Acetylated SYP

Installation Guide

⚠WARNING

Important Safety Precautions

Please read and follow all safety precautions and information installation guides for specific installation details and requirements prior to installing Kimberly Bay Acetylated Wood decking Failure to do so may result in serious injury or death.

⚠WARNING

To reduce the risk of trip/fall hazards and/or serious injury or death:

- Always secure and properly store boards on a dry, level, covered surface.
- Never leave loose boards scattered at the site.
- Always be sure all deck boards are firmly secured to the framing structure before walking on them.
- Always use standard protective gear including eye and hearing protection, hardhats, dust mask, work gloves and boots when transporting and/or cutting boards.

NOTICE

Kimberly Bay Acetylated Wood rail posts are not rated for ground or concrete contact. Direct contact of this product with the ground or concrete may lead to structural damage of this product. To reduce the risk of serious injury or death from a collapse hazard, Acetylated Wood decking should be installed only on a substructure rated for direct contact with the ground.

NOTICE

Use only stainless steel fasteners and connectors. Fasteners and connectors mad ewith corrosive metals may cause cosmetic damage and may over time degrade Kimberly Bay Acetylated Wood Products. Do not pressure wash wood products. Pressure washing may cause damage to the deck and deck finish.

Tools

Kimberly Bay Acetylated Wood requires no specialized equipment and can be installed using standard carpentry tools such as saws,.drills, etc

Storage and Handling (before and during construction)

⚠WARNING

To reduce the risk of death and/or serious injury from crushing or tripping:

Never allow Kimberly Bay Acetylated Wood to be dumped off a vehicle. Exercise caution when lifting and bending during loading/unloading to help avoid injury from strain and/or falling. Always operate forklifts, cranes, and other special handling equipment in accordance with manufacturer instructions.

NOTICE

To reduce the risk of property damage such as breaking, chipping, and scuffing: Elevate the wood above ground level and cover with plastic to protect against mud and debris prior to and during construction. Exercise care when offloading from a vehicle to prevent excessive bending and falling impact.

Information for Building Officials

Jurisdictional building officials may consult ICC Evaluation Services report number ESR-1690 for additional information on Acetylated Wood products at www.icc-es.org.

Deck Substructure

It is recommended the deck design be prepared or approved by a structural engineer or architect, and decks must meet the requirements of your local jurisdiction's building codes. Always obtain required permits prior to construction. Structural support requirements are the same when constructing a new deck or resurfacing an existing structure with Kimberly Bay Acetylated Wood decking. The substructure must be constructed to adequately support the required loads. In some cases, local snow loads may govern substructure requirements.

Check with the local building official.Specifications for deck construction are found in building codes and in the "Design for Code Acceptance 6" (DCA-6).

Joist Spacing

While 7/8" x 5.25" Kimberly Bay Acetylated Wood decking is suitable for joist spacing up to 16" on center when deck boards are installed perpendicular to the joists, joist spacing of 12" on center maximum is required when deck boards are at an angle to the joists (up to 45 degrees).

Figure A

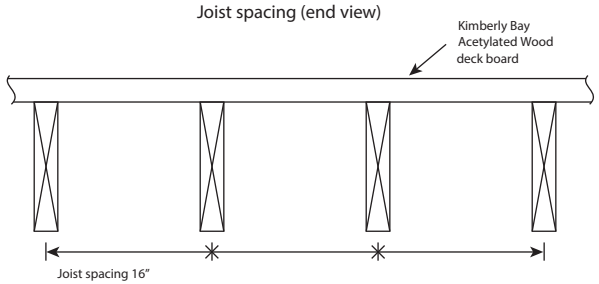
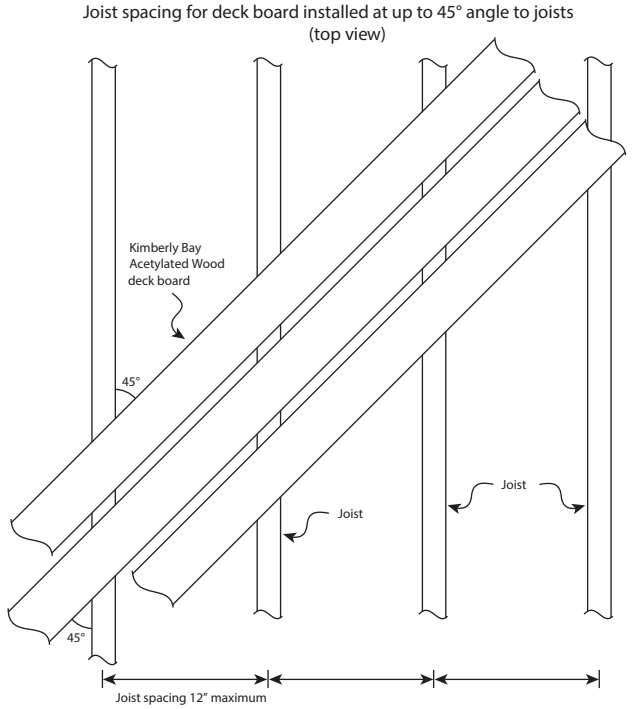


Figure B



Rail Post Installation

a) Install posts no farther apart than 6 feet on center for both code compliance and to accommodate the Kimberly Bay Acetylated Wood railing system.

b) Kimberly Bay Acetylated Wood posts are glue laminated in the factory. During installation, orient the post so that the bolts pass through the face of the post that has no glue lines.

c) Rail posts must be attached to the joists with stainless steel connectors and fasteners. The Simpson Strong-Tie® DTT2SS is a recommended connector. Always follow the connector manufacturer's guidelines for proper installation.

d) Kimberly Bay Acetylated Wood posts can be used to give a maximum rail height of 42". Install blocking using Simpson Strong-Tie® SDS25300SS (or comparable 1/4 x 3" stainless steel screws) to secure the Simpson Strong-Tie® DTT2SS connector to the joist. Outside washers used with the 1/2" thru-bolts should be stainless steel with a minimum outer diameter of 1.99". Properly installing post-to-joist connectors can provide rail post attachment strong enough to meet the code requirements stated in DCA-6.

Figure C

Rail post installation

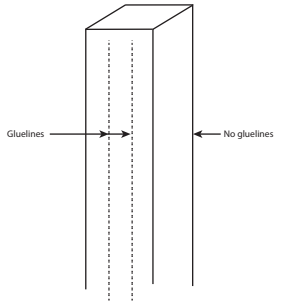


Figure D

Post to rim joist example

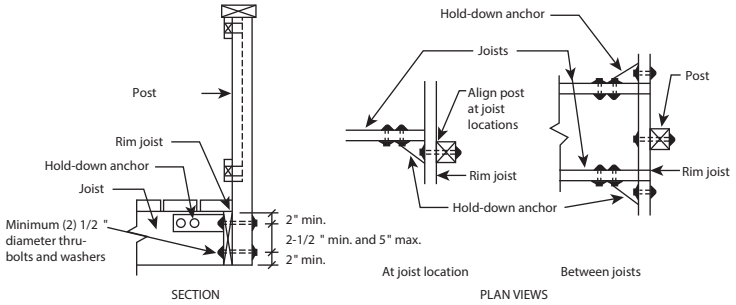
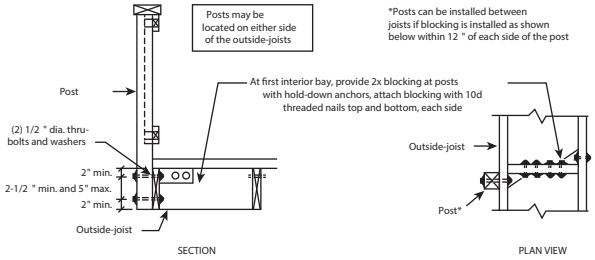


Figure E

Post to outside joist example



Section Two: Decking

General

To maximize the integrity, appearance, and performance of your decking, use the correct stainless steel fasteners and connectors. Properly attach the deck boards to the substructure. Consider using hidden fasteners made of stainless steel or plastic components for a clean, professional look.

NOTICE

Use only stainless steel fasteners and connectors. Fasteners and connectors made with corrosive metals may cause cosmetic or structural damage to wood products.

The end of each deck board must be adequately supported by a joist.

Before You Begin

Read the following section before the Step-by-Step Installation Guide.

⚠WARNING

Kimberly Bay Acetylated Wood rail posts are not rated for ground or concrete contact. Direct contact of this product with the ground or concrete may lead to structural damage of this product. To reduce the risk of serious injury or death from a collapse hazard, Kimberly Bay Acetylated Wood decking should be installed only on a substructure rated for direct contact with the ground.

– Each deck board must span a minimum of four joists and be connected to each joist with either two hidden fasteners or two stainless steel through-face fasteners according to the fastener manufacturer's instructions .

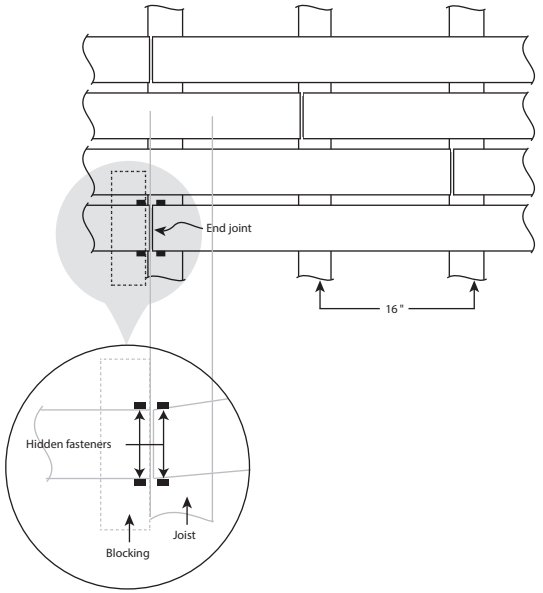
– Space deck boards to allow about a 3⁄16" - ¼" gap between parallel boards when using through-face fastening.

– When using hidden fasteners, the space between deck boards will be determined by the hidden fastener system .

– For best appearance and deck strength, end-butted joints should be staggered to prevent direct alignment of the ends .

Figure F

Staggered end joints (top view)



Note: End butted joints should be staggered to prevent direct alignment of the ends. Blocking may be required at butted joints when using hidden fasteners.

Fasteners

NOTICE

Use only **stainless steel fasteners** and connectors. Fasteners and connectors made with corrosive metals may cause cosmetic damage and may over time degrade Kimberly Bay Acetylated Wood products.

Fasteners made with corrosive metals can cause deck stain and coating to leach. All metal hardware used with this product must be stainless steel to avoid this risk. Hidden fasteners must be either stainless steel or plastic. All metal fasteners or connectors in contact with Kimberly Bay Acetylated Wood must be stainless steel.

Fasteners used in coastal regions must be 316 stainless steel. Two methods can be used to fasten deck boards: hidden fasteners or through-face fastening with screws.

– Kimberly Bay Acetylated Wood deck board edges are designed with a groove to accommodate hidden fasteners.

– Hidden fasteners must be installed per fastener manufacturer's instructions.

– Some hidden fastener systems provide start/stop clips to be used for attaching the starting deck board and the final deck board to the ledger board and band joist. Start/stop clips must also be installed per fastener manufacturer instructions.

– If you are not using start/stop clips, see Step-by-Step Installation Guide for attachment with stainless steel screws.

Step-by-Step Installation Guide

Please read the Before You Begin portion of this installation guide before proceeding with the step-by-step installation process here.

Kimberly Bay Acetylated Wood decking is specifically designed to be installed with hidden fasteners. For hidden fasteners, proceed with Option 1 of the following instructions.

Alternatively, for traditional through-face fastening using stainless steel screws, proceed to the instructions for Option 2 (beginning on page 6).

Option 1: Hidden Fasteners

Only use hidden fasteners with stainless steel screws.

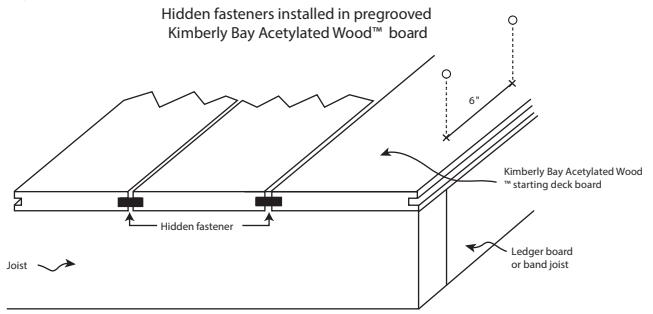
Step 1

Some hidden fastener systems include start/stop clips to be used with the starting deck board and the final deck board. If the chosen hidden fastener system includes start/stop clips, follow the fastener manufacturer's instructions.

Attach the starting deck board to the joist using start/stop clips.

If start/stop clips are not included, stainless steel screws can be used. Attach the starting deck board to the joist using #10 2.5" stainless steel screws into the face of the starting deck board 1 from the outside edge. Predrill pilot holes through the deck board with a 7/64" bit before installing screws. Install the screws into the joist every 6" along the length of the deck board.

Figure G



Step 2

To attach the other edge of the starting deck board, install the hidden fasteners by engaging the grooved edge of the deck board and fastening to the center of each joist. (See Figure G.)

Step 3

Continue installation of deck boards following fastener manufacturer's instructions.

Step 4

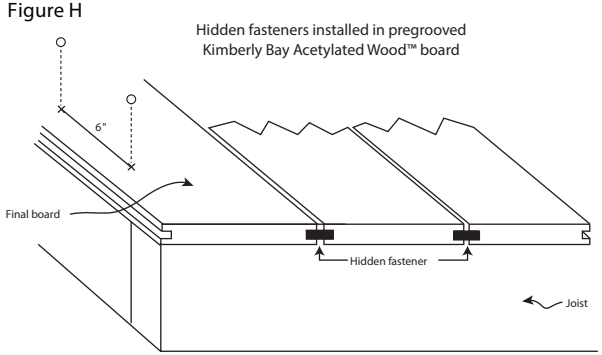
Repeat step 3 until you reach final deck board.

Step 5

To attach the final deck board, engage the first edge onto the hidden fasteners. Then attach the other edge to the joist using start/stop clips (follow start/stop clip manufacturer instructions).

If start/stop clips are not included, use stainless steel screws to engage the first edge onto the hidden fasteners. Then attach the other edge to the joist using #10 2.5" stainless steel screws 1 from the outside edge. Predrill pilot holes through the deck board with a 7/64 bit before installing screws. Install the screws every 6" along the length of the deck board into the joist.

Figure H



Option 2: Through-face Fasteners

NOTICE

Predrill pilot holes for all screws to prevent splitting and cracking. All screws must be stainless steel.

Step 1

Attach the starting deck board to the joist by installing a #10 2.5" stainless steel screw (predrill pilot holes through the deck board with a 7/64 diameter bit) 1 from the outside edge. Install the screws every 6" along the length of the deck board into the joist.

Note: When attaching end-butted joints, screws will be 3/8" from end of joint.

Step 2

To attach the other edge of the starting deck board, insert a #8 2.5" stainless steel screw (predrill pilot holes through the deck board with a 3/32 diameter bit) 1 from the edge and into each joist. (See Figure I.)

Step 3

Attach additional deck boards by inserting two #8 2.5" stainless steel screws per deck board (predrill pilot holes through the deck board with 3/32" diameter bit) 1 from each edge and into the center of the joist. (See Figure I.) Space the deck boards to allow about a 1/4" gap. At end of butted joints, use two screws on ends of each board.

Step 4

Repeat step 3 until you reach final deck board.

Step 5

To attach the final deck board, install a #10 2.5" stainless steel screw (predrill pilot holes through the deck board with a 7/64" diameter bit) 1 from the outside edge and every 6" and into the rim/band joist or ledger.

Note: When attaching end-butted joints, screws will be 3/8 from end of joint.

Step 6

To attach the inside edge of the final deck board, insert a #8 2.5" stainless steel screw (pre-drill pilot holes through the deck board with a 3/32" diameter bit) 1" from the edge and into each joist. (See Figure J.)

Figure I

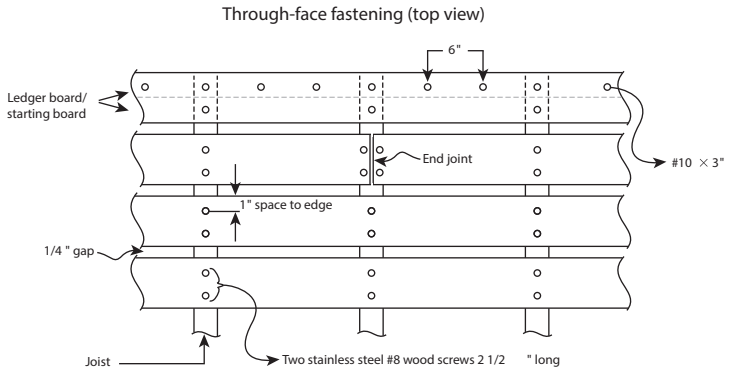
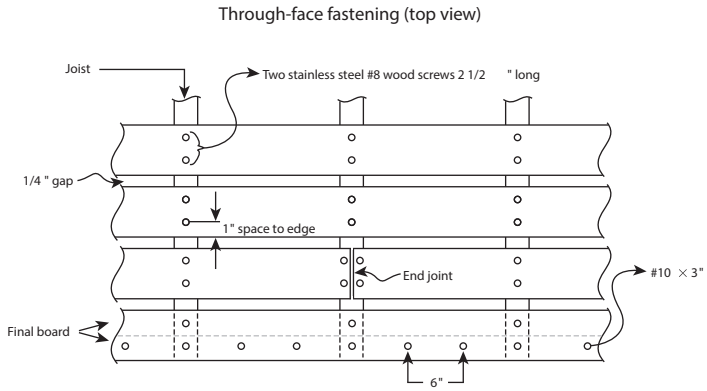


Figure J



Section Three: Fascia

General

Installing Kimberly Bay Acetylated Wood fascia board to the band joists creates a streamlined, attractive appearance.

– The fascia ends can be mitered or end butted.

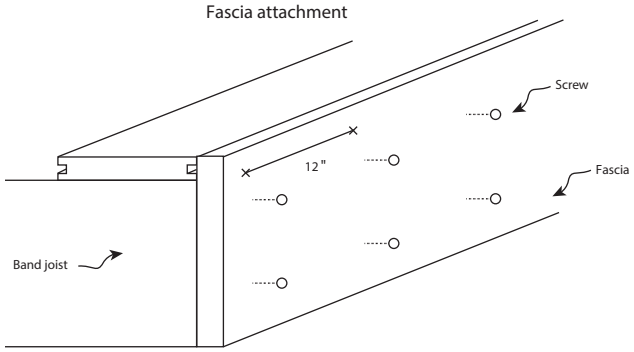
Step-by-Step Fascia

a) Align the top edge of the fascia board with the top edge of the deck board.

b) Using a 3/32″ drill bit, predrill pilot holes through the fascia board.

c) Screw the fascia board to the band joists with two #8 2.5″ stainless steel screws spaced every 12 along the board.

Figure K



Section Four: Railing

General

This section refers only to the Kimberly Bay Acetylated Wood railing system. When installed properly, the Kimberly Bay Acetylated Wood railing system meets or exceeds the requirements outlined in DCA-6. For installation of railing systems other than the Kimberly Bay Acetylated Wood railing system, refer to that manufacturer's installation guide.

Railing Components needed to build 6' section (Some parts sold separately)

Item	Description	Quantity
1	Top rail cap	1
2	Top rail base	1
3	Bottom rail base	1
4	Balusters	15
5	Rail-to-post connector set (1 upper mounting bracket; 1 lower mounting bracket; 10 #10 × 1 3/4″ stainless steel screws; 2 #8 × 3/4″ stainless steel screws)	2
6	Screws: #8 × 2″ stainless steel (for balusters)	30
7	Screws: #10 × 1 3/4″ stainless steel (for top rail cap)	6

6' Railing Kit Includes top rail cap, top rail base, bottom rail, 2 upper mount connectors, 2 lower mount connectors (balusters sold separately).

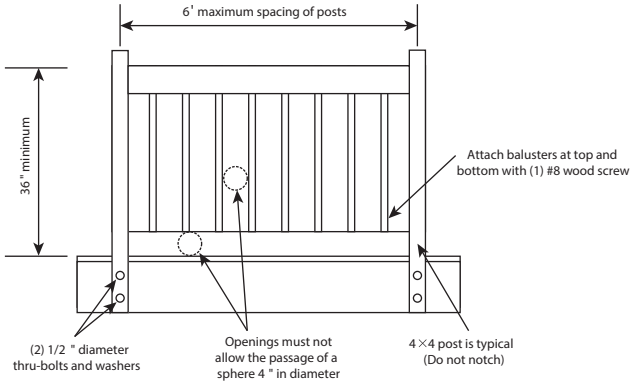
Screws for fastening balusters and top rail cap sold separately.

Step-by-Step Railing

Please note that the following Step-by-Step Installation Guide is specifically designed to be used with the Kimberly Bay Acetylated Wood railing system. The following step-by-step instructions below specify how a complete railing system section is to be attached between Kimberly Bay Acetylated Wood rail posts that are installed 6 feet on center. Since actual post spacing can vary slightly, Kimberly Bay Acetylated Wood horizontal railing components are provided longer than necessary so that they can be cut to the lengths needed and give a precise finished fit. Repeat the steps as required for each railing section.

Figure L

Deck rail requirements



Step 1: Preparation of the Top Rail Cap and Bottom Rail

a) Measure the distance between the inside face of the two posts where this section of railing is to be installed.

b) Cut top rail cap and bottom rail to the measured length. (Preparation of the top rail base will be completed in Step 3: Baluster Spacing.)

Step 2:

Attach the Top Rail-to-Post Connector to Post–This step is only to install the connector

a) Measure up 40 5/8″ from the top of the deck board surface on the post and lightly mark the inside face of the post. This will establish the height for the top of the rail-to-post connector used for the top rail base.

b) Find the center of the post and mark it on the line established above.

c) Center the top edge of the top rail connector on the center mark on the line.

d) Mark the location of the pilot holes on the post, using the connector holes as a guide. (The two holes will be at the top).

e) Drill three pilot holes into the post using a 5/32″ diameter bit to a depth of 1 1/2″.

f) Repeat for installation of top rail connector on other post.

Step 3: Determining Baluster Spacing

a) Measure the distance from the inside of the top rail connectors and cut the top rail base to length.

b) Place the top rail base on the top rail connectors. Do not attach at this time. c) Determine the center-to-center spacing for the balusters from post to post. Spacing will be used for determining pilot hole locations in both the bottom rail and the top rail base.

d) Locate the shallow groove on the underside of the bottom rail. This groove indicates the centerline of the bottom rail and will aid in locating the pilot holes for baluster screws.

e) Mark the locations of the pilot holes for balusters in the centerline groove of the bottom rail.

f) Mark the locations of pilot holes for balusters in the centerline groove of the top rail base. These will be used in Step 7.

g) Using a 1/8″ diameter drill bit, predrill pilot holes through the bottom of the bottom rail as marked. Repeat this process until all pilot holes are complete.

h) Repeat the preceding step G for the top rail base.

Step 4: Railing Assembly

a) The ends of the balusters have factory pre-drilled pilot holes. Align pilot holes in the top rail base with pilot holes in the end of the balusters.

b) Attach the balusters to the top rail base using #8 2" stainless steel screws.

c) Continue until all balusters are attached to the top rail base.

d) Stand the assembly with the top rail base resting on a flat surface.

e) Place the bottom rail into position on the ends of the balusters. Make sure the bottom rail is resting flat against all baluster ends.

f) Attach the middle baluster to the bottom rail using a #8 2" stainless steel screws, then attach the other balusters working from the middle toward the ends.

g) Continue until all balusters are attached to the bottom rail.

Figure M

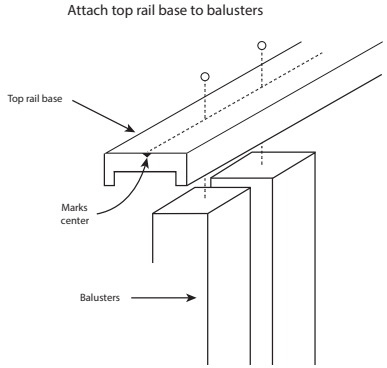
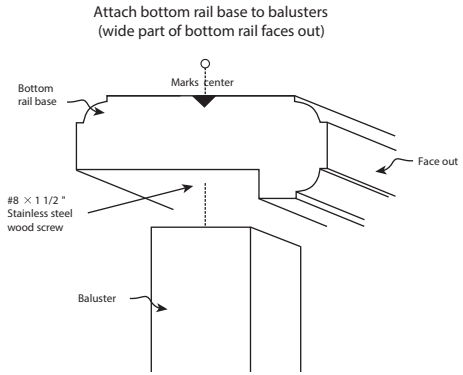


Figure N



Step 5: Installation of the Rail-to-Post Connector to Bottom Rail

NOTICE

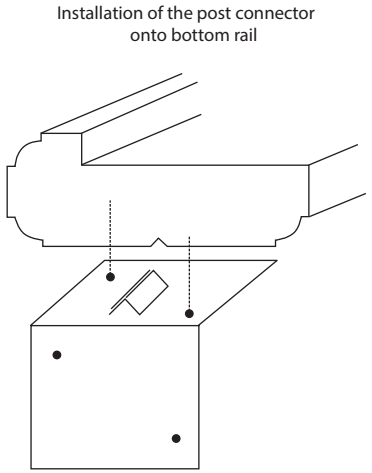
Do not drill completely through the top rail cap. It is easy to overdrill. This will result in damage to your Kimberly Bay Acetylated Wood railing system.

a) Using the rail-to-post connector as a guide, place the tab on the top of the bottom rail connector in the groove located on the bottom of the rail. Make sure the connector is flush with the end of the bottom rail and mark the location of the pilot holes. The vertical leg of the connector should be pointing down when oriented to the final installed position.

b) Using a 1/8 diameter drill bit, predrill 1/2" deep pilot holes in the bottom of the bottom rail as marked.

c) Attach the connector using #8 3/4" stainless steel wood screws.

Figure O



Step 6: Attach the Bottom Rail to Post

a) Place the railing assembly on the top rail connectors (which were attached to the posts in Step 2).

b) Center the bottom rail connector on the post.

c) Using the bottom rail connector holes as a guide, drill pilot holes into each post using a 5/32" diameter drill bit to a depth of 1-1/2".

d) Attach the bottom rail to the post by using two #10 1-3/4" stainless steel screws.

e) Repeat Step B through Step D of this section on the other end of the bottom rail.

Step 7: Attach Top Rail Base & Top Rail Cap

NOTICE

Do not drill completely through the top rail cap. It is easy to overdrill. This will result in damage to your Kimberly Bay Acetylated Wood railing system.

a) Place the top rail cap onto the top rail base and secure. Make sure the edges of the cap and base are flush at both ends of the railing. (Clamps may be used to hold the pieces in place.)

b) Using the connector as a guide, use a 5/32" diameter drill bit and predrill the pilot holes no more than 1-1/2" deep through the top rail base and into the top rail cap. (This will result in drilling only 3/4 deep into the top rail cap.)

c) Use the #10 1-3/4" stainless steel screws and attach the top rail cap to the top rail base.

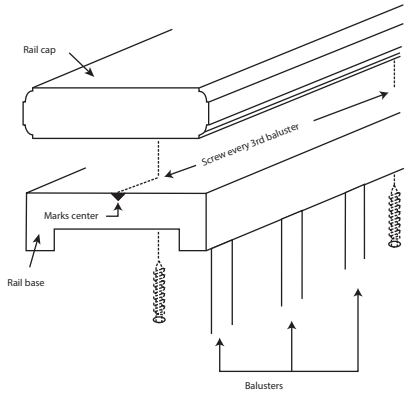
d) Repeat Step B and Step C for other end of railing.

e) From the underside of the top rail base, use a 5/32" drill bit to predrill 1-1/2" deep pilot holes up through the top rail base and into the top rail cap. Do not drill completely through the top rail cap. Repeat the predrilling about every 12" or between every third baluster along the length of the rail.

f) Attach the top rail cap by using #10 1-3/4" stainless steel wood screws.

Figure P

Complete attachment of top rail cap to top rail base



Section Five: Stairway Rails

General

Please note that the following Step-by-Step Installation Guide is specifically designed to be used with the Kimberly Bay Acetylated Wood railing system. Assembly of stairway guardrails is similar to railing installation because the same components will be used. owing requirements section. Repeat the steps as required for each section of stairway railing.

Requirements:

- Kimberly Bay Acetylated Wood stair stringers and handrails are not yet available.
- Stairways with a total rise of 30" or more require guardrails.
- Stairway rails made from Kimberly Bay Acetylated Wood should be installed to meet requirements of DCA-6.
- The minimum stair guardrail height is 34" as measured from the top surface of the stair tread at the stair nose.
- The maximum spacing between stair guardrail posts is 6 feet.
- The maximum opening between stair balusters is 4-3/8"
- The maximum triangle opening between the stair tread and the bottom rail is 6".

Figure Q

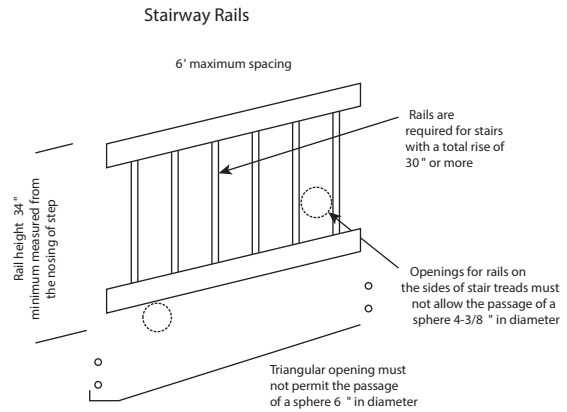
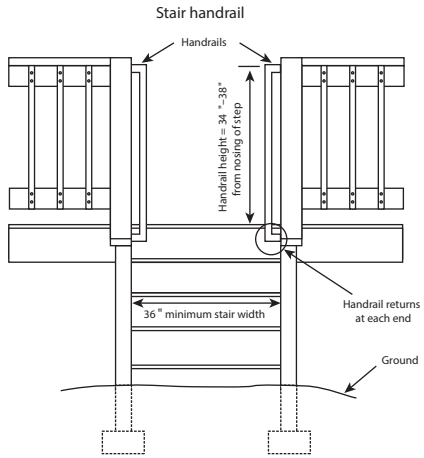


Figure R



Note: Rail/balusters shown are not representative of Kimberly Bay Acetylated Wood railing system.

Instructions

a.) Install Kimberly Bay Acetylated Wood rail posts onto the outside face of the stair stringers using two 1/2" diameter stainless steel bolts in each.

b.) Kimberly Bay Acetylated Wood posts are glue laminated in the factory. During installation, orient the post so that the bolts pass through the face of the post that has no glue lines.

c.) Install stair treads using the guidelines in Section Seven.

d.) Install stairway rail using Kimberly Bay Acetylated Wood railing components following steps in Section Four with the following modifications:

1. Rail ends will have to be miter cut.
2. Top rail attachment height measurements up onto posts will be from the stair tread top surface at the stair tread nose.
3. Bottom rail attachment height must be set to not allow passage of 6 diameter sphere, as specified in DCA-6 guidelines.
4. Pilot holes will no longer be drilled perpendicular to the board faces but on angles as required.
5. A different "angled" rail-to-post connector is required for stairway rails. Check local hardware stores for this stainless steel hardware.

Section Six: Handrails General

Kimberly Bay Acetylated Wood graspable handrails are not yet available. Choose an available high-quality alternative and install it according to manufacturer's guidelines and in compliance with local building codes.

Requirements

- Both postrails and handrails should be used at stairs. Stairs with four or more risers require a handrail on at least one side. Handrails, unlike rails, must be "graspable." Kimberly Bay Acetylated Wood postrails cannot be used as handrails. For more information, see the stair handrail section of DCA-6 or your local building code.
- The handrail height shall be between 34" and 38".
- Attach the handrail to the rail posts or the top rail base with stainless steel hardware. (See Figure R above)

Section Seven: Stairway Treads and Risers

General

Kimberly Bay Acetylated Wood stair treads are available with rounded nose and grooved surface. Kimberly Bay Acetylated Wood decking can also be used for stair treads and risers. The basic requirements are shown in DCA-6. However, check with local code officials to ensure code compliance and to reduce risk of serious injury.

Kimberly Bay Acetylated Wood decking is not suitable for use as stringers.

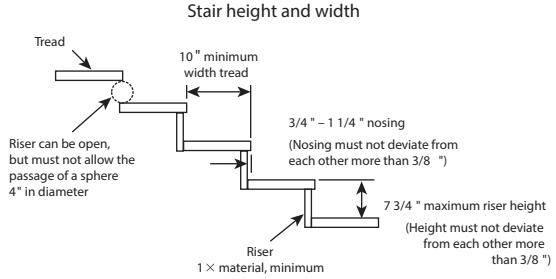
Predrill pilot holes (3/32" diameter through the boards) and use through-face fasteners (#8 2 1/2" stainless steel screws) as described under "Decking Installation Option 2: Through-face Fasteners to attach deck boards or stair treads to the stair stringers.

Requirements

- The minimum stair width is 36".
- The minimum tread width must be 10" from stair tread nosing to tread nosing.
- The nose must extend between 3/4" to 1 1/4" beyond the face of the riser.
- The tread widths and stair tread nose length must not deviate from one another by more than 3/8".
- The maximum stair height from the top of one tread to the top of the next must not exceed 7 3/4".
- Stair heights must not deviate from each other by more than 3/8".
- The maximum stringer spacing from the outside face of the stair stringer to the center of middle stringer must not exceed 18". Each Kimberly Bay Acetylated Wood stair tread should always be attached to three or more stringers.
- An open riser must not allow passage of a 4" diameter sphere, as specified in DCA-6.

Figure S

Stair height and width



Section Eight: Finishes and Maintenance

General: Finishes

Wood industry experts, like the Forest Products Laboratory, recommend that all exterior-exposed wood surfaces be coated to exterior coating provides wood some protection against UV light degradation and typically makes cleaning dirt and mold stains resist rot, decay, and movement, should also be given the surface SYP Products accepts most types of exterior stains and paints and applicable to products coated within 30 days of installation.

TIPS

All stains require open pores for adequate and even absorption into the wood. To achieve these results and avoid blotches on the wood, the following best practices are recommended:

- Sand bare wood lightly with a medium grit sandpaper -or-
- Apply a thin coat of wood conditioner, using an inexpensive brush. Give the conditioner approximately 15 minutes to dry before applying the stain.
- Always test stain on piece of scrap wood.

General: Maintenance

NOTICE

To reduce the risk of damage to your decking:

Never use harsh cleaners. Commercially available deck cleaners may contain concentrations of bleach and other chemicals that may damage the surface.

Never pressure wash. Pressure washing can result in serious surface damage.

When removing snow or ice, always use tools that will not scratch or damage the surface finish. Use a broom or plastic-edged shovel.

- Routinely keep your Kimberly Bay Acetylated Wood deck free of debris such as leaves and grass clippings by sweeping or blowing them off.
- Clean your Kimberly Bay Acetylated Wood deck with water and a mild soap (neutral pH) as needed.

Section Nine: Legal and Contact Information

Disclaimer

Read all safety precautions and information in this guide before beginning construction and be sure that a copy of this manual is available at each jobsite where Kimberly Bay Acetylated Wood products are used. Installation of Kimberly Bay Acetylated Wood must conform to the specifications provided in this manual. Kimberly Bay Acetylated Wood decking should only be used for single-story, above-ground, residential decks and balconies. Kimberly Bay Acetylated Wood components are not intended for use in primary structural elements of the deck such as joists, girders, columns, stair stringers, etc. All fasteners and connectors shall be stainless steel, with the exception of hidden fasteners, which may be stainless steel or plastic, to maintain resistance to corrosion.

This installation guide does not modify or otherwise enlarge the limited warranty that accompa-nies this Kimberly Bay Acetylated Wood product. It is the builder's responsibility to inspect the Kimberly Bay Acetylated Wood at the time of purchase and/or delivery. If questions arise about the suitability of this product for a project, consult a properly qualified professional such as an engineer or architect for an evaluation and recommendations.

It is recommended that the builder obtain a copy of the current Prescriptive Residential Wood Deck Construction Guide (DCA-6) published by the American Wood Council (AWC) in conjunction with the American Forest & Paper Association, Inc. It is available as a free pdf download from the AWC website at http://www.awc.org/Publications/DCA/DCA6/DCA6-09.pdf.