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# CABLEVIEW® WOOD RAILING INSTRUCTIONS

Choose **CABLE RAILING DIRECT™** for all your fittings and cablerail assemblies!

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**Just follow these simple steps:**

## 1. INTRODUCTION/TIPS

Thanks to its density and durability, Ipe is recognized as one of the best timber species to use for exterior decks and railing. When working with Ipe, keep in mind the following:

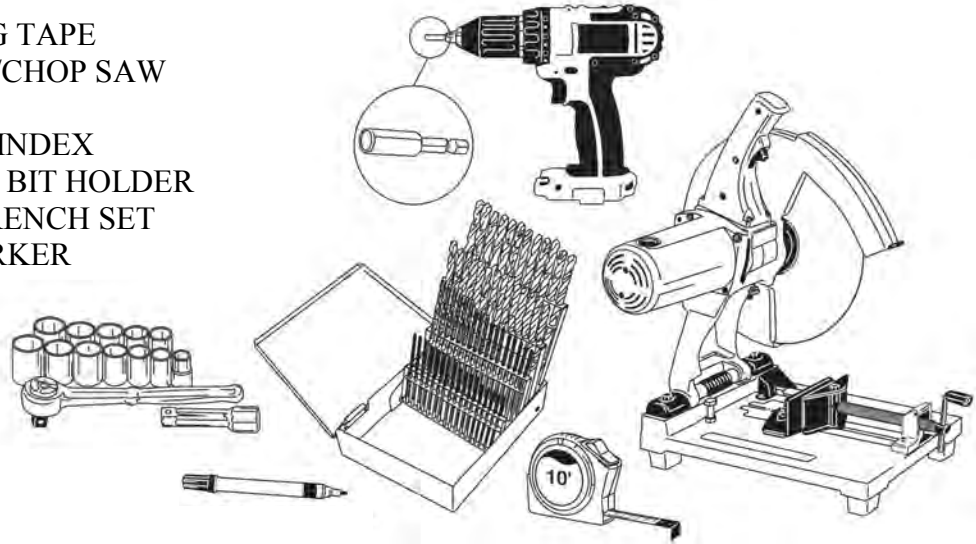
- Make sure to check and follow local building codes
- Wear safety glasses and masks at all times to keep sawdust out of eyes and mouth
- Cut wood using carbide-tipped saw blades
- Drill holes before inserting screws
- Use only stainless steel screws to fasten. Square drive is recommended to minimize stripping.

### IMPORTANT TIPS:

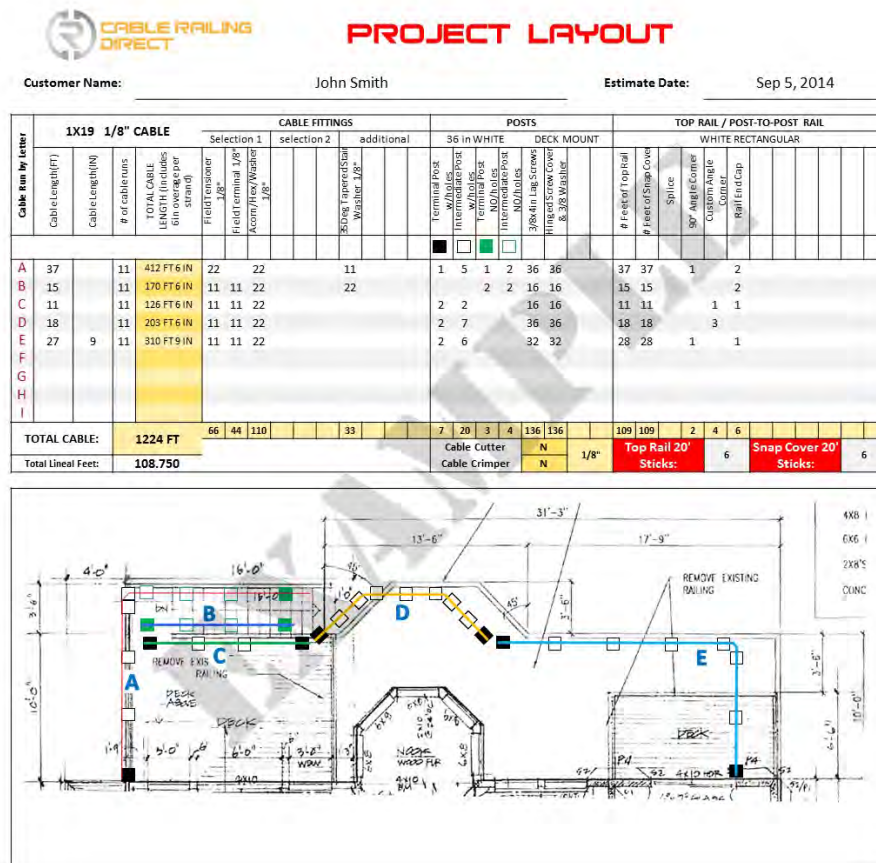
- Store Ipe at the installation location at least one week prior to installation, allowing the wood to acclimate to the humidity levels of its environment. Keep dry and out of direct sunlight by covering. Stored railing should be supported to prevent warping and kept off the ground. Used scraps of wood between the boards will allow air circulation. Failure to allow enough time for the wood to acclimate can increase the chances of cracking, checking, warping, etc. after installation.
- Upon exposure to sunlight, Ipe will naturally darken, though specific areas might darken at different rates. Differences in shade between adjacent areas will become less noticeable with time, as the entire surface darkens to its long-term shade. Ipe will oxidize and turn a silvery grey if you do not put any finish on your wood. If you prefer this color or would rather not bother with oil finish, you may leave the wood untreated.

## 2. NECESSARY TOOLS

1. MEASURING TAPE
2. CROSS CUT/CHOP SAW
3. DRILL
4. DRILL BITS INDEX
5. UNIVERSAL BIT HOLDER
6. SOCKET WRENCH SET
7. BLACK MARKER



## 3. LAYOUT



NOTE: This sheet should be included with your shipment. Call 888-686-7245 if you do not have this.

Determine where the cable will start and stop (ie; Sections).

Reference the color-coded layout sheet (Fig 1) if it was included with these instructions.

Fig 1

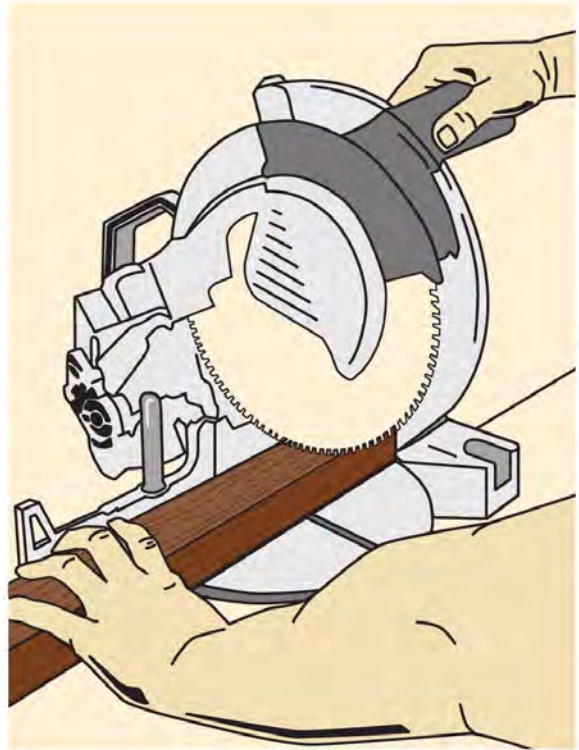
#### 4. CUT POSTS TO LENGTH

Fig 2

Posts are shipped oversized to accommodate a variety of configurations and may need to be cut to length. If posts need to be cut, use a carbide tipped blade on a cross cut/chop saw (Fig 2). Cut posts to the appropriate height given your desired overall railing height including your top rail.

#### **IMPORTANT:**

- Make sure you are cutting the correct end of the post.
- Cut slowly through the wood to minimize splintering on the bottom of the board.
- Have the good side face up while cutting to minimize splintering on the ends.
- Before cutting stair posts, refer to Step 9.



**NOTE:** For 36" residential height, there are 11 holes/cables.

For 42" residential/commercial height there are 13 holes/cables.

Install rail posts flush to the inside or outside of the deck frame, spacing them 5' apart or less.

Use 2 3/8" through-bolts to attach 4x4 wood posts to the deck framing. Be careful not to over-tighten the fasteners, as this will crush wood fibers and compromise the integrity of the post.

Simpson Strong Tie DTT22 brackets are available for rail post connections attached inside the frame. This bracket nicely transfers normal and perpendicular stress into parallel shear loads that work with bolts to increase load capacity. The design of these brackets complies with IRC and IBC code requirements for a safe and secure hold. They fasten easily to a single 2x joist using the provided screws, and accept a 3/8"-1/2" hex bolt. A washer must be installed between the nut and seal.

Do not notch the guard posts where they connect to deck framing. These ends of the guard post are subject to the greatest bending force. This method often results in the post cracking at the notch. Instead, it is recommended that you fasten your 4x4 posts at their full cross-section, as this will provide the best and strongest result.

## 5. INSTALL POSTS

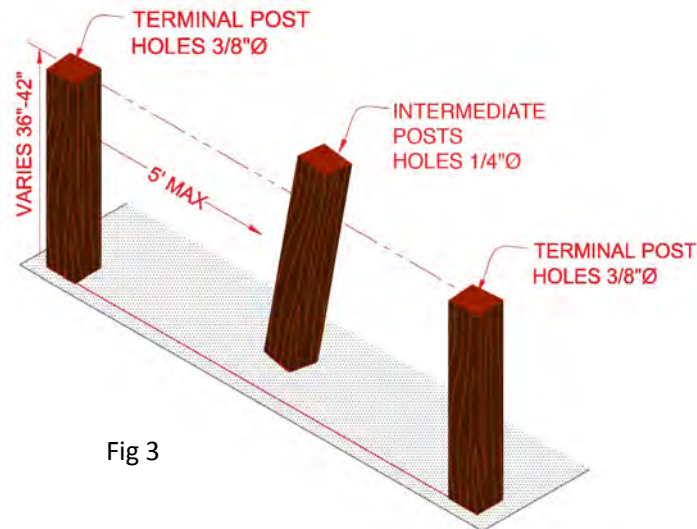


Fig 3

Refer to the layout (Fig 1) for proper post location.

Use the layout (Fig 1) to determine post position. Additional blocking may be needed for strength and should be added at this time.

Check your local building code requirements to determine approved mounting techniques. Fig 4 shows typical mounting options.

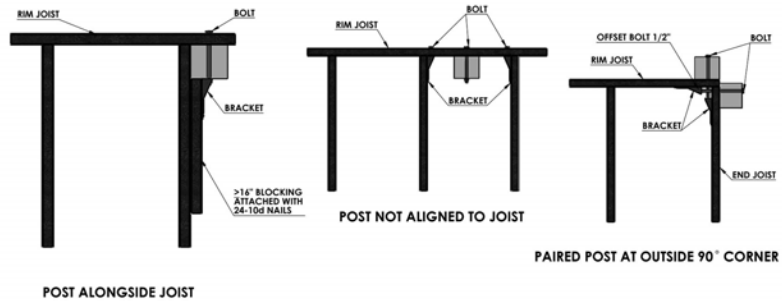
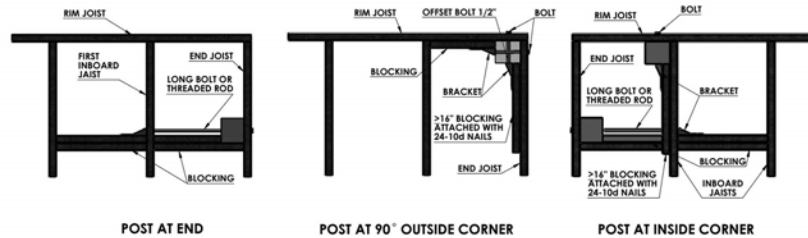


Fig 4

Adjust mounting location up or down, as needed, keeping in mind the following:

1. Overall rail height. (36"-42")

2. Gap between the edge of the board and the first cable (3").



3. Depending on the mounting hardware chosen, drill (2) appropriately sized holes through the base of each post. Use the following chart (Fig 5 & 6)

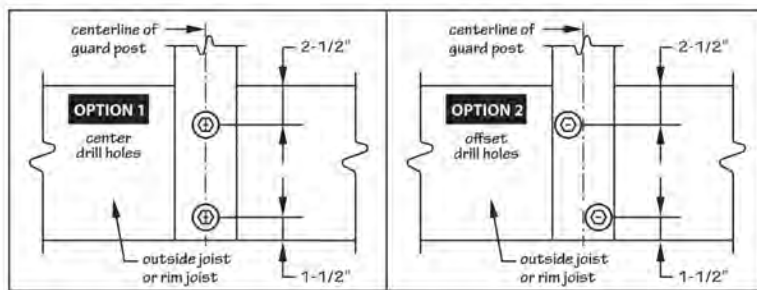


Fig 5

Hardware Size	Post Hole Size
3/8" Bolt	13/32"

Fig 6

## 6. INSTALL TOP RAIL

**6A. Measure and cut top rail.** Keep in mind that the top rail is used in the longest lengths practical since longer railings will incorporate more posts and strengthen the handrail.

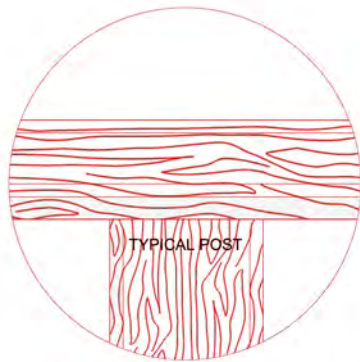


Fig 7

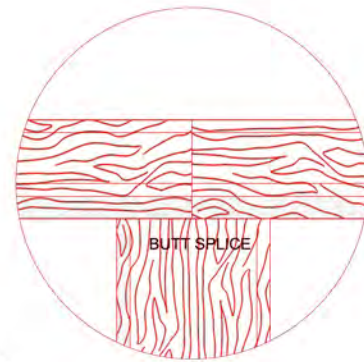


Fig 8

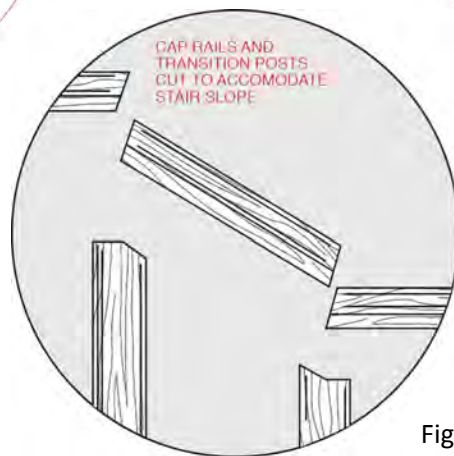


Fig 9

Top rail may run continuously from the horizontal to accommodate angles (Fig 9). Mitre cuts are required.

To attach top rail to post, first position and center top rail over a plumbed post. Terminal posts - where the cable starts and stops, thus transferring the highest loads - should have four screws through the top rail into the post. Intermediate posts only need two screws (Fig 10).

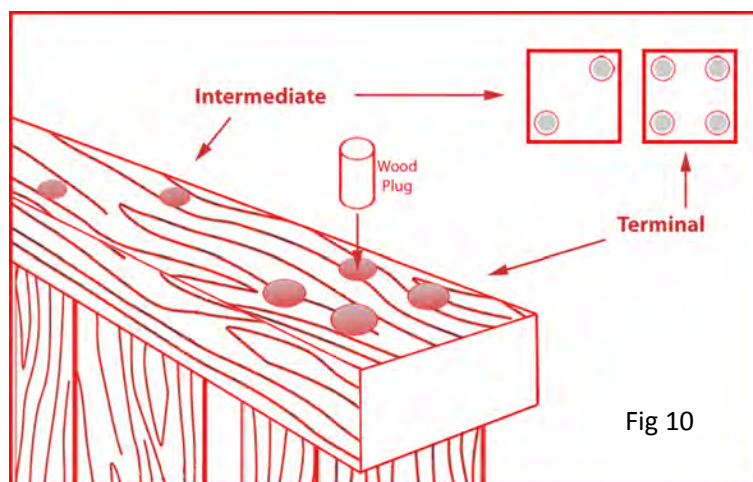


Fig 10

If using our Installation kit with 3/8" Ipe Plugs and #10x3" Square Drive Deck Screws, follow this procedure:

- Once the drill locations have been identified and marked, drill through them one at a time using the 7/64 straight bit to create pilot holes. These holes should be slightly deeper than the overall screw length. Otherwise, the screw might bottom out and later break off (Fig 11).

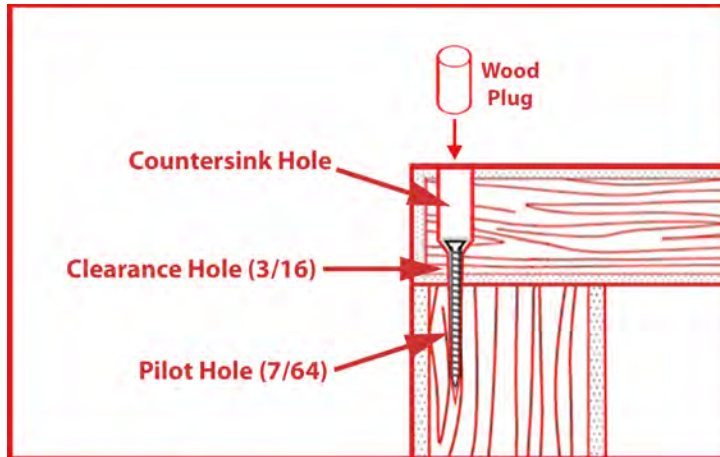


Fig 11

- For the top rail only, drill 3/16" clearance holes into the pilot hole you have just drilled.
- Using the 3/8" countersink included in the installation kit, drill the screw pilot holes.
- Drive each screw through these holes using the supplied square drive bit, to attach the top rail to the post. Seat the screw head firmly into each countersink hole.

## 6B. INSTALL PLUGS

1. Paying attention to plug color and grain, choose the best plug for each hole. Brush a layer of the included glue across the bottom and sides of the plug.
2. Gently tap the plug into the hole using a mallet, until you feel it seat against the screw head. Wipe away excess glue.
3. Once the glue is dry, trim the wood plug until it is nearly flush with the surrounding surface. Use a flush-cutting saw or chisel and mallet to do this.
4. With sanding block that has 80- or 100-grit sandpaper, grid the plugs down the rest of the way, until they are flush with the surrounding wood. Repeat these steps for each plug.

## 7. FINISHING

### End Sealing

In order to prevent any end checking, we ship our Ipe boards with the endgrain sealed by clear wax. Cutting your boards will expose fresh endgrain, which will compromise the integrity of your boards if left unsealed. We recommend applying an endgrain sealant within 24 hours of a fresh cut. Our shop offers DeckWise End Grain Sealer by the quart.

Apply end grain sealer across the ends of the boards to prevent splitting, checking, and cracking. Do not apply to the other surfaces of your boards, and clean up any spills with soap and water. Sealant should be applied with a paintbrush and will dry clear.

### Finishing

Like all woods, Ipe will lose moisture and color over time. To maintain the initial deep reddish-brown color of your Ipe and better retain its moisture, you should regularly apply oil finish, preferably every 3 to 6 months, in consideration of your local climate.

We offer Penofin Deep-Penetration Oil Finish for exotic and domestic hardwoods. This deep-penetration formula soaks into the wood for complete protection, rather than merely coating the surface. Application is simple and quick, and results in a clear, UV-protective, mildew-resistant coating that won't leave a surface film and allows the wood to breath.

Follow these steps for application:

1. Once your railing has been installed and cleaned, apply a moderate coat of the stain.
2. Allow stain to sit for 20-30 minutes, so that it may properly penetrate the wood.
3. Wipe the surface thoroughly clean to remove excess finish.

If you would rather let your Ipe railing naturally fade to a soft silver color, then you don't have to worry about regular oil treatments. We still recommend an ininitial application following installation, however, as this will better ensure that the Ipe retains its oils and stability.

## 8. READY FOR CABLES

Refer to each assembly respective instructions for each cablerail assembly.

Need Assistance? Call 1-855-820-8439 ([VIEW](#))

## 9 POST-TO-POST INSTALLATION (Not all designs will have this)

### A POST-TO-POST RAIL

can be used in the following ways:

- Support for a wood top rail
- Handrail for stairs

#### 1) Support for a wood top rail.

Must be installed sequentially starting from the first terminal post. Hold the mounting bracket centered against the inside face of the post, and 1/16" from to the top of the post (Fig 13). Mark with a felt tipped pen the two holes (Fig 12). Center punch the marked holes and drill pilot holes into post to accept 2 #12 x 3/4" stainless pan head screws (included). Using these screws, attach mounting bracket to post (Fig 12). Repeat procedure for the next post. With the chop saw, cut the **POST TO POST RAIL** to length. At this time, loosen or remove anchors to allow the **POST TO POST RAIL** to be inserted over the brackets. Re-tighten the posts.

The **POST TO POST RAIL** is then screwed into place by pre-drilling 1/8" pilot holes through the rail into the bracket and securing with 2 #8 x 3/4" stainless pan head screws (Fig 14). A variety of customer supplied top rail wood works well in this application.

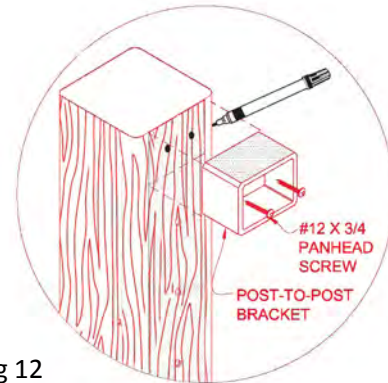


Fig 12

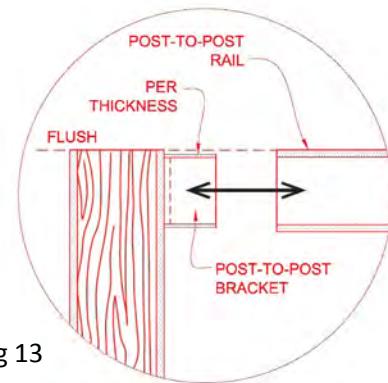


Fig 13

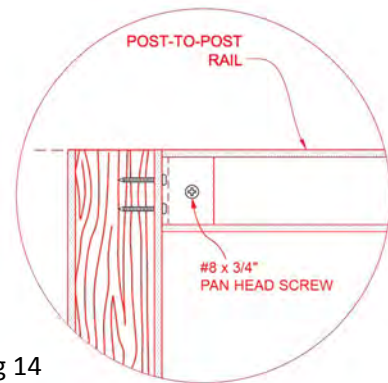


Fig 14

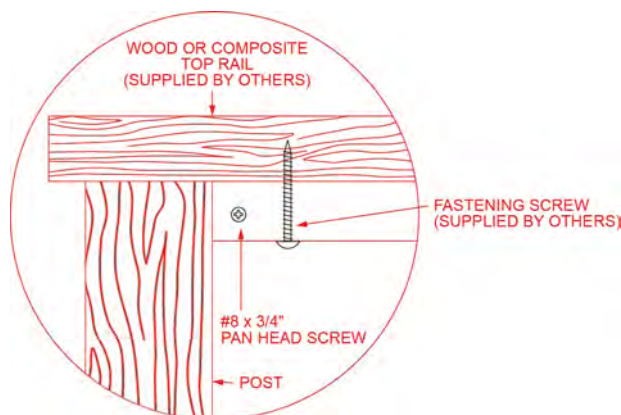


Fig 15

Usually drilling up from the bottom through the POST TO POST RAIL and screwing into the wood works the best (Fig 15).



## 90 DEGREE POST-TO-POST INSTRUCTIONS:

Determine the proper placement of the plastic bracket vertically on the post. This is based on where you plan to attach the Post-To-Post rail.

Insert # 8 x 1 ¼ Screw, hold in position, pushing hard on the corner of the bracket (Fig 16).

Using the proper size Philip driver, power turn each screw until it drills into the post and tightens.



Fig 16



Fig 17

## 135 DEGREE POST-TO-POST INSTRUCTIONS:

Determine proper placement of plastic bracket vertically on the post.

Insert a # 8 x ¾ Screw in the hole on the short side of the bracket and a # 8 1 ¼ Screw in the hole on the long side of the bracket.

Attach bracket with screws using a long Philips driver.

Install corner Post-To-Post piece (cut at proper angle and length) over bracket. Line up rail so it is flush with sides of post.

On the underside of the corner piece, drill through the METAL ONLY with an 11/64” drill bit, exposing the plastic bracket inside (Fig 19).

Drill a ½” pilot hole into the plastic bracket with a 1/8” drill bit.

Using a Philips screwdriver, hand screw in # 8 x ½” screw.



Fig 18



Fig 19

## 2) Handrail for stairs.

2:1 Install top and bottom stair posts first. Before cutting stair posts to length, keep the following in mind:

- Post-To-Post stair handrail must run continuously between the posts at the head and base of the stairs.
- Finished handrail height must be between 36" (max) and 34" (min).
- Post-To-Post hand rail is often used as a standalone stair hand rail (Fig 20).

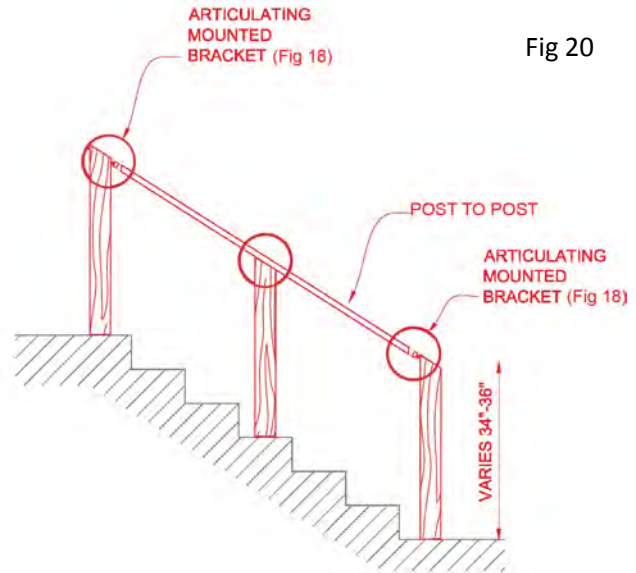


Fig 20

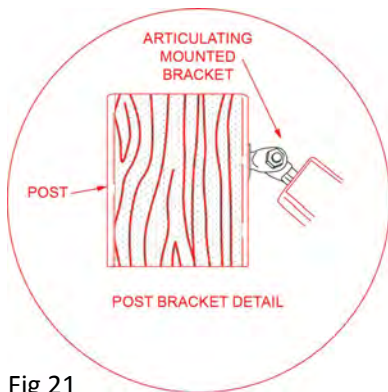


Fig 21

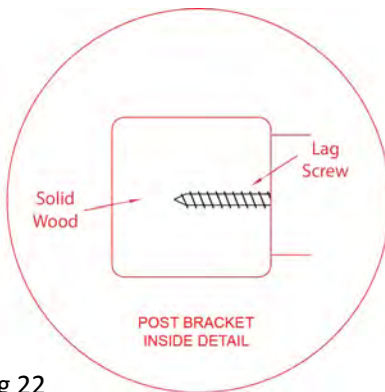


Fig 22



Fig 23

- Post-To-Post hand rail can also be combined with a wood top rail (Fig 24).

2:2 Drill (1) 1/4" pilot hole in the inside face of the post in its correct position.

2:3 Screw the lag into this pilot hole.

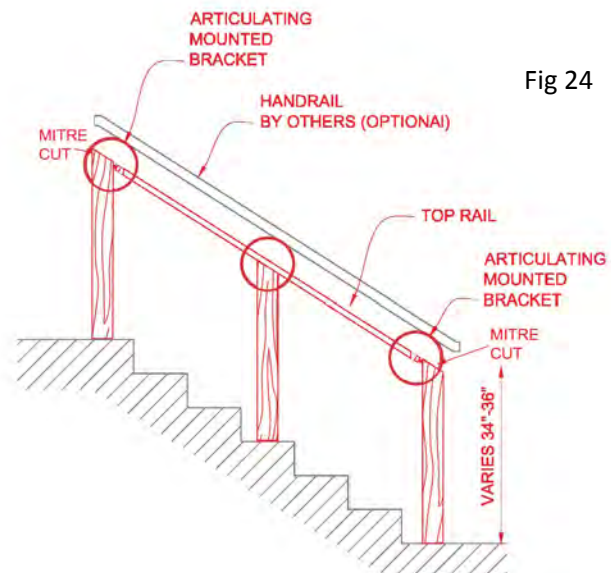


Fig 24



## **Marine-Grade Stainless Steel** **Maintenance and Cleaning** **Procedures**

Cable Railing Direct offers Marine-Grade Stainless Steel Cable Infill that boasts high resilience with little maintenance. The material is in and of itself corrosion resistant thanks to a thin “passive layer” of alloying elements that forms on the surface of stainless steel. While this protective layer is strong enough to withstand typical wear and tear, it's not impervious.

We want our customers to get the most out of their cable railing and encourage periodic maintenance to keep cable infill clean, beautiful, and strong for years to come. This is especially important for exterior applications, particularly those in harsh outdoor environments exposed to salt water, industrial pollutants, de-icing salt spray, atmospheric dirt, traffic film, etc.

Here are some simple procedures to keep your cable infill good as new. See Page 2 for warnings and coastal environment procedures.

### **General Cleaning:**

Remove finger prints and other marks generated from daily use as needed. Apply mild soap and water or glass cleaner to area using a clean cotton cloth or chamois. Rinse clean with water and dry completely.

### **Oil, Grease, and Residue Cleaning:**

Remove oil, grease, or residue left from other cleaning materials (such as floor cleaner or polishing detergents) as soon as possible. Apply alcohol-based products (including methylated spirit and isopropyl alcohol) or other solvents (such as acetone) several times using a clean, non-scratching cotton cloth until all traces have been removed. Use Scotch Brite if necessary. Rinse clean with water and dry completely.

### **Paint and Graffiti Cleaning:**

Remove as needed using proprietary alkaline or solvent-based paint strippers. Apply chosen cleaning solvent several times with a clean, non-scratching cotton cloth until all traces of paint have been removed. Use Scotch Brite if necessary. Rinse clean with water and dry completely.

### **Salt Film and Environmental Deposit Cleaning:**

Perform cleaning regularly in consideration of environmental conditions and the rate of deposit build up. Use a clean cotton cloth with Citrisurf solution (available in our store) to remove contamination. Apply cleaner evenly across cables to avoid a patchy appearance. Rinse clean with water and dry completely. Use Scotch Brite if necessary.

## WARNINGS & TIPS

- Avoid use of the following products, as they will harm your cables:
  - Chloride-containing cleansers
  - Hypochlorite bleaches. Should accidental contact occur, rinse off immediately with copious amounts of fresh water.
  - Muriatic acid (commonly used to clean up tile/concrete installations)
  - Silver-cleaners
  - Scouring powders
  - Hard scrapers or knives
  - Non-stainless steel based scouring pads, cleaning wool, or wire brushes
  - Any cleaning utensils that have been used on “ordinary” (carbon) steel, as this may result in iron particle “cross-contamination”
- Do not leave stainless cables or fittings in contact with steel, iron, or any other metals, as this will cause rusting due to free-iron transfer. If your frame is made of a material other than stainless steel, use protective grommets or sleeves (which can be found in our store) to keep the metals from coming into contact.

## COASTAL ENVIRONMENT MAINTENANCE

- Due to the regular high-salt content of oceanfront air, properties in these environments are encouraged to use our **Boshield T-9** for their cables, fittings, and/or stainless steel frame, in addition to the general maintenance procedures mentioned above.
- Clean stainless steel during initial installation and regular maintenance. We recommend this maintenance be done quarterly or as needed, and that any stains or rust spots obtained through daily use be removed immediately. Always reapply Boshield T-9 once stainless steel is clean and dry.

Please follow these procedures to get the most out of your stainless steel cable infill by Cable Railing Direct. If you have any questions, call us any time at 1-855-820-8439.