

RadianceRail® Installation Guide



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TimberTech Code Listings

Once a product is tested by an independent lab, an application and report is submitted to one of several agencies that provide listings for building products that meet the requirements of Acceptance Criteria 174 (AC 174) as set forth by the International Code Council Evaluation Service (ICC-ES). TimberTech currently has listings from the ICC-ES and Architectural Testing Inc. The following TimberTech reports on code compliance are available to download on www.timbertech.com.

For the most up-to-date code listings visit
www.timbertech.com/installation.

ATI Architectural Testing, Inc.
CCRR-0114 • RadianceRail & RadianceRail Express



- Please read all instructions completely before starting any part of the installation.
- TimberTech Rail should be installed using the same good building principles used to install wood or composite railing and in accordance with the local building codes and the installation guidelines included below. TimberTech accepts no liability or responsibility for the improper installation of this product.
- TimberTech Rail may not be suitable for every application and it is the sole responsibility of the installer to be sure that TimberTech Rail is fit for the intended use. Since all installations are unique, it is also the installer's responsibility to determine specific requirements in regards to each Rail application.
- TimberTech recommends that all applications be reviewed by a licensed architect, engineer or local building official before installation. If you have any questions or need further assistance, please call TimberTech Customer Service at 1.800.307.7780 or visit our website at www.timbertech.com.
- TimberTech Railing is tested as a whole system and should be used that way. It is not intended to be used in conjunction with other railing systems or fasteners.
- The following Installation Guidelines are applicable for installation of TimberTech RadianceRail railing.
- **IMPORTANT:** Make sure the DRIVE TOOL/DRILL is configured or set to use the SCREW setting when driving and/or tightening all FASTENERS.
- **SAFETY:** Always wear goggles when handling, cutting, drilling and fastening materials.
- Failure to install this product in accordance with applicable building codes and TimberTech's written Rail Install Guide may lead to personal injury, affect rail system performance and void the product warranty.

Installing RadianceRail® with CableRail by Feeney®

Visit www.timbertech.com/installation to view TimberTech installation videos.
 Consult your local building codes for guard and handrail requirements.

RadianceRail® Custom Rail Packs are available in 10', 8' and 6' lengths.

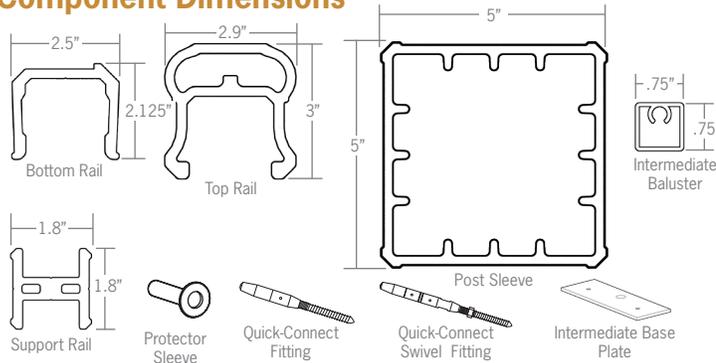
Measuring Your Railing Area

- Measurements are from center to center of post. Rails are produced in 10', 8' and 6' lengths to allow for finished end cuts and angles.
- Determine how many 10', 8' and 6' RadianceRail Custom Rail sections you need. Check to be sure you have all components (and quantities) listed in the chart shown to the right.

Important Information

- ⚠️ • RadianceRail Custom Rail 10', 8' and 6' Rails are designed not to exceed 10', 8' and 6' center of post to center of post, respectively.
- ⚠️ • For stair applications maximum rail length must not exceed 91".
- 4x4 lumber posts should be installed plumb.
- Cut slowly, using a fine tooth saw blade to avoid chipping.
- Cannot be installed using Secure Mount Post.
- For 42" railing use 12' Post Sleeves

Component Dimensions



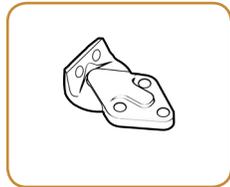
Tools Required

- 2 3/8" Open End Wrenches
- Miter Saw
- Tape Measure
- Drill
- Cable Cutters
- #2 Square Drive
- Drill Bits: 7/64", 1/4", 3/16", 1/8", 9/64"
- Extended 1/4" Drill Bit

Components Needed For Installing One RadianceRail® Section

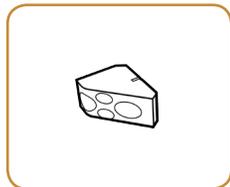
Hardware included in Hardware Kits:	Hardware Mounting Kit 4 - Mounting Brackets 2 - Support Blocks 16 - #8 x 3/4" Screws 6 - #8 x 1 3/4" Screws 6 - #8 x 2 5/8" Screws (Stairs Only) 3 - #8 x 3" Screws 12 - #8 x 3" Green Screws T20 Driver Bit	
Components available separately for mix-and-match rail systems	RadianceRail Custom Rail Pack 1 - Top Rail 1 - Bottom Rail 2 - Support Rails (1 - Aluminum Top Support Rail for 10') Hardware Mounting Kit Support Block Mounting Templates Foot Blocks - 1 in 6' Packs, - 2 in 8' Packs, - 3 in 10' Packs	CableRail Components 36" Intermediate Baluster - 1 for 6', - 2 for 8', - 3 for 10' 42" Intermediate Baluster - 1 for 6', - 2 for 8', - 3 for 10' Stair Intermediate Baluster - 1 for 6', - 2 for 8', - 3 for 10' Cable - 100' spool or 500' spool 36" Hardware Kit - 9 Quick-Connect Fittings - 9 Quick-Connect Swivel Fittings - 18 Hanger Bolts - 9 lock nuts 42" Hardware Kit - 11 Quick-Connect Fittings - 11 Quick-Connect Swivel Fittings - 22 Hanger Bolts - 11 lock nuts
Additional Components Needed for Each System	2 - Post Sleeves 2 - Post Caps 2 - Post Skirts Protector Sleeves - 42" System: 22 per Thru Post - 36" System: 18 per Thru Post	CableRail Accessory Pack Includes: - Quick-Connect release tool - Lacing Needle - Hanger Bolt Installation Tool

Mounting Bracket (4)

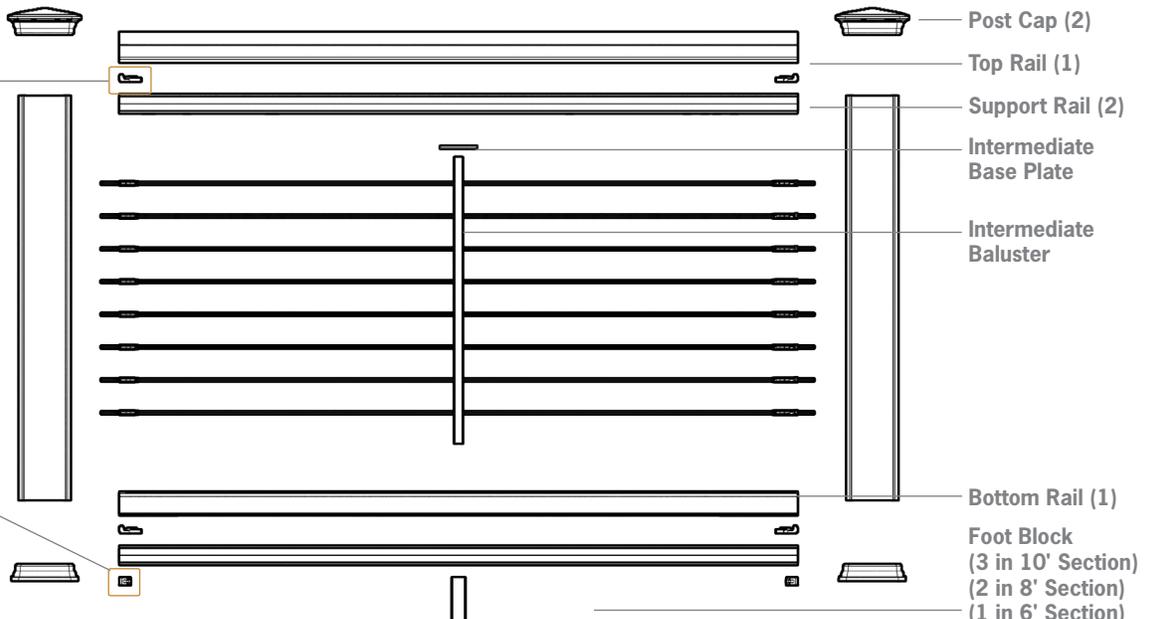


Post Sleeve (2)

Support Block (2)



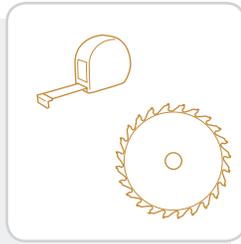
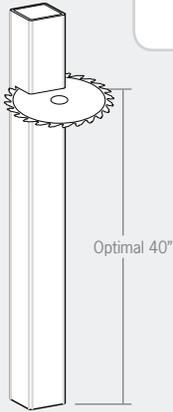
Post Skirt (2)



1 INSTALL POST SLEEVES

- Trim Post Sleeves to desired length.

40" above deck surface is optimal for 36" railing heights.

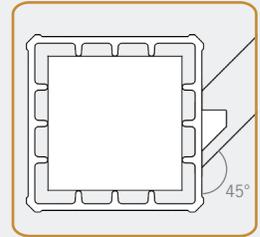
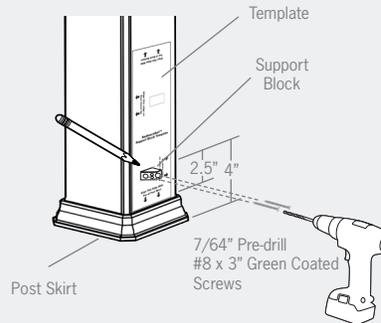


- Slide Post Sleeve and Post Skirt over post (do not force).
- Ensure post are square and plumb.



2 INSTALL LOWER SUPPORT BLOCK

- Position template at bottom of Post Sleeve above Post Skirt.

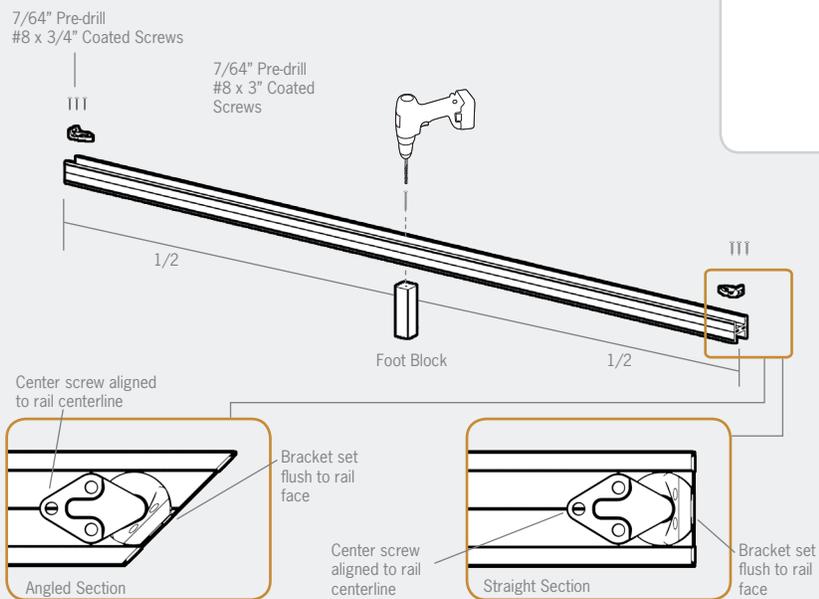


For angled rail installations, align angled face of Support Block parallel to rail section.

If you do not have a the template, position the top of the Support Block 4" above the deck and 2-1/2" above the post skirt.

3 CUT AND ASSEMBLE BOTTOM SUPPORT RAIL

- Cut Bottom Support Rail to length.
- Attach bracket to Bottom Support Rail with screws.

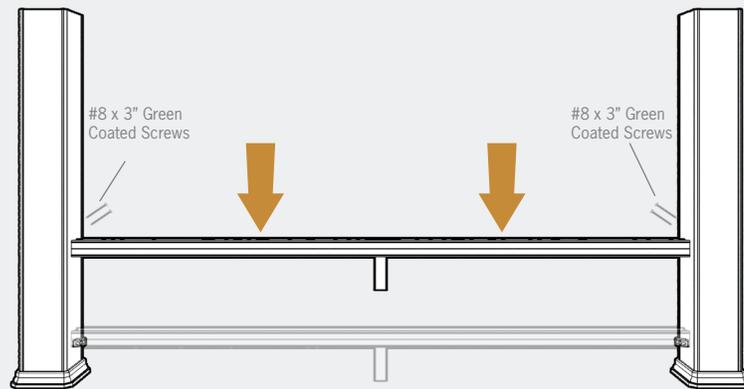
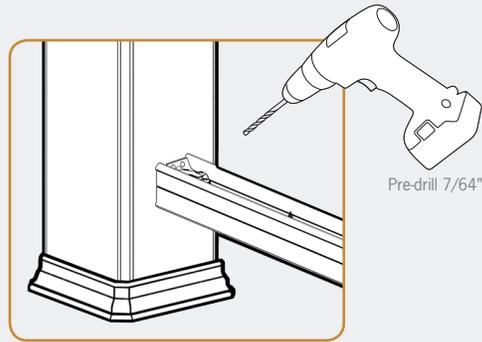


For sections up to 6': Place one Foot Block in the center of the rail
For sections 6' to 8': Space two Foot Blocks approximately at 1/3 intervals on the rail
For sections 8' to 10': Space three Foot Blocks approximately at 1/4 intervals on the rail

4

INSTALL BOTTOM SUPPORT RAIL

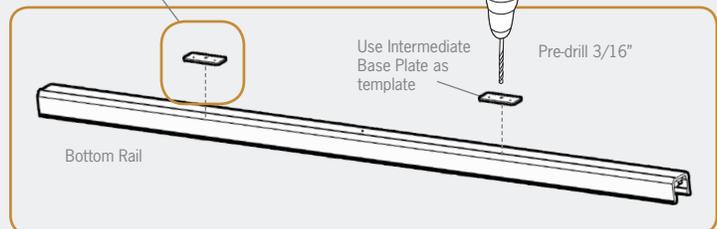
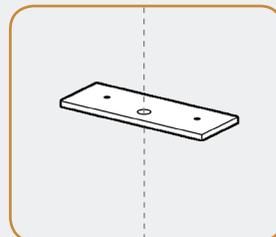
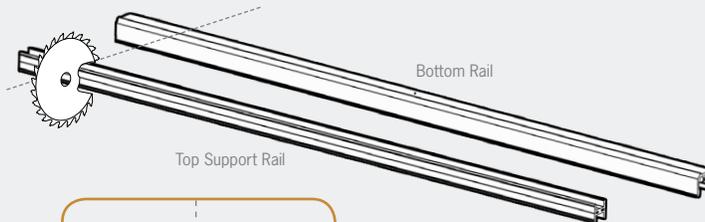
- Position rail assembly onto Support Blocks.



5

CUT & PREP BOTTOM RAIL AND TOP SUPPORT RAIL

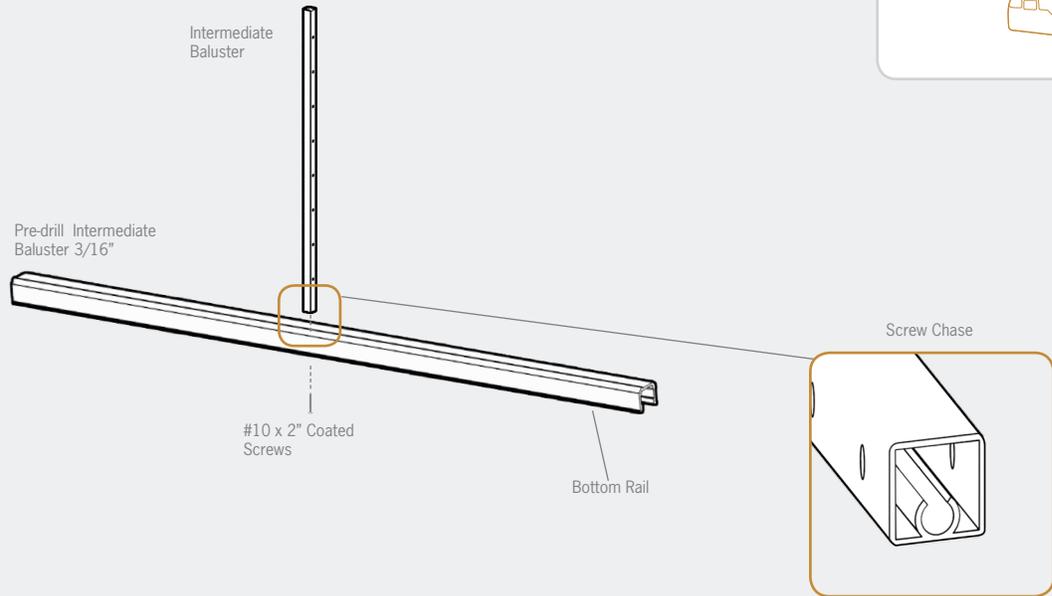
- Measure distance between the posts at the Bottom Rail and Top Support Rail.
- Cut to length.
- Attach brackets to the Top Support Rail. Use step 3 for reference.
- Pre-drill the Bottom Rail for the Intermediate Baluster



6' sections require 1 Intermediate Baluster; 8' sections require 2 Intermediate Balusters; 10' sections require 3 Intermediate Balusters.

6

**ATTACH
INTERMEDIATE
BALUSTERS**

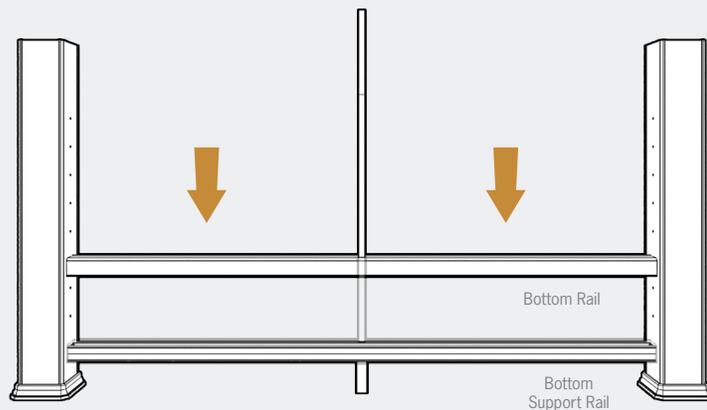


For ease of installation, pre-drill screw chase with a 3/16" drill bit. Ensure the screw finds the screw chase.

7

**INSTALL BOTTOM
RAIL**

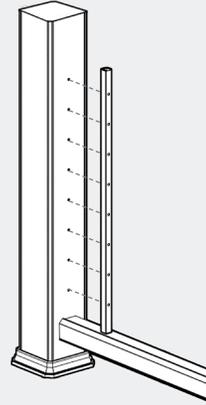
- Place the Bottom Rail between the posts and allow the rail to rest on the Bottom Support Rail.



8

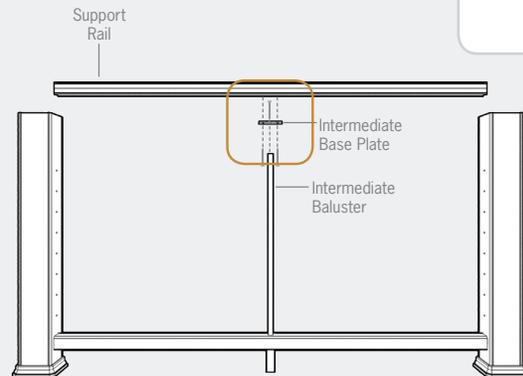
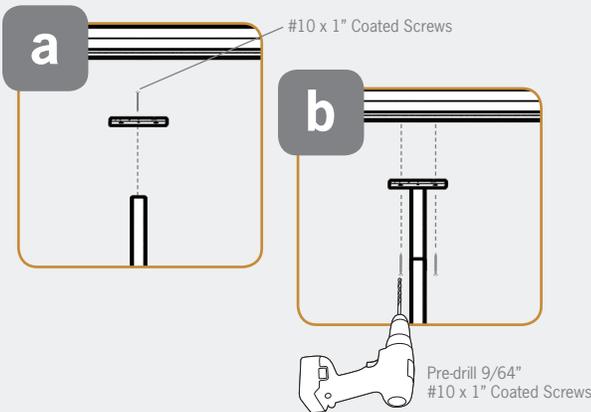
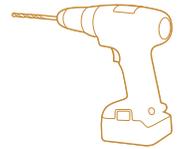
TRANSFER HOLE LOCATION ONTO POST SLEEVE

- Use an extra Intermediate Baluster, rested on the Bottom Rail, as a template for the CableRail Hardware and through holes.
- Use a 3/16" drill bit to transfer your marks onto the Post Cover.



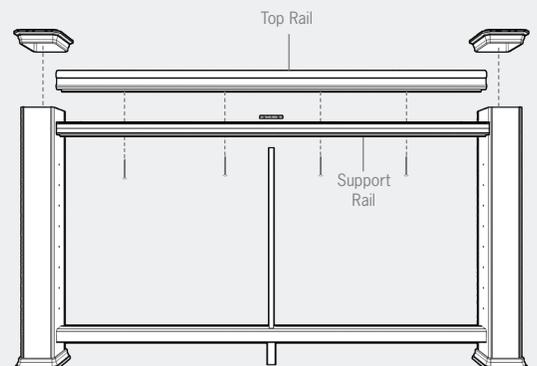
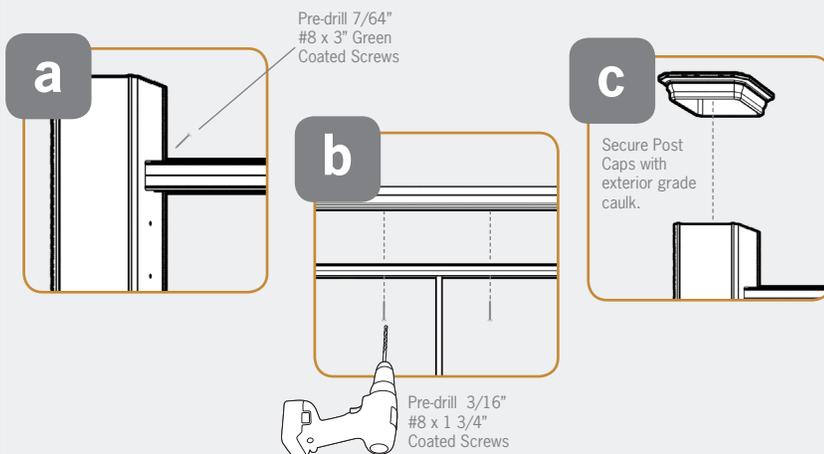
9

ATTACH TOP SUPPORT RAIL



10

INSTALL TOP RAIL AND POST CAPS

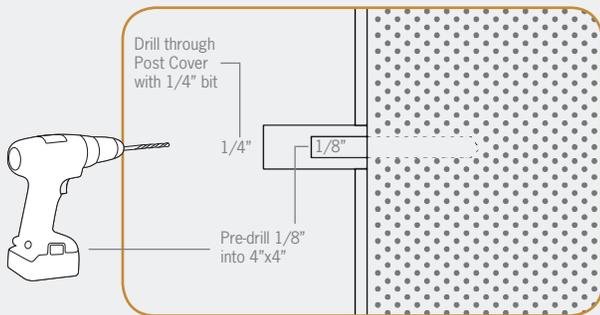


1

PRE-DRILL ANCHOR POST COVER



- Using the marks on the Anchor Posts, drill a through hole only in the Post Cover with a 1/4" Bit drill.



Anchor posts should not exceed 60 feet apart during any continuous run of cable.

2

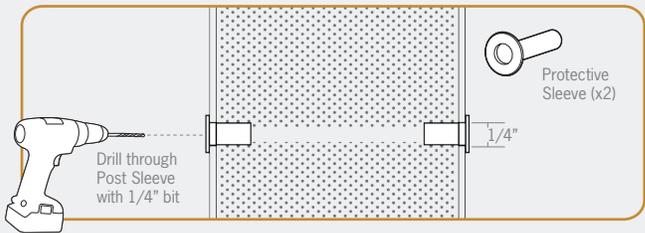
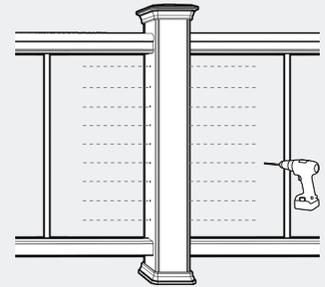
PRE-DRILL THROUGH POST SLEEVES



- For the through posts, drill a 1/4" hole through both the Post and Post Sleeve.

Optional - Protector Sleeves are not required on the through posts, but do offer a more finished appearance.

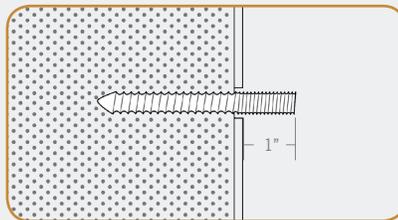
Use a dab of adhesive on Protector Sleeve if needed.



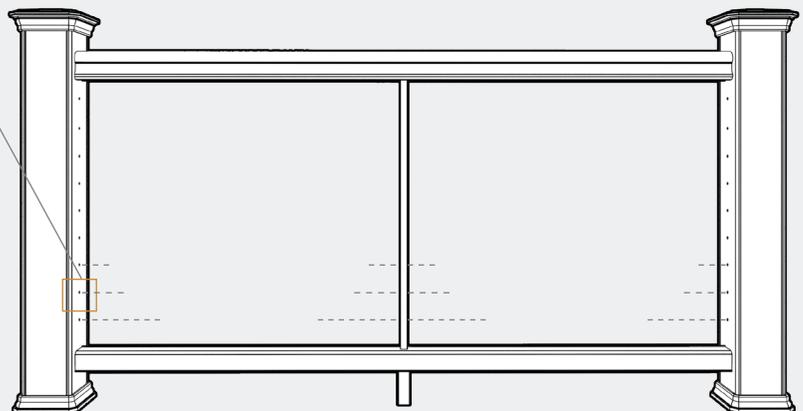
3

DRIVE IN HANGER BOLTS

- On Anchor Posts, screw the Hanger Bolts into the pilot holes in the Post with the Hanger Bolt Installation Tool.

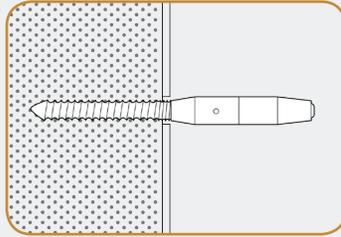


Leave about 1" of machine thread exposed for cable take-up.



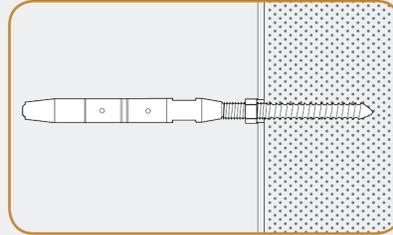
4

ATTACH QUICK-CONNECT AND QUICK-CONNECT SWIVEL FITTINGS



- Screw on Quick-Connect Swivel fitting onto the Hanger Bolt with the lock nut already installed.

- Screw Quick-Connect fittings snugly against Post Sleeve of one side of the railing and lock nuts onto hanger bolts on the other side.

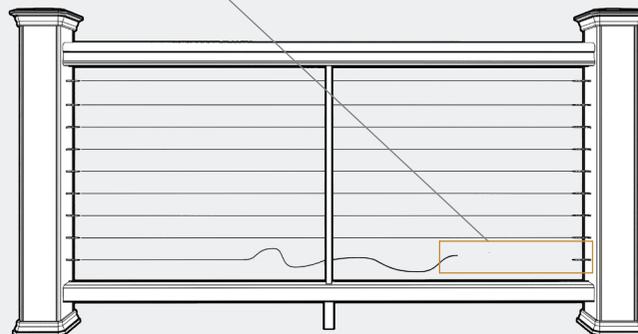
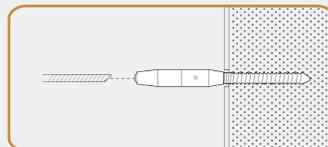


One side of the railing will be only Quick-Connect fittings, the other side will be Quick-Connect swivel fittings and lock nuts.

5

INSERT AND THREAD CABLE

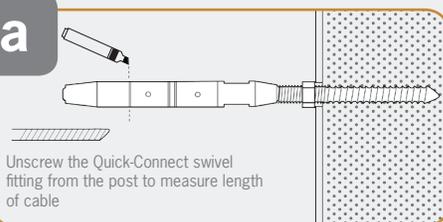
- When all of the hardware is in place, insert one end of the Cable into the Quick-Connect fitting.
- Feed the Cable through the Intermediate Baluster (or through posts) with a lacing needle.



6

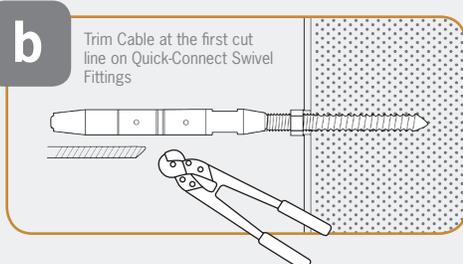
CUT CABLE TO LENGTH

a



Unscrew the Quick-Connect swivel fitting from the post to measure length of cable

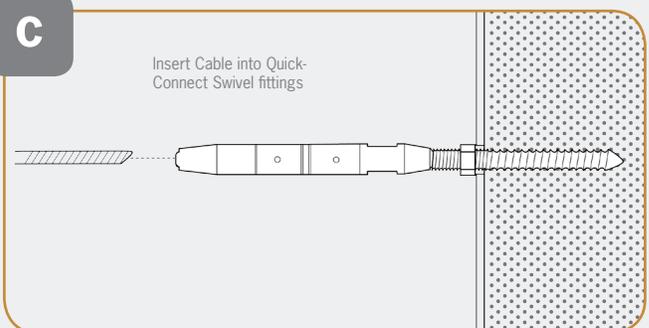
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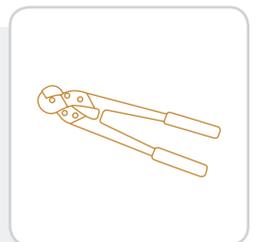
Trim Cable at the first cut line on Quick-Connect Swivel Fittings

Be sure to leave threads exposed for tightening.

c

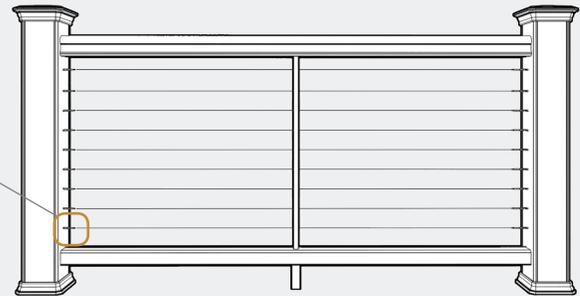
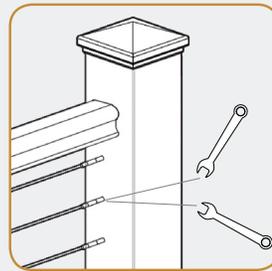
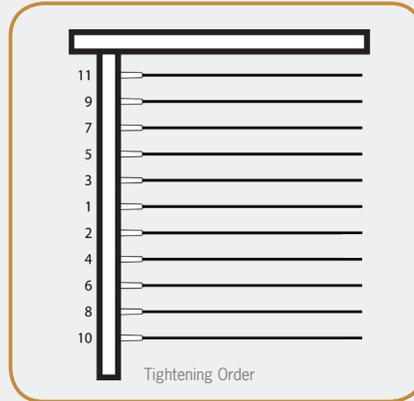


Insert Cable into Quick-Connect Swivel fittings



7 TIGHTEN CABLE

- Use a set of 3/8" open-ended wrenches to tighten the Cable using the "swivel" end insuring the Cable does not twist.
- Once the Cable is tight, tighten the lock nuts against the Quick-Connect swivel fittings in order shown.



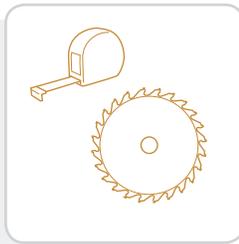
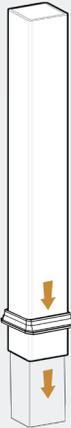
 If necessary, the Cable can be removed from the Quick-Connect fitting by using the Quick-Connect Release Tool.

1 INSTALL POST SLEEVES

- Trim Post Sleeves to desired length.

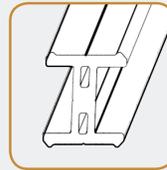


- Slide Post Sleeve and Post Skirt over post (do not force).
- Ensure Posts are square and plumb.

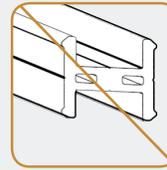


2 MEASURE SUPPORT RAILS

Support Rails are rotated 90° for stair rail applications.

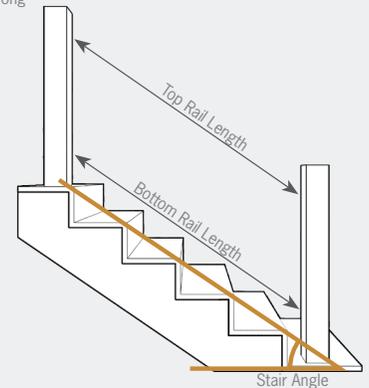


Right

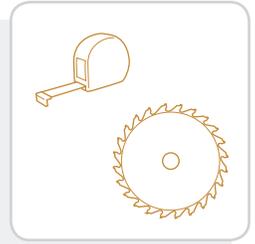


Wrong

- Determine measurements and angle as shown.

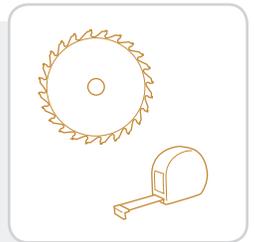
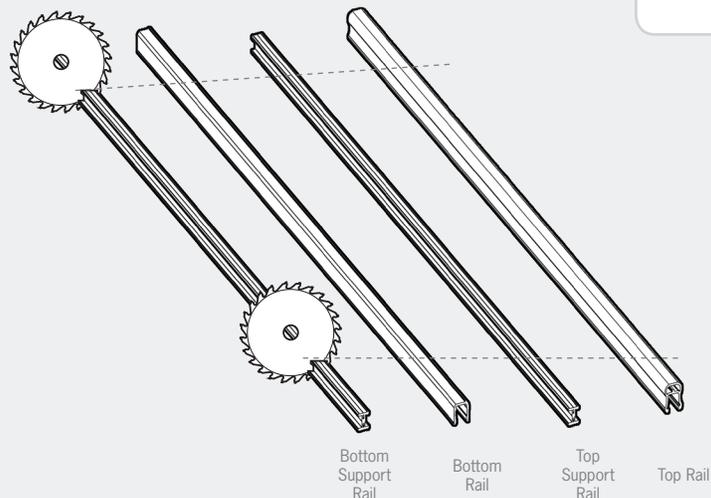


Stair Angle



3 TRIM RAILS

- Trim both the Top Support Rail and the Bottom Support Rail to those dimensions. Test fit rails to check for accuracy.
- Transfer measurement from Bottom Support Rail to Bottom Rail.
- Trim Top Rail to match Top Support Rail.

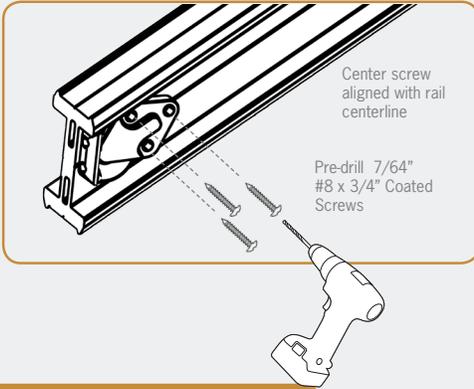


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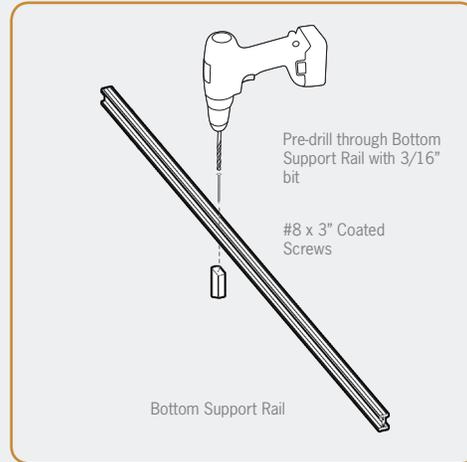
PREP BOTTOM SUPPORT RAIL



- Attach Mounting Brackets to Bottom Support Rail.



- Trim and Attach Foot Blocks.



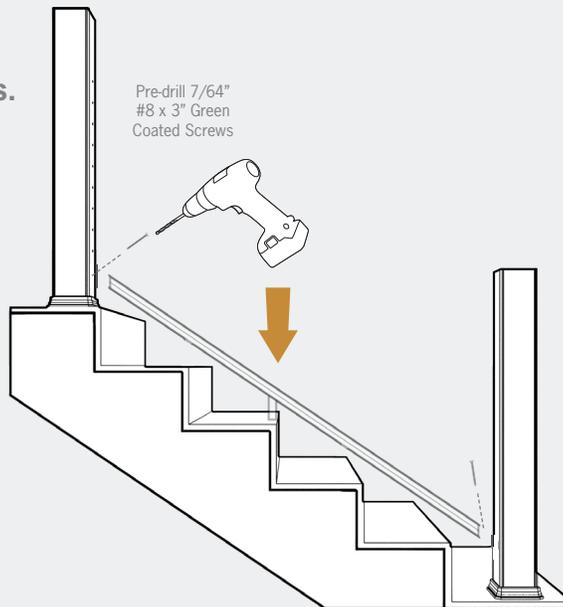
 For sections up to 6': Place one Foot Block in the center of the rail

For sections 6' to 8': Space two Foot Blocks approximately at 1/3 intervals on the rail.

5

INSTALL BOTTOM SUPPORT RAIL

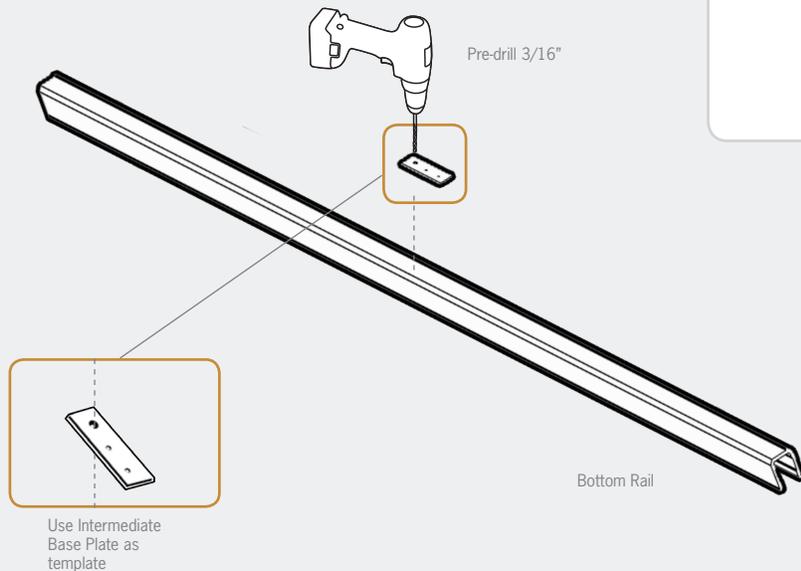
- Secure Mounting Brackets.



Brackets must be installed to the stair tread side of the rail

6

PRE-DRILL BOTTOM RAIL

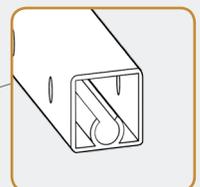
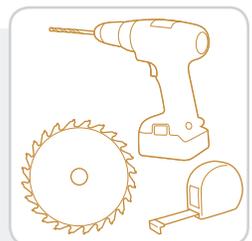
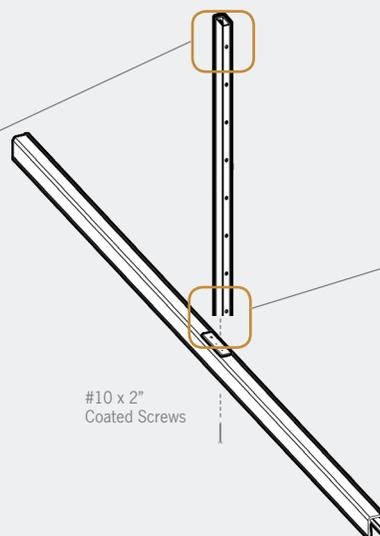
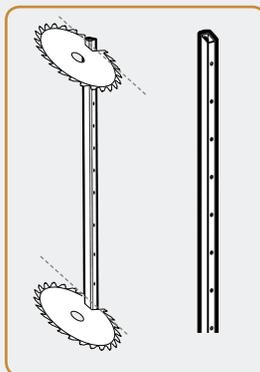


Intermediate Baluster should be placed over Foot Blocks for best results.

7

ATTACH STAIR INTERMEDIATE BALUSTER

- Trim Stair Intermediate Baluster to match stair angle.



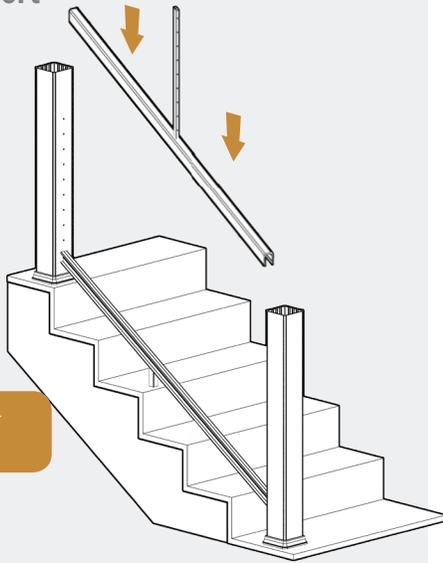
Be sure the screw finds the screw chase

For easier installation, pre-drill screw chase with a 3/16" drill bit

8

INSTALL BOTTOM RAIL

- Place the Bottom Rail over the Bottom Support Rail with the Intermediate Baluster(s).

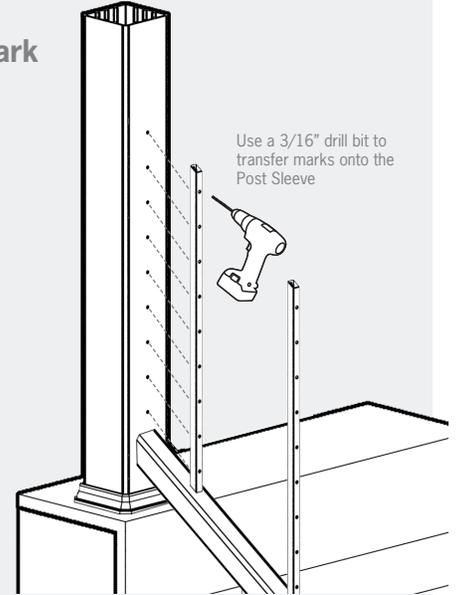


Lower the rails perpendicular to the deck surface.

9

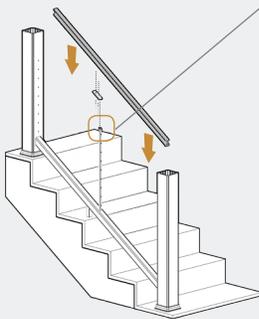
TRANSFER HOLE LOCATION ONTO POST SLEEVE

- Use an extra Intermediate Baluster as a template to mark for CableRail hardware and through holes.

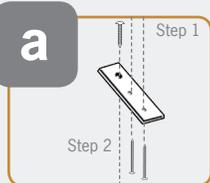


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ATTACH TOP SUPPORT RAIL



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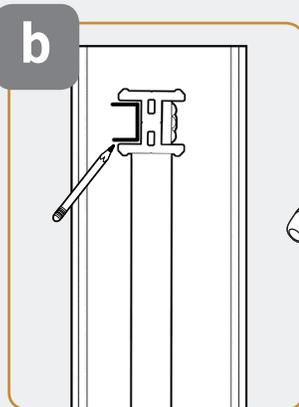


- Mark Ends of Top Support Rail.

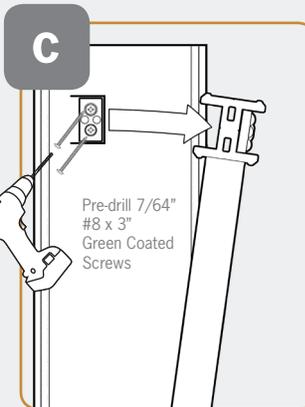
- Rotate Rail assembly out of way to fasten Support Block.

- Secure Mounting Brackets to Posts.

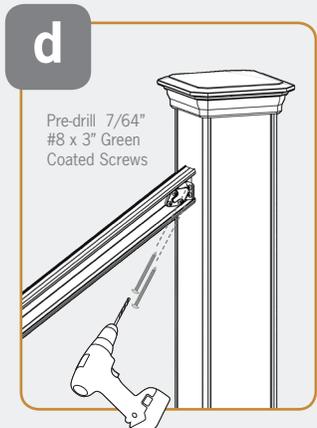
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c



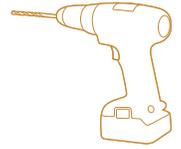
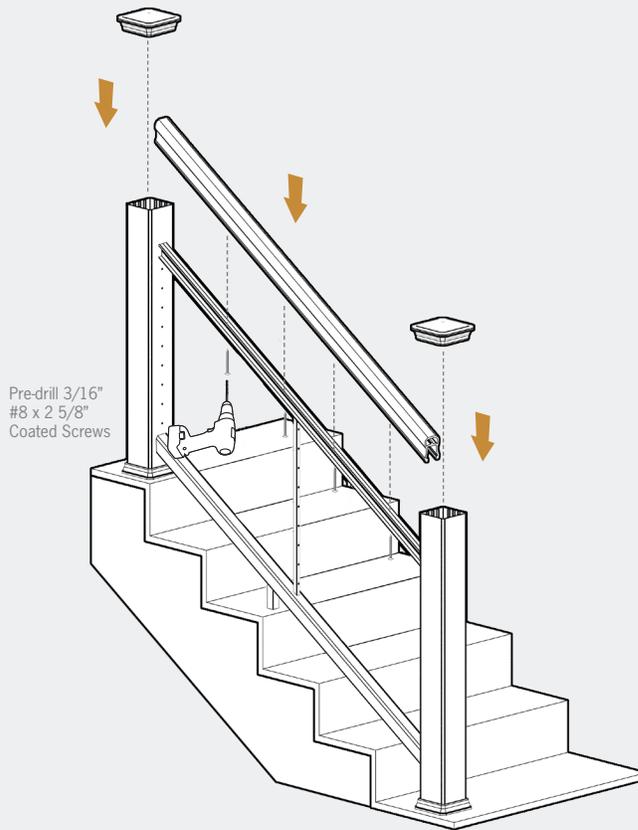
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11

INSTALL TOP RAIL AND POST CAPS

- Position Top Rail over Support Rail and attach with screws.
- Secure Post Caps with exterior grade caulk.



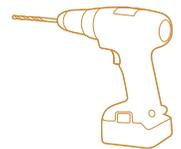
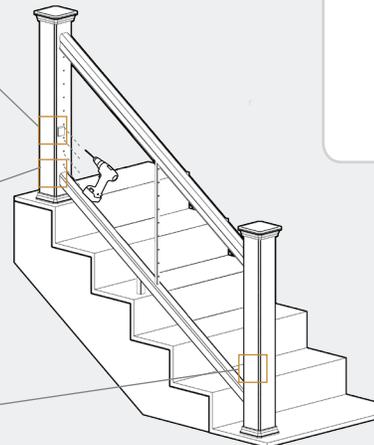
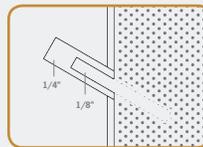
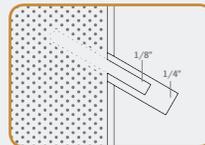
Installing CableRail by Feeney® Stairs for RadianceRail®

1

PRE-DRILL ANCHOR POST SLEEVES

Drill a through hole only in the post sleeve with a 1/4" drill bit at the same angle as the stair run.

Scrap Baluster cut at stair angle for drill template



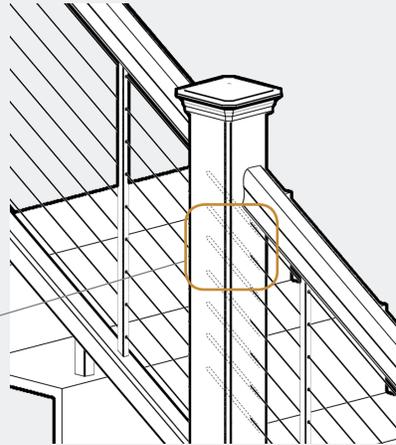
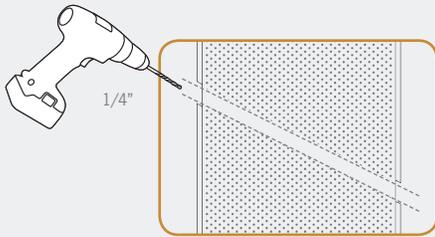
Use a scrap piece of baluster trimmed at the stair angle as a guide.

Anchor posts should not exceed 60 feet apart during any continuous run of cable.

2

PRE-DRILL THROUGH POST SLEEVES

- Drill a 1/4" hole through both the Post and Post Sleeve at stair angle.

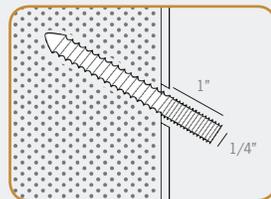


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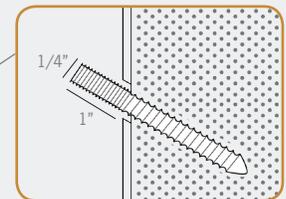
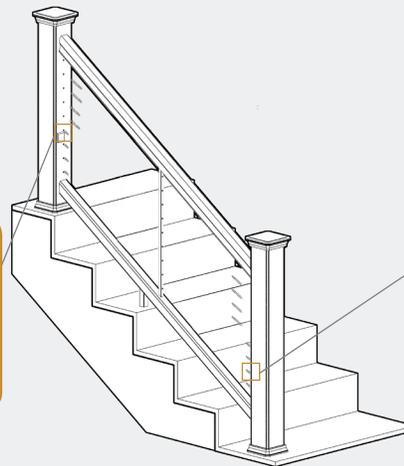
DRIVE IN HANGER BOLTS

- Screw Hanger Bolts into the pilot holes at the same angle of the stairs using the Hanger Bolt Installation Tool.

Leave about 1" of machine thread exposed for cable take-up.



Top Anchor Post

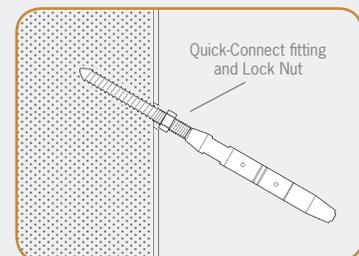
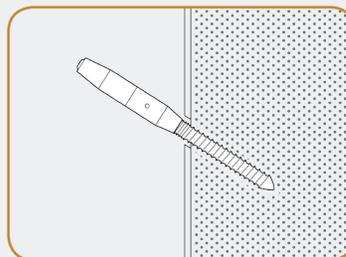


Bottom Anchor Post

4

ATTACH QUICK CONNECT FITTINGS

- Place one Quick-Connect fitting at one end and the Quick-Connect Swivel fitting on the opposite end.

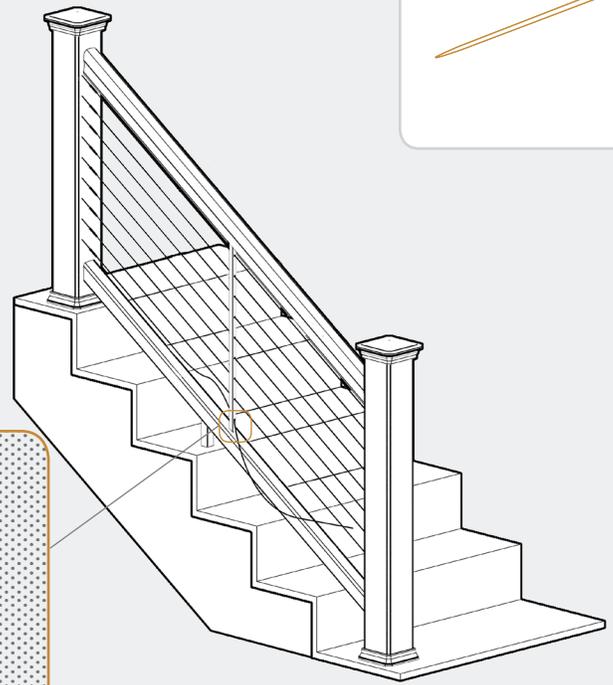
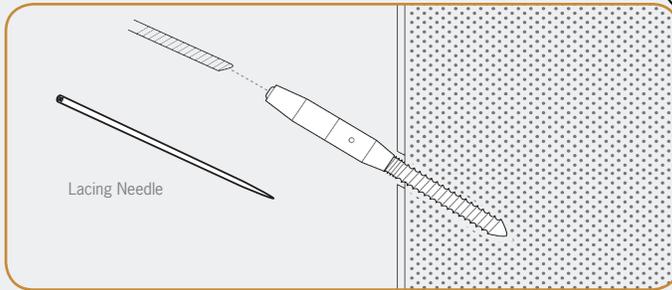


One side of the railing will be only Quick-Connect fittings, the other side will be Quick-Connect swivel fittings and lock nuts

5

THREAD CABLE

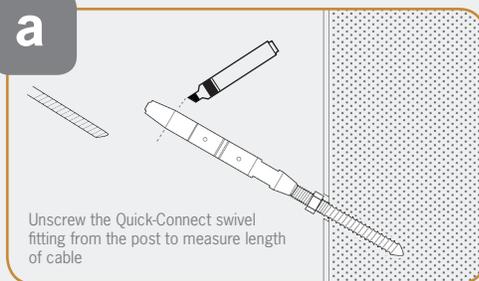
- When all of the hardware is in place, insert one end of the Cable into the Quick-Connect fitting.
- Feed the Cable through the Intermediate Baluster (or through posts) with a lacing needle.



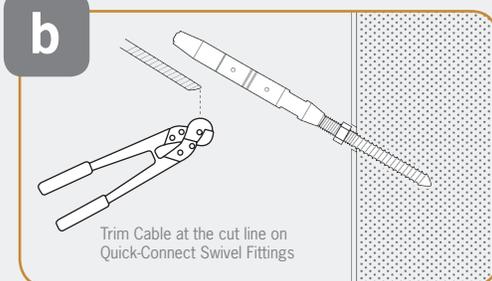
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CUT CABLE TO LENGTH

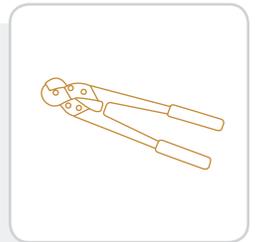
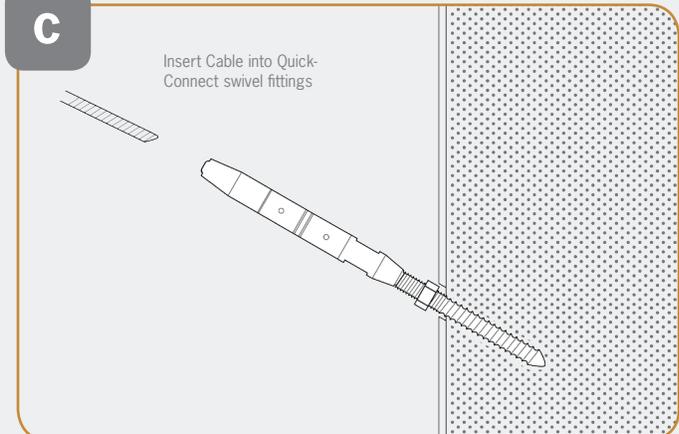
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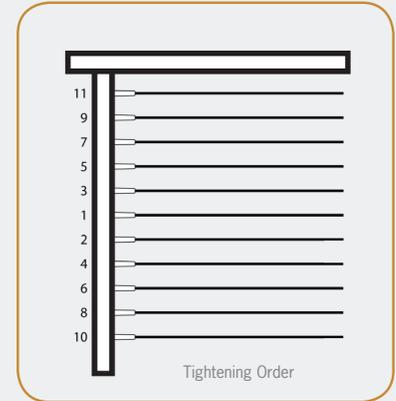
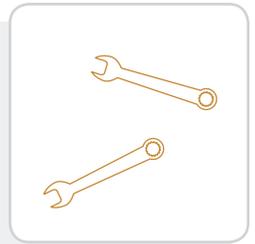
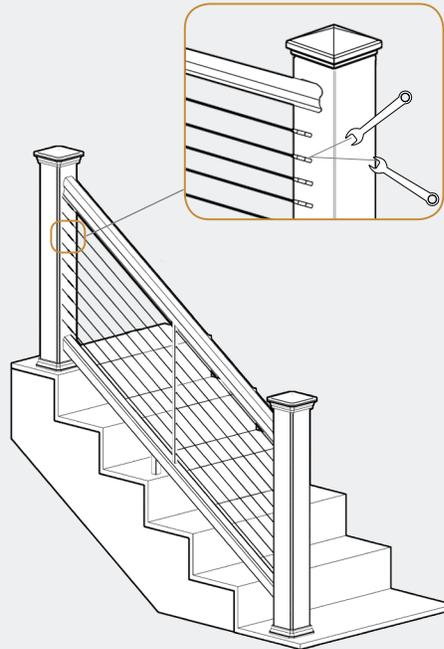
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7

TIGHTEN CABLE

- Use a set of 3/8" open-ended wrenches to tighten the Cable using the "swivel" end insuring the Cable does not twist.
- Once the Cable is tight, tighten the lock nuts against the Quick-Connect swivel fittings.



If necessary, the Cable can be removed from the Quick-Connect fitting by using the Quick-Connect Release Tool.

RadianceRail® Installation Guide



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