



2025

HANDLING & INSTALLATION GUIDELINES

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INTRODUCTION

Thank you for selecting Delta Millworks® (Delta) as your choice for premium exterior and interior natural wood products. We are proud to provide these high-performing and sustainable wood products for your project. We aim for these products to exceed your expectations and live up to their highest potential performance, so please take a moment to read and understand these guidelines to ensure that proper methods are followed. Please keep in mind that wood is a natural product and can be affected by environmental changes. Furthermore, please be aware that proper handling and installation are critical to long-term performance. Delta is happy to consult further on any topics covered in this document, so please feel free to reach out to us at any time.

Please note that these are general guidelines and best practice recommendations, and do not take into account the effects of your specific environment, local building codes, or other unique conditions that may affect installation and overall performance. Delta is a materials supplier only - we can make general recommendations for your project, but please follow local building codes and consult your architect, general contractor and subcontractor for final authority on the installation of these products. Delta is more than happy to participate in these technical conversations.

Thanks again for choosing Delta Millworks.

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GUÍA DE MANEJO E INSTALACIÓN

To view this Guide in Spanish, please scan the QR code below:



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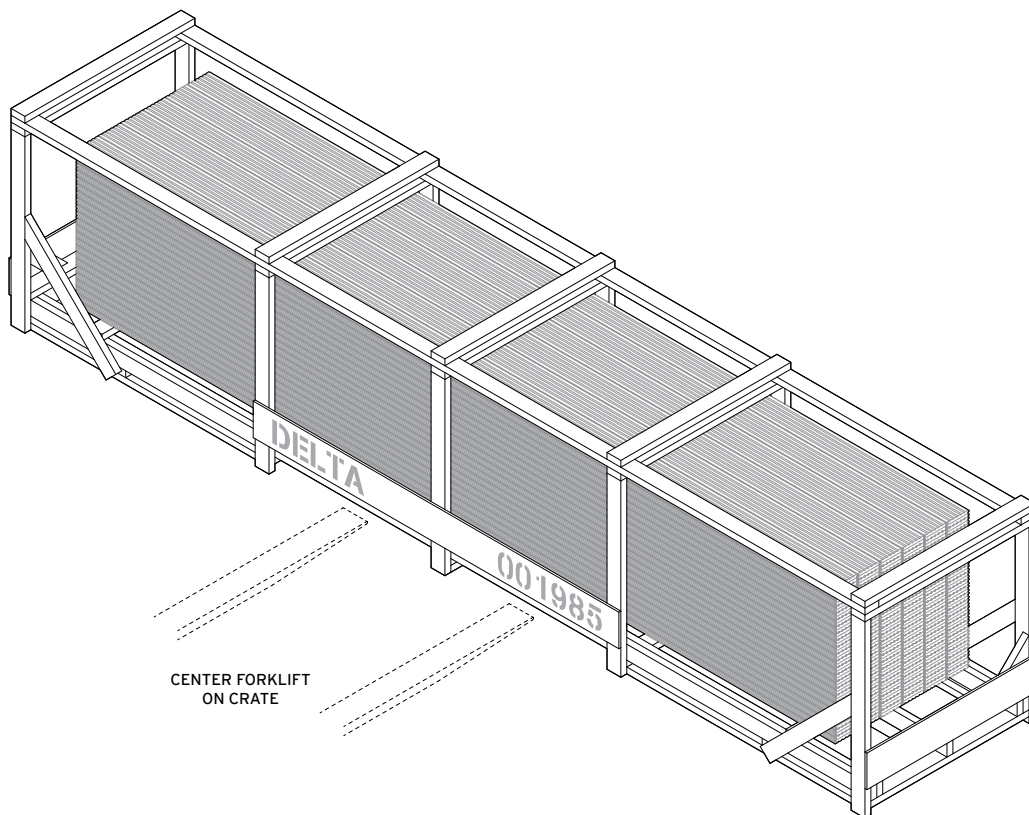
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01 SECTION I. GENERAL WOOD GUIDELINES

**Please read and understand these guidelines prior to handling or installing this material.*

1. DELIVERY

Your material from Delta will arrive at the job site via third-party freight carrier. It will arrive banded & crated to protect from damage during the transportation process. Please note that the consignee is responsible for unloading materials.



If using a forklift, be sure to center the forks on the crate and grab entirely beneath the pallet. Please use caution when unloading these crates and be sure to inspect the units for damage that may have occurred in transit. Freight claims can only be accepted if reported at the time of delivery. A quick visual inspection should determine if damage has occurred during transit. If any damage is noticed at the time of delivery, please notify both the freight driver & Delta immediately. Once the material is safely offloaded, please move crates to a covered area to reduce adverse effects of weather exposure.

2. INSPECTION

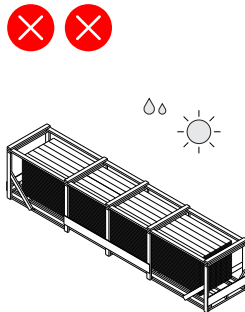
Visually inspect the material to verify quality and quantities. Each crate will be labeled with a packing slip to identify the product within the crate and its respective quantities. Delta requests that shortages, damages, or any concerns about the material be reported and documented within ten (10) days of delivery. Do not install any material considered defective, and report any questions or concerns immediately to Delta.

3. JOBSITE STORAGE

Crates, bundles or loose pieces of Delta wood need to be stored properly so that the material is not adversely affected by exposure to rain, direct sun, concentrations of moisture, or other harmful elements. The material should also be protected from dust, overspray of any kind, or general damage that can occur in construction zones. Although the crates are designed to be water-resistant, they are not weatherproof and will need to be additionally protected from moisture and sun exposure. Delta strongly recommends the crates and any material be stored under a covered area such as a garage. If a covered area is not available to store the material under, please protect the material by means of a waterproof tarp or covering (breathable or “vapor-open” plastic to allow for proper ventilation). **Remove the plastic shrink wrap prior to covering/tarping so that the wood receives proper air flow and can begin to acclimate to its environment.** Please make sure the materials are elevated on stringers at least 6” above the ground, and that any covering used will allow for proper ventilation around all sides of the crate.

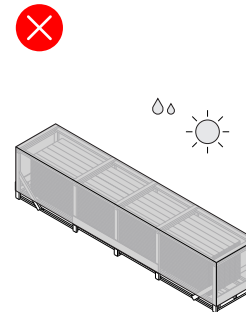
WORST

Removing Delta wrap & leaving exposed to elements.



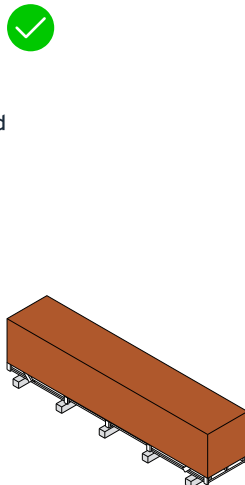
BAD

Leaving wood inside Delta wrap, trapping humidity (greenhouse effect) & inhibiting acclimation.



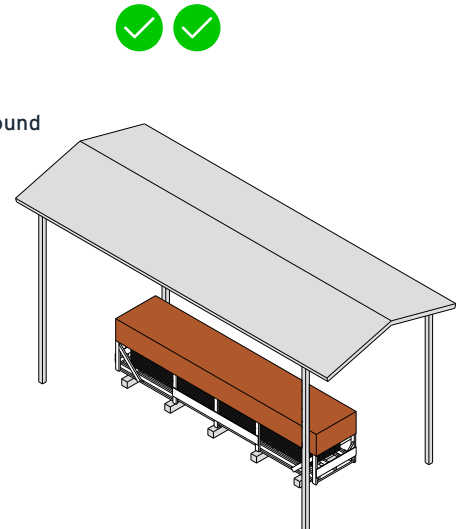
GOOD

Removing Delta wrap & protecting with waterproof cover. Elevated on stringers 6” above ground, spaced 30” max.



BEST

Stored under covered area. Partially covered allowing ventilation around all sides. Elevated on stringers.

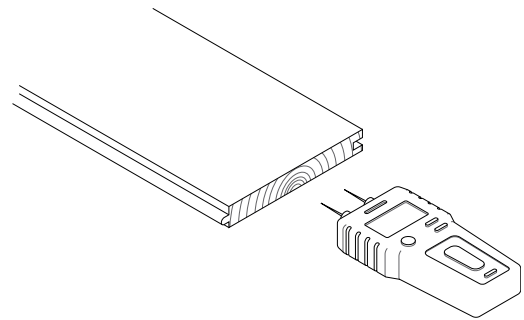


4. ACCLIMATION OF WOOD

Wood is a natural material and will respond to its environment, so proper acclimation and an assessment of the moisture content (MC) is necessary to achieve maximum performance. Delta highly recommends the use of a moisture meter to properly measure MC and accurately determine when the wood has fully acclimated to its environment and is ready for installation. All exterior woods can and will move to some extent with changes in the climate, so the wood needs to reach an equilibrium moisture content (EMC) prior to installation by providing proper airflow around the wood. Reaching EMC in the wood means that the MC has stabilized and will not move up or down over the course of several days in normal conditions. Chemically-modified woods (i.e. Accoya) are typically ready for installation upon delivery but could require additional time to acclimate depending on climate and storage methods, or if the wood has been wetted. Thermally-modified woods typically acclimate in 1 week but could take up to 2 weeks. Kiln-dried woods (i.e. Cedar, Cypress, etc.) could take up to 2 weeks or more to fully acclimate to their environment. Do not install any material that has

been wetted or experienced any extreme changes in temperature, humidity, or exposure. ALWAYS measure the moisture content of the wood with a moisture meter prior to installation to ensure that EMC has been reached.

SPECIES	EQUILIBRIUM MOISTURE CONTENT*	ACCLIMATION PERIOD**
ACCOYA®	3 - 5 %	~ 2-3 days
LUNAWOOD	6 - 8 %	~ 1 week
WESTERN RED CEDAR	12 - 15 %	~ 2 weeks
HEMLOCK	12 - 15 %	~ 2 weeks
SOUTHERN YELLOW PINE	12 - 15 %	~ 2 weeks
BEETLE KILL PINE	12 - 15 %	~ 2 weeks
CYPRESS	10 - 15 %	~ 2 weeks
THERMO HEMLOCK	5 - 7 %	~ 1 week
THERMO RADIATA	6 - 8 %	~ 1 week
OLD SOULS RECLAIMED	6 - 8 %	~ 2 weeks
* These numbers are meant to provide a rough target range (+/- 2%) and may fluctuate depending on climate and/or storage conditions. Please consult Delta with any questions or concerns related to acclimation.		
** Under normal conditions		



5. MOCK-UP MATERIAL

Mock-up (test) areas are highly recommended by Delta if there are any questions or concerns about the appearance or installation of the material. A mockup will allow all parties involved to assess the appearance of the wood, understand installation methods and put a proper plan together for the installation of the full batch of material. Installers with experience in prefinished wood are strongly recommended for handling these materials.

6. FIELD CUTS

All field cuts, specifically cut ends and ripped edges, must be sealed prior to installation. The ends of the boards will need to be trimmed/squared up and sealed prior to installation. The sealer can be applied and installed without fully drying before installing. The sealer can be applied with a foam brush or end-cut applicator. Delta includes a can of stain for end cuts and touch-up with every order. Please note that linseed oil is NOT a suitable sealer for Lunawood/ThermoWood Spruce products and will cause discoloration. Do not seal the ends of **unfinished** Lunawood/ThermoWood Spruce products.

7. GENERAL HANDLING ON JOBSITE

Please be sure that the material is handled with caution, as natural wood can be damaged more easily than other manufactured products. Wood is relatively soft, and the finishes can be delicate, so proper storage and handling is important for minimizing damage. Longer boards should be removed from the crates with care; ***two people at each end are recommended for transporting and installing boards to reduce damage.*** Improperly removing a board from its crate can damage the finish or the finish of other boards.

8. FASTENERS

***Most install issues are fastener-related. In addition to the following information, please reference [Section III: Fastener Options](#).** Using appropriate fasteners will directly affect the longevity and structural performance of your material. Even the best woods on the market will fail if inappropriate fasteners are used. Delta strongly recommends stainless steel fasteners, especially if the material is finished with a transparent or semi-transparent stain or oil. Nails can be hand driven or installed with a pneumatic nail gun. If a pneumatic nail gun is desired, reduce the air-pressure, and tap nails flush with a nail set.

Minimum Size Nail: 8d (2.5") Ring-Shank Nail - 0.092" shank diameter, 0.221" head diameter. Screws may offer superior holding power vs. nails. The nail must penetrate at least 1.25" into a solid wood substrate.

Delta cannot warrant any material installed with improper fasteners. These guidelines regarding fasteners apply to average environmental conditions -- extremes in heat, humidity, precipitation, wind and other environmental conditions may require different fasteners or fastening techniques. All wood products that come with a manufacturer's warranty require stainless steel fasteners in exterior installations to maintain the warranty.

DO:

- Use "splitless" ring-shank nails or screws
- Use stainless steel 304 or 316 fasteners (Accoya must use stainless steel only)
- Pre-drill all screw holes to 80% of screw shank diameter
- Pre-drill nail holes to 0.04" less than nail shank diameter ONLY for nails located at the ends of each board. Fasteners near the end of boards can cause splitting
- Use the appropriate length of nail (fastener must drive at least 1.25" into a solid substrate or wall stud)
- Assess environmental conditions prior to choosing a fastener (coastal and other extreme climates may affect fastener choice)
- Use painted fastener heads to match wood color, if desired
- Preserve the quality of the wood and finish by using caution during installation

DON'T:

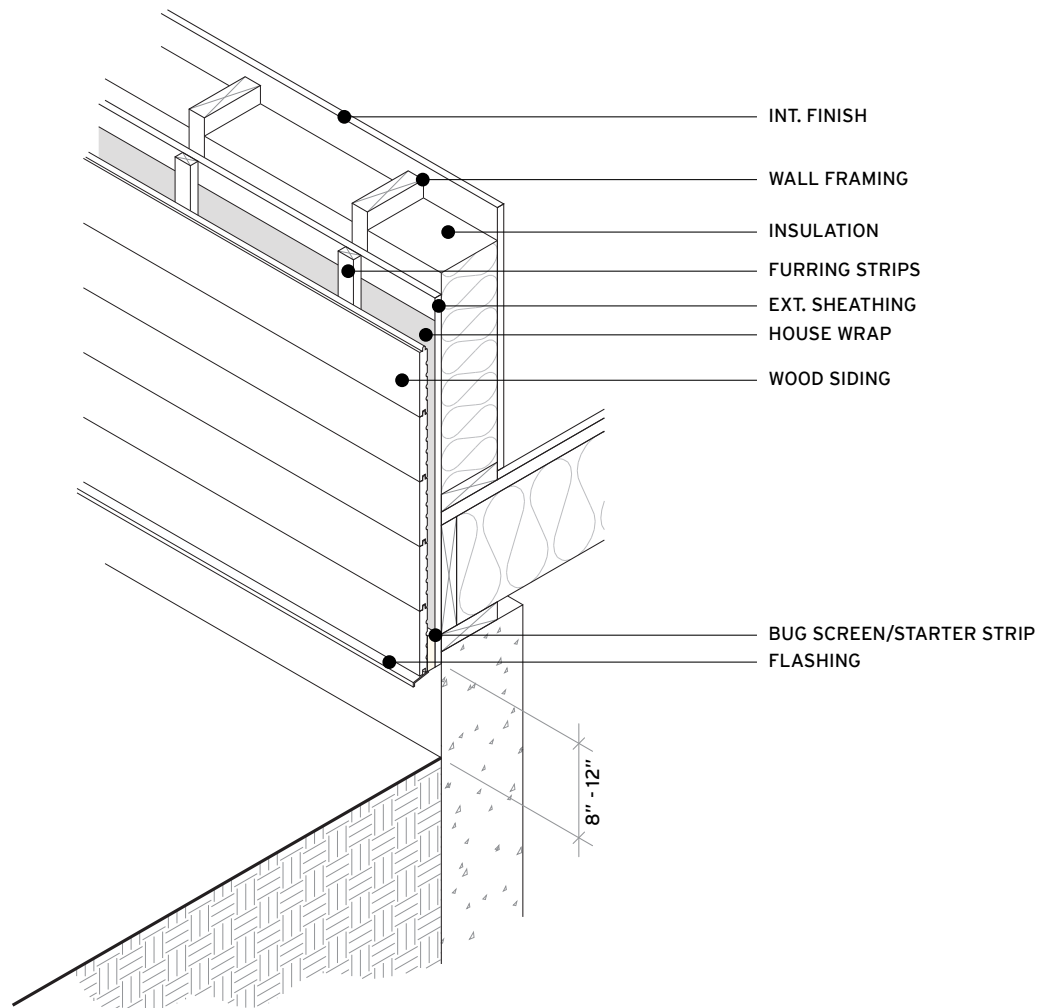
- Use staples, T-nails, interior-rated ("finish" nails) or any insufficient fasteners
- Overdrive nails into wood
- Install wood with defects
- Damage the wood or finish during installation

02 SECTION II: INSTALLATION GUIDELINES

1. EXTERIOR CLADDING

A. VENTILATED CLADDING SYSTEM (RAINSCREEN)

Proper ventilation is important for all wood products. Trapped moisture or prolonged exposure to moisture can cause swelling and adversely affect the structural performance of any wood product. A ventilated cladding system a.k.a. “rainscreen” style installation will greatly increase the longevity and overall performance of the wood and is strongly recommended for the vast majority of exterior siding installations. This method provides an open air space between the finish and the exterior sheathing, minimizing exposure of moisture to the wood siding. The exterior finish should have 8-12” of clearance from the ground, and top and bottom air vents should exist, allowing for air circulation fully around the siding. Additionally, Delta incorporates a relief-cut technology on the back face of every board, which further improves circulation of air behind the wood.

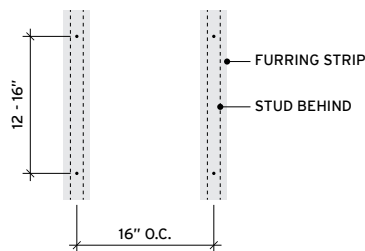


B. FURRING STRIPS

Delta siding should be installed over a standard 16" on-center stud built wall with exterior sheathing and a weather barrier over top. In order to create an air gap for the rainscreen assembly, the wood siding should be held off the exterior sheathing with furring strips, which will ensure uninterrupted ventilation and drainage behind the siding. Remove any materials that may hinder airflow or drainage. There are many different options for furring strips, but we typically recommend standard 1x2 or 1x4 lumber. Using pressure-treated lumber is optional but should be prioritized in extreme climates with significant moisture. Please note the precautionary measures that must be taken when installing over pressure-treated lumber on the next page. Standard non-treated lumber can be used in moderate climates. All lumber furring must be kiln-dried, straight, and without splits or nail holes to ensure a proper fastening base. Regardless of whether siding is being installed horizontally or vertically, the two most important details are air gap & fastener penetration. Delta highly recommends that all fasteners penetrate a minimum of 1-1/4" into a solid wood substrate (not including siding). The recommended air gap depth will vary depending on climate and other project conditions. As always, please consult with your licensed siding installer and general contractor to determine their preferred and recommended type of furring strip & installation method.

i. HORIZONTAL SIDING

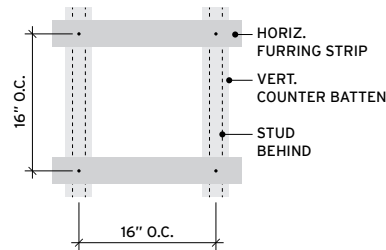
For siding installed horizontally, use vertical furring strips placed over each stud location at a maximum spacing of 16" on-center (see Figure A). Nail the strip into the stud every 12-16" vertically up the stud. It is the installer's responsibility to ensure the furring strips are properly secured to the structure. Other popular methods for providing a ventilated cladding system for horizontal siding include plastic furring strips (Quarrix, Cor-A-Vent, etc.) or drainage mats (Keene, VaproShield, Benjamin Obdyke, etc.).



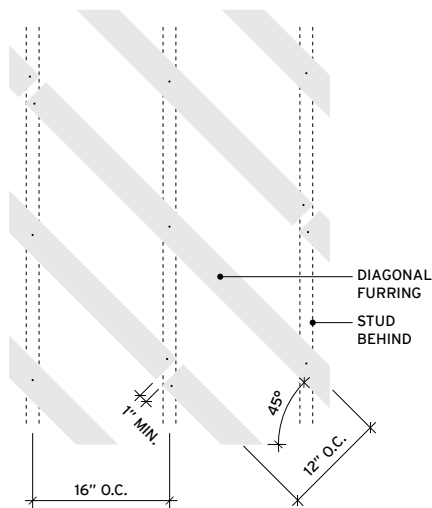
A. Horizontal siding with vertical furring strips.

ii. VERTICAL SIDING

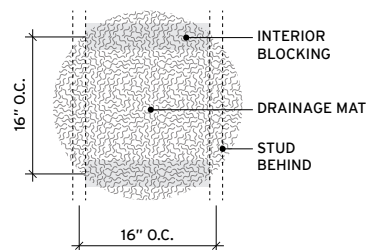
Vertical siding can be installed in a number of ways. Because vertical siding is parallel to the structural studs behind, additional detailing is required to maintain appropriate fastener penetration and an unimpeded drainage plane. Vertical siding can be installed using double-furring, diagonal furring, a drainage mat, or any combination of these. Please consult with a licensed siding installer, general contractor, or Delta to determine the best installation method for your project.



B. Double-furring



C. Diagonal-furring



D. Drainage mat

DOUBLE-FURRING

For the double-furring method, use vertical *counter battens* to hold the horizontal furring strips off the exterior sheathing and maintain an uninterrupted drainage plane (see Figure B). In this assembly, the vertical counter batten may be discontinuous, any material, and as thin as 1/8", as it merely serves to float the horizontal furring strips off the exterior sheathing. Neoprene shims (i.e. VaproShim SA Self Adhered) are ideal. Delta recommends that the horizontal furring strips be made of solid wood in order to provide a solid fastening base.

DIAGONAL-FURRING

Diagonal furring is an alternative method to reduce the overall depth of the wall assembly. In this method, a second layer of furring is not required since moisture can migrate down and out of the assembly. Install lumber furring strips at a 45° angle to the wall at 12" O.C. (see Figure C). Leave a minimum of 1" between furring strips or at every 8' to allow for uninterrupted ventilation and drainage behind the siding. These gaps should be staggered. Please note that if hidden fasteners are desired, the diagonal furring method requires a tongue & groove profile with a maximum board width of 6" to maintain a blind installation.

DRAINAGE MAT

Drainage mats (Keene, VaproShield, Benjamin Obdyke, etc.) are best for reducing the overall depth of the wall assembly. This method is typically only appropriate for projects in moderate climates with minimal moisture. For vertical siding, fastener penetration must be addressed. To achieve proper holding power, either provide interior blocking every 16" O.C. vertically between studs (see Figure D), or add an additional 1x horizontal furring strip over the drainage mat, similar to the double-furring method. Be sure to verify that the drainage mat thickness satisfies any air gap requirements by warranty.

Please note that certain light-stained products (particularly Accoya®) could be susceptible to staining when in direct contact with some types of furring strips in certain climates. To avoid the possibility of moisture wicking and leaching color from the furring material into the wood, your general contractor or installer may want to consider applying a protective butyl flashing tape between the sub-frame and the exterior finish. This “barrier” will protect against surface discoloration where the wood is fastened (see images below).



C. STARTER STRIP

In order to prevent rodent or insect infestation within the wall cavity, we recommend using ventilated “starter strips” or standard staple screening at the top and bottom of every wall. We recommend using Quarrix or Cor-A-Vent™ SV-3™ Siding Vent or SV-5™ Siding Vent, depending on the desired thickness for your air gap.

D. FLASHING

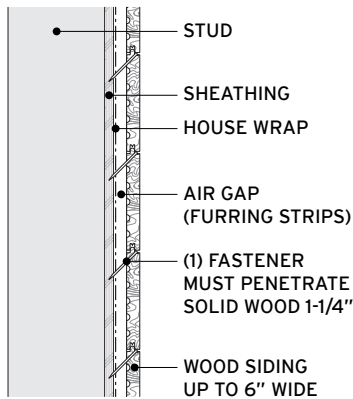
Prior to installing Delta siding, please be sure that flashings are also installed to prevent moisture from entering into wall spaces. Flashings are a critical component that direct water away from the building and toward designed drainage paths. Moisture can accumulate behind the exterior finish as a result of rain penetration through the siding, water vapor diffusion, or leakage of moist air from the interior or condensation. Install horizontal flashing at the top of all wall penetrations, like windows and doors, as well as at any change in materiality or material direction. All Delta siding should be at least 1/4” above the flashing ledge. Do not caulk where the flashing and trim or other materials meet. Please note that caulking in lieu of flashing is not an acceptable alternative.

E. GROUND CLEARANCE

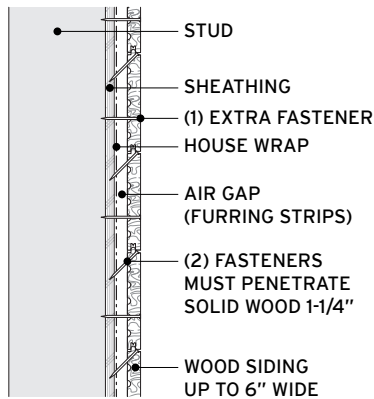
To avoid the wicking of moisture into the wood, Delta siding should never be in contact with the roof or ground. Wood siding should have no less than 8-12” of ground clearance, separated by a water-resistant material. You should also maintain a minimum clearance of 1” from adjacent horizontal structures (i.e. deck, low wall, trim) and 2” from the roof.

F. INSTALLING TONGUE & GROOVE (T&G)

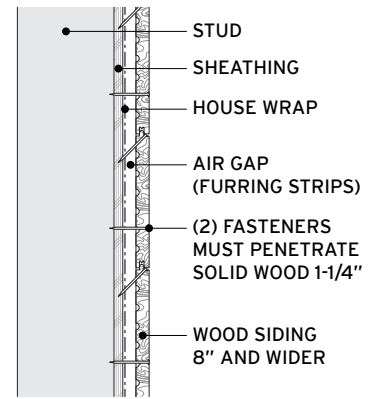
Tongue and groove siding can be installed both horizontally and vertically. For boards 6" or under in width, fasteners can be blind-fastened at the base of each tongue (in normal climate conditions). Wider siding should be face-fastened with two courses per board. To avoid the use of face fasteners in extreme weather, choose a 4" or narrower board which can then be blind-fastened instead. Begin installation at the bottom of the wall, working up, with the groove edge facing down.



A. 6" and narrower t&g in normal climates: (1) blind-fastener will be required.



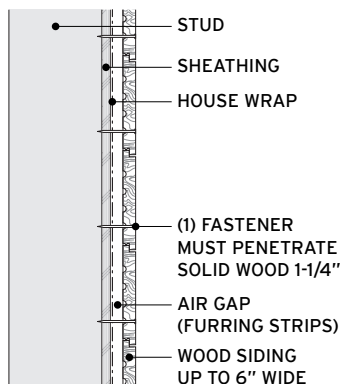
B. 6" and narrower t&g in extreme climates: (1) extra face-fastener will be required (*excluding Accoya). Please consult with Delta if you are unsure about your climate condition.



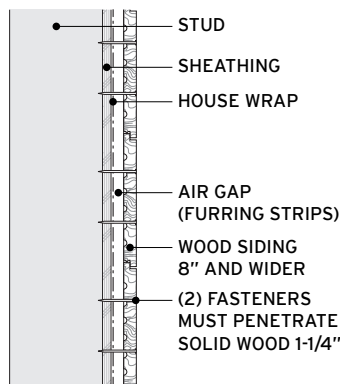
C. 8" and wider t&g in normal climates: (1) extra face-fastener will be required. In extreme climates, (2) face-fasteners may be required.

G. INSTALLING LAP SIDING (SHIPLAP)

Lap siding can be installed both horizontally and vertically. For boards 6" or under in width, use one fastener at least 1" up from the exposed lap. For planks 8" and wider, face-fasten two courses per board with the fasteners 2.5" to 3" apart, allowing for expansion and contraction without splitting.



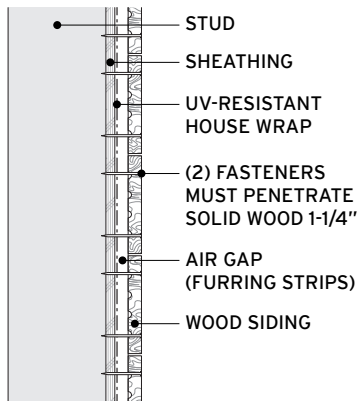
A. 6" and narrower shiplap in normal climates: (1) face-fastener will be required.



B. 8" and wider shiplap: (2) face-fasteners will be required.

H. INSTALLING SQUARE SIDING (S4S)

Square siding can be installed both horizontally and vertically. For all S4S boards, face-fasten two courses per board with the fasteners 2.5" to 3" apart, allowing for expansion and contraction without splitting. Due to the open joint between S4S planks, a UV-resistant weather barrier is required. Any lumber furring should also be protected with a suitable weather-resistant joist tape.



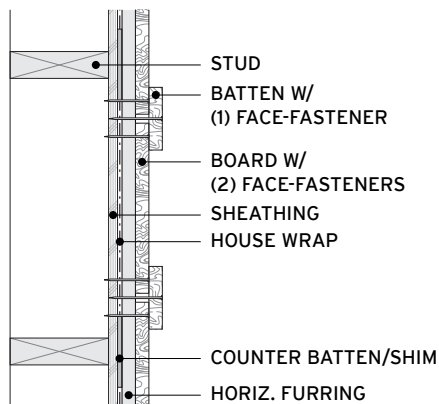
A. All S4S: (2) face-fasteners will be required.

J. INSTALLING BOARD & BATTEN SIDING

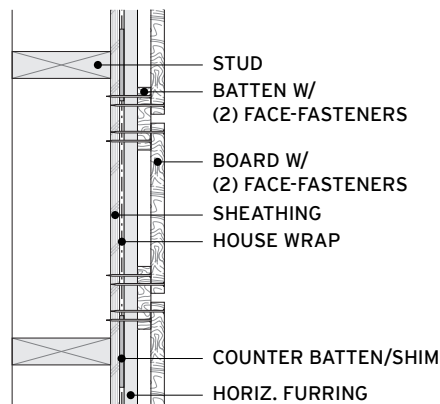
Board & Batten is a vertical pattern created using square boards and battens of various widths for a wide range of appearances. Standard Board & Batten and Reverse Board & Batten are the two most common approaches. Boards are typically spaced 1/2" apart and battens should overlap the board by at least 1/2". With wider boards, increase batten overlap proportionately. While there are no set widths for board & batten siding, a typical combination is 1x4 battens with 1x10 boards, with 1-1/2" overlap.

Siding should be nailed to horizontal furring strips and a counter batten/shim will be required to hold the horizontal furring strips off the exterior sheathing and maintain an unimpeded drainage plane. There are many different products that can be used for the counter battens/shims but Delta recommends VaproShim SA™, Easy-Fur™, or similar.

For Standard Board & Batten, (1) face-fastener can be used to secure the overlying batten and hide the (2) face-fasteners on the underlying board. The shank should pass between the edges of the under boards. For Reverse Board & Batten, (2) face-fasteners will be required to secure the overlying board and hide the (2) face-fasteners of the under battens. Please note that longer fasteners will be required for the overlying board/batten in order to achieve a minimum penetration of 1-1/4" into a solid wood substrate.



A. Board & Batten:
(2) face-fasteners for board,
(1) face-fastener for batten.

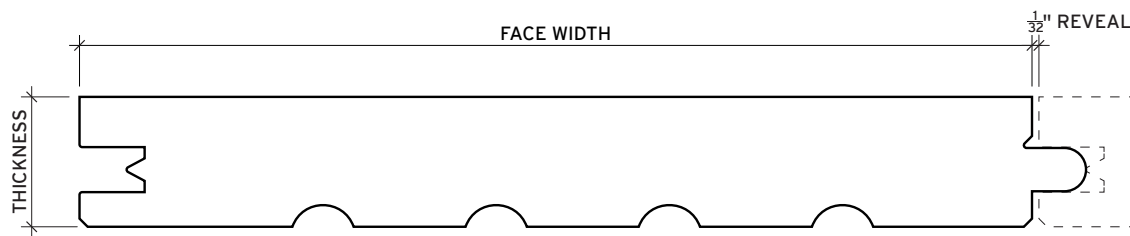
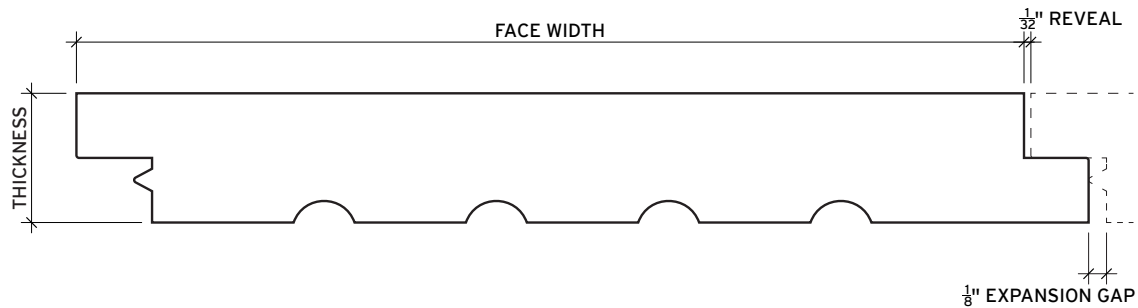


B. Reverse Board & Batten:
(2) face-fasteners for board,
(2) face-fasteners for batten.

K. SPACING

To allow for natural expansion and contraction of wood siding products, Delta can mill a crusher bead into our T&G and Shiplap profiles. The crusher bead creates a small allowance for natural movement and reduces the risk of buckling or other concerns when boards are installed “tight” without room for movement. The crusher bead creates a $\frac{1}{32}$ ” reveal between boards once installed. Please be sure to account for this gap when calculating overall heights and lengths to achieve desired alignments.

For end/butt joints, an expansion of 0.8% (65% RH - wet) needs to be considered. Never install boards butted up tight against any other construction elements, including wood. Provide roughly an $\frac{1}{8}$ ” gap when meeting other construction elements like window & door trim, corners, or any dissimilar materials. Provide roughly a $\frac{1}{4}$ ” gap when meeting any metals to avoid staining. Provide roughly a $\frac{1}{16}$ ” gap between butt joints of a similar wood material. Delta recommends a “weather cut” (or scarf joint) at these butt joints. This detail is particularly important for vertical siding to allow moisture to shed properly. ALWAYS seal cut ends and ensure that they land over a stud or furring strip for proper fastening.

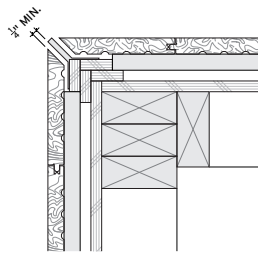
**TONGUE & GROOVE + CRUSHER BEAD****SHIPLAP + CRUSHER BEAD**

L. CORNER DETAILS

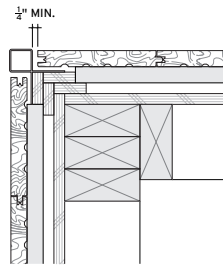
There are many different approaches to wood siding corner details. Since this is mostly an aesthetic design decision, please consult with the owner, architect/designer, and contractor to determine the best solution for your project. Delta does not recommend a traditional tight mitered corner. We have seen significant evidence of this particular detail ultimately failing due to a moisture trap at the tight joint, causing flaring at the corner as the wood expands and contracts and also discoloration/uneven weathering at the ends. It is extremely important to remember to seal ALL field cuts with the stain that is included in your pallet. Please refer to the previous section (**K. Spacing**) for proper spacing procedures: minimum 1/8" gap when meeting similar wood materials and minimum 1/4" gap when meeting any metals, to avoid staining. Most contractors will order metal corner profiles with their local roofing manufacturer but Delta also recommends Fry Reglet for metal trim products. The exterior corner details below are the typical standard recommendations by Delta:

VERTICAL SIDING

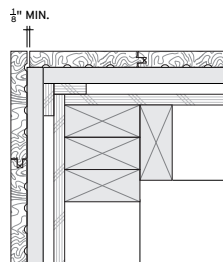
V1. Metal Corner Trim



V2. Metal Corner Trim

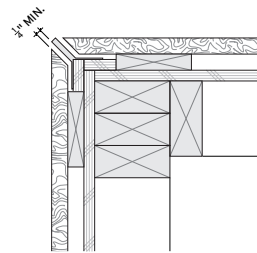


V3. Ripped Squared Edge

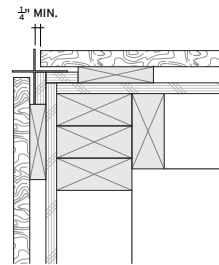


HORIZONTAL SIDING

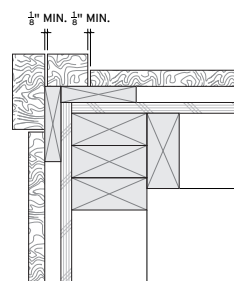
H1. Metal Corner Trim



H2. Metal Corner Trim



H3. Wood Corner Trim



M. THE DO'S & DON'TS OF WOOD SIDING

DO:

- Inspect material upon arrival
- Discuss performance expectations with Delta
- Understand Delta's installation guidelines and consult Delta with queries or concerns
- Store material in a dry and protected location
- Remove the shrink wrap from the crates and allow for proper air flow while storing
- Acclimate material under normal conditions & proper methods
- Seal all field cuts
- Use proper fasteners
- Install a ventilated cladding system (rainscreen)
- Design for flashing and weeps to prevent water intrusion
- Maintain 8-12" of clearance from the ground
- Follow local building codes
- Make sure installers and anyone handling this material reads these guidelines
- Allow for at least 20% of waste due to trimming and fall off
- Allow for expansion and contraction of the wood by spacing boards with a "crusher bead" milled into the T&G or Shiplap profiles
- Install mock-ups or test areas to assess proper installation methods

DON'T:

- Receive material from Delta without inspecting
- Install without acclimating or determining appropriate moisture content
- Use staples, T-nails, interior-rated ("finish" nails) or any other insufficient fasteners
- Install damaged or defective wood. Delta cannot warrant or replace material once it's installed
- Install siding in direct contact with concrete, masonry, stucco, top soil, mulch, patios, or roofs
- Install siding directly to sheathing or house wrap

2. INTERIOR PANELING & CEILINGS

All of Delta's exterior cladding products can also be used for interior applications, however, interior paneling products cannot be used for exterior siding applications. Since interior conditions are not directly exposed to weather, they do not require the same installation detail as exterior products. Please note that proper acclimation is still required for interior paneling products. The building should be properly conditioned for acclimation. Below are some general guidelines for interior paneling installation, but please consult your licensed installer and general contractor to determine best practices & methods for your project.

A. FRAMING

A ventilated cladding system (rainscreen) is not required for interior paneling, but it's still an effective installation option since wood is a natural product that will expand and contract over time. Horizontal cladding can be installed directly to drywall or attached to battens, if preferred. For vertical cladding, you will need horizontal furring or blocking to create a secure attachment. For vertical furring, the battens should be aligned with the wall studs behind the drywall. For horizontal furring, be sure to fasten the battens at each wood stud along the wall.

B. FASTENERS & ADHESIVES

Interior paneling can be face-nailed or blind-nailed using a minimum 15-gauge nailer. 2" or 2-1/2" nails should be driven through the shoulder of the tongues into the framing at about a 45° angle. Please see the *Exterior Soffits* section for additional information regarding blind-nailing. While adhesives are not required, they will certainly provide additional attachment strength and could improve the longevity of your interior paneling. There are many construction adhesives available, but we recommend using Titebond III or Liquid Nails.

C. INSTALLATION

Always install your boards so that the tongue points toward the direction of installation. The tongue & groove profile allows for easy installation as each board locks into each other. It is important to ensure that the tongues fully lock into each groove. You can accomplish this by using a scrap piece of wood and a rubber mallet and lightly tapping each board into place. Be sure to stagger the butt joints in a random pattern. ALWAYS seal cut ends and ensure that they land over a stud or furring strip for proper fastening.

3. EXTERIOR SOFFITS

Delta Millworks offers a wide variety of elegant wood products for exterior soffits. Please note that soffits are an exterior application and should be approached similar to an exterior cladding install. Installation methods will vary and depend on the structure, climate, and other project conditions. Please note that proper acclimation is still required for soffit products. Below are some general guidelines for soffit installation, but please consult your licensed installer and general contractor to determine best practices & methods for your project.

A. FRAMING

Exterior soffits can be installed directly over the soffit structure (typically 2x roof joists/rafters) or attached to battens (typically 1x4) that are nailed into the roof framing. It is essential to maintain proper air circulation throughout the surface with *soffit vents* on both sides.

B. FASTENERS & ADHESIVES

Delta recommends that exterior soffits be fastened similarly as exterior cladding; with ring-shank nails or trim-head screws. For moderate climates and/or areas that are not directly exposed to weather conditions, exterior soffits may be fastened with a minimum 15-gauge nailer. 2" or 2-1/2" nails should be driven through the shoulder of the tongues into the framing at about a 45° angle. The groove of the next board will hide the nail holes creating a clean finish with concealed fasteners. While adhesives are not required, they will certainly provide additional attachment strength and could increase the lifespan of your ceiling or soffit. There are many exterior-rated construction adhesives available, but we recommend using Titebond III or Liquid Nails.

C. INSTALLATION

Always install your boards so that the tongue points toward the direction of installation. The tongue & groove profile allows for easy installation as each board locks into each other. It is important to ensure that the tongues fully lock into each groove. You can accomplish this by using a scrap piece of wood and a rubber mallet and lightly tapping each board into place. Be sure to stagger the butt joints in a random pattern. ALWAYS seal cut ends and ensure that they land over a stud or furring strip for proper fastening.

4. DECKING

Delta Millworks offers highly durable, sustainable, and beautiful exterior decking products. Below are some general guidelines for decking handling & installation, but please consult your licensed decking installer and general contractor to determine best practices & methods for your project.

A. FRAMING

Delta recommends constructing deck framing using ground-contact pressure treated pine. Joists should be spaced 12"-16" on center. It is essential to maintain clearance between the deck and the ground at all locations. If using wood posts, we recommend using a Simpson Strong-Tie post base (or similar) to avoid contact with the ground. A skirtboard should also be used at the perimeter of the deck to provide ground clearance and cap the end grain to avoid wicking which could cause the boards to crack. The top faces of all framing members that will be in direct contact with the decking should be wrapped with a peel & stick deck joist tape. There are many products available but we like PolyWall Rot Shield joist tape or Protecto Wrap deck joist tape.

B. FASTENERS

Decking can be fastened two ways: concealed fasteners (hidden clips) or exposed fasteners (face-screwing). Delta highly recommends using face screws if the board is 5" wide or greater. For any boards less than 5", hidden fasteners are a great option for a clean and contemporary look. There are many hidden clip products available but we like Simpson Strong-Tie's EB-TY hidden deck fastener or the Deck-Wise Ipe Clip. In most cases, stainless steel screws are the best choice to avoid any potential discoloration leaching from the fastener. Hot-dipped galvanized screws can be used in very moderate climate conditions. We recommend using color matched screws to avoid any visibility of the fasteners. If using concealed fasteners, the first board will still need to be face-screwed to create a fixed starting point for the rest of your boards. In this case, you can plug those face screws with a matched wood plug to hide the screw heads. As you install the rest of the boards, it is important to use a shim or "gap spacer" to maintain even spacing between boards across your entire deck. Delta recommends a 3/16" gap between deck boards.

C. STAINING/SEALING

It is extremely important to seal all end cuts with a commercial-grade end sealer to avoid the wicking of moisture into the board, which could cause cracking. If using an unfinished decking product, we recommend avoiding the use of a surface sealer and allowing the wood to weather & gray out over time. If you would like to increase the lifespan of your deck or retain some of the original color, you may consider applying a thin coat of a clear commercial-grade decking sealer.

5. SPECIAL CONSIDERATIONS FOR SHOU SUGI BAN

Shou-sugi-ban (SSB), or charred wood siding, is a finishing technique that plays off the long-standing Japanese method of charring wood cladding for purposes of fire, rot and insect resistance. SSB not only protects the wood through the charring process, but creates unique surfaces on the wood that can only be achieved through a flame treatment. SSB should really be considered a “treatment” or “finish” on the wood’s surface, so please make sure it is treated as a more delicate pre-finished wood product when handling and installing. Please consider the following guidelines to insure that the performance of this treatment is maximized over its lifespan.

HANDLING

SSB is a process that produces a layer of carbon on the surface of the wood with the carbon acting as a protective barrier (along with a wood sealer at times) to outdoor elements. The carbon or char will also be a major component of the appearance of the wood, so handling these products with care is key to maintaining the beauty and performance of these wood products. ***Two people at each end are recommended for transporting and installing boards to reduce damage.*** Damage to the charred surface can create visual blemishes, flaking, premature ageing, and inconsistencies in color. More heavily charred products, such as Delta’s Gator® SSB finish, can be scraped or damaged if proper handling is not considered.



IMPROPERLY HANDLED & INSTALLED SSB SIDING:



Scraped SSB Gator®



Close-up of damaged SSB Gator®



Damage from a ladder - scraped SSB Gator®

DO'S & DON'TS

DO:

- Follow these guidelines as well as Delta's general handling and installation guidelines (Section I & II)
- Keep material stacked safely in the pallet until it is needed
- Use two or more people to remove boards from pallets and at all times during handling and installation
- Protect any installed material from jobsite traffic, ladders, scaffolding, trees or other vegetation, and anything that may adversely affect the charred finish of the wood by scraping or damaging the material

DON'T:

- Use excessive force of any kind on the charred surface of SSB products
- Lean ladders against the installed SSB siding without proper protection
- Install damaged SSB material

6. SPECIAL CONSIDERATIONS FOR OLD SOULS RECLAIMED™ WOOD

Reclaimed wood from Delta is a unique product in many ways. Unlike new wood, the material can be a bit less consistent in its surface structures, color, texture, and workability. However, when produced and installed properly, these materials can provide many benefits that new wood cannot. Careful handling and installation are important when dealing with reclaimed wood. Please make sure to carefully discuss expectations with Delta regarding how these products are to be handled, installed, and will perform over the years. With reclaimed woods, grades can be blurry or non-existent at times, so please make sure that appearance, performance, and other expectations are understood.



DO'S & DON'TS

DO:

- ***Discuss & understand the "grade" and characteristics to expect in the finished product***
- Understand the allowable variation in color and character
- Square up cut ends and seal them before installation
- Allow for at least 20-25% of waste due to trimming and fall off

DON'T:

- Install defective wood or wood deemed undesirable

CHARACTERISTICS SOMETIMES SEEN IN RECLAIMED WOOD:

- Jagged ends
- Knots (hollow, loose, or sound)
- Nail/bolt holes
- Post marks
- Surface checking (cracks/splits)
- Inconsistencies in color
- Organic matter such as lichens or moss on the surface of the wood

STANDARD CHARACTERISTICS IN RECLAIMED WOOD:

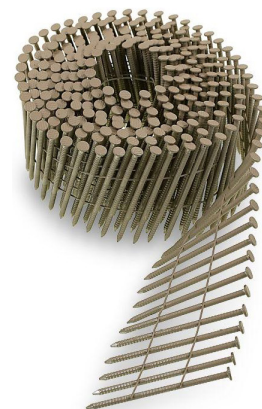


03 SECTION III: FASTENER OPTIONS

The following section outlines our recommended options for fastening your Delta products. We would like to stress that proper fasteners and installation techniques are key to the long-term structural performance of this material. Most installation issues are fastener-related. Using correct fasteners will also increase the longevity of the finish/stain/burn applied to your product by stabilizing the wood. Please let us know of any special conditions you are working around and we will provide you with best-practice recommendations regarding fasteners. Delta will assist you as best we can as a material supplier, however we strongly recommend that the final selection of fasteners be made by a qualified installer.

1. NAILS

BRAND	Simpson Strong-Tie®
PRODUCT	Siding Nail or Painted Siding Nail
METAL	304 stainless steel (choose 316 / 'Premium Siding Nail' for seaside and coastal environments)
LENGTHS	Up to 2-1/2" for collated stainless steel and painted siding nails (this should suffice for most common rainscreen installations). Hand-driven nails up to 4" long.
PENNY SIZE	Please see product data sheet for all options
INSTALLATION	Hand-driven or collated for siding nail gun (recommended) Painted Colored Heads
GENERAL USES	Wood siding, paneling, ceilings and soffits



We recommend painted siding nails for any project in which the client wants the exposed fastener head to blend in with the color of the wood. Please do a mock-up area to determine that the proper fasteners and fastening methods are being used. These nails should penetrate at least 1-1/4" into solid wood behind the siding planks to ensure proper structural performance.

BENEFITS	Known brand name with a good reputation for high quality Offers painted head options to match wood Easy to install with collated roll and siding nail gun More affordable than screws
CONS	None! This is a go-to siding option

Delta recommends the following standard nail specifications:

SPECS	15 degree wire coil, full round head, ring-shank nail - 304 stainless steel
PENNY SIZE	8d
LENGTH	2-1/2"
SHANK	0.092" D.
HEAD	0.221" D.

2. SCREWS

BRAND	Simpson Strong-Tie®
PRODUCT	Deck-Drive - DWP Wood SS Screw (Trim Head)
METAL	305 stainless steel (choose 316 for seaside and coastal environments)
LENGTHS	Up to 2-1/4" long in colored head options and 4" long in stainless steel head
SIZE	Please see product data sheet for all options
INSTALLATION	Hand-driven with T15 star drive
GENERAL USES	Siding, decks, docks and boardwalks, and general exterior millwork and trim. This screw is not load rated. For load rated applications, please see the Strong-Drive - DWP Wood SS Screw



BENEFITS	Known brand name with a good reputation for high quality Offers painted head options to match wood In shiplap and S4S siding applications, the screw can be backed out and removed if a board needs replacement Better holding power than a siding nail over the long term
CONS	More expensive than a siding nail Hand driven; longer installation time Pre-drilling is sometimes necessary Only rated for wood construction - not metal

Delta recommends the following standard screw specifications:

SPECS	Trim-head screw, 6-lobe drive - 305 stainless steel
PENNY SIZE	#7
LENGTH	2-1/4"
HEAD	0.23" D.

3. FASTENER OVERVIEW

Nails are the most widely used fastener for wood siding installations. Delta Millworks' recommendation is a stainless steel ring-shank siding nail. A painted head is suggested in a collated roll that can be used with a siding nail gun. This fastener should suffice for the majority of our products under most environmental & structural conditions.

Screws are the most robust fastener option available. Screws can be backed-out, allowing planks to be removed and reinstalled without any major demolition work to the siding wall. Although ring-shank siding nails are suitable for wood siding installation, screws have better holding power over time. Please note that the recommended Type 305 stainless steel screws are only rated for fastening into wood. If you are using z-girts or other metal hat channel products for your furring strips, you will need to use a similar fastener that is rated for metal construction.

Stainless steel is strongly recommended for all woods and required for modified woods such as Accoya.

316 stainless steel is recommended for seaside, coastal, and extreme environments.

**Please refer to the previous sections of this Handling & Installation Guide for more information regarding techniques for working with our products. Please consult your professional installer to ensure proper installation techniques are used. Fastener selection should be determined by the builder or installer, not Delta Millworks.*

04 SECTION IV: ADDITIONAL RESOURCES

For more information on these products, technical information, structural data, and building codes pertaining to wood, please visit these sites below:

Accoya Technical Guides and Warranty Information:

<https://www.accoya.com/downloads/>

Building Codes, Technical & Fire Safety:

<https://www.awc.org/codes-standards>

Cypress Installation Guide:

http://www.cypressinfo.org/wp-content/uploads/Cypress_Siding_Installation.pdf

Lunawood Download Centre:

<https://lunawood.com/download-centre/>

Western Red Cedar Installation Guide:

<https://www.realcedar.com/siding/installation/>

GUÍA DE MANEJO E INSTALACIÓN

To view this Guide in Spanish, please scan the QR code below:

