

# 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](http://www.timbertech.com).

For the most up-to-date code listings visit [www.timbertech.com/installation](http://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](http://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 Balusters

Visit [www.timbertech.com/installation](http://www.timbertech.com/installation) to view TimberTech installation videos.  
Consult your local building codes for guard and handrail requirements.

**RadianceRail® is available in 10', 8', and 6' lengths.**

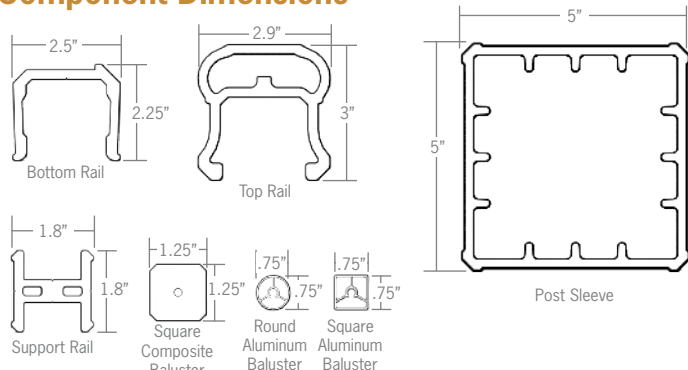
## Measuring Your Railing Area

- Measurements are from center to center of the posts. 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 sections you need and check to be sure you have all the components (and quantities) listed in the chart shown to the right.

## Important Information

- ⚠️ • RadianceRail 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"
- Cut slowly, using a fine tooth saw blade to avoid chipping.
- For 42" railing use 12' Post Sleeves.
- Custom Rail Packs should be used when installing Aluminum Balusters.

## Component Dimensions



## Tools Required

- Miter Saw
- Drill
- Measuring Tape
- 7/64" Drill Bit
- 3/16" Drill Bit

## Components Needed For Installing One RadianceRail® Section

<b>Components Included in Complete 6' and 8' Kits (white only).</b>	1 - Top Rail 1 - Bottom Rail 2 - Support Rails Foot Blocks - 1 in 6' kits - 2 in 8' Kits Square Balusters - 13 in 6' Kits - 18 in 8' Kits Hardware Mounting Kit Support Block Mounting Templates Baluster Screw Kit	
<b>Hardware included in Hardware Mounting Kits:</b>	<b>Hardware Mounting Kit</b> 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	
<b>Components available separately for mix-and-match rail systems</b>	<b>RadianceRail Pack</b>	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
	<b>Baluster Pack</b>	<div> <b>Composite Balusters</b>                              - 18 Balusters per Pack (23 required per 10' section) (18 required per 8' section) (13 required per 6' section)                              - 29" for 36" Railing                              - 31" for 36" Railing (with less than 2" gap between deck &amp; Bottom Rail)                              - 35" for 42" Railing                              - 37" for 42" Railing (with less than 2" gap between deck &amp; Bottom Rail)                         </div> <div> <b>Aluminum Balusters</b>                              - 20 Balusters per Pack (25 required per 10' section) (20 required per 8' section) (15 required per 6' section)                              - 29" for 36" Railing                              - 31" for 36" Railing (with less than 2" gap between deck &amp; Bottom Rail)                              - 35" for 42" Railing                              - 37" for 42" Railing (with less than 2" gap between deck &amp; Bottom Rail)                         </div> <div> <b>Baluster Screw Kit</b>                              18 - #8x2" Screws                              18 - #8x3" Screws                         </div> <div> <b>Baluster Screw Kit</b>                              20 - #8x2" Screws                              20 - #8x3" Screws                         </div>
<b>Additional Components Needed for Each System</b>	2 - Post Caps 2 - Post Sleeve 2 - Post Skirts	

Post Cap (2)

Mounting Bracket (4)

Post Sleeve (2)

Support Block (2)

Post Skirt (2)

Top Rail (1)

Support Rail (2)

Composite Baluster  
(23 in 10' Section)  
(18 in 8' Section)  
(13 in 6' Section)

Aluminum Baluster  
(25 in 10' Section)  
(20 in 8' Section)  
(15 in 6' Section)

Bottom Rail

Foot Block  
(3 in 10' Section)  
(2 in 8' Section)  
(1 in 6' Section)

## 1

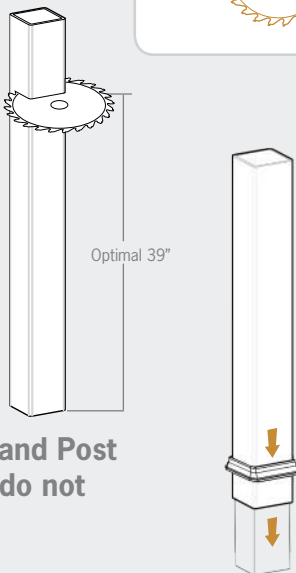
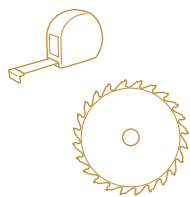
### INSTALL POST SLEEVES

- Trim Post Sleeves to desired length.

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

Optimal 39"

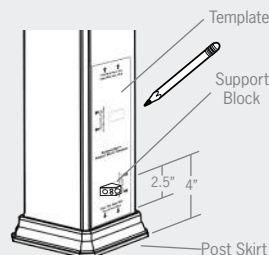
- Slide Post Sleeve and Post Skirt over post (do not force).
- Ensure post are square and plumb.



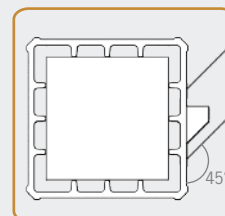
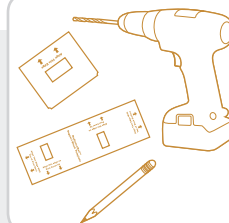
## 2

### INSTALL LOWER SUPPORT BLOCK

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



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.

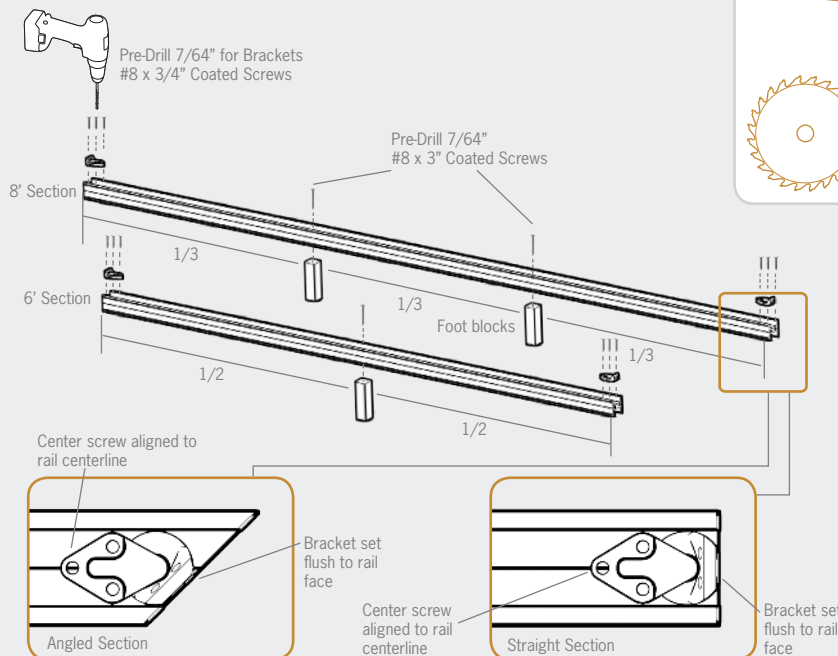


For angled rail installations, align angled face of Support Block parallel to rail section.

## 3

### CUT AND ASSEMBLE BOTTOM SUPPORT RAIL

- Cut the Bottom Support Rail to length.

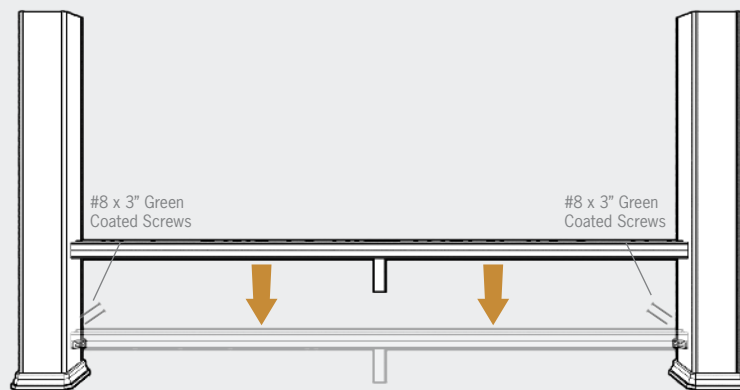
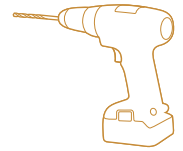
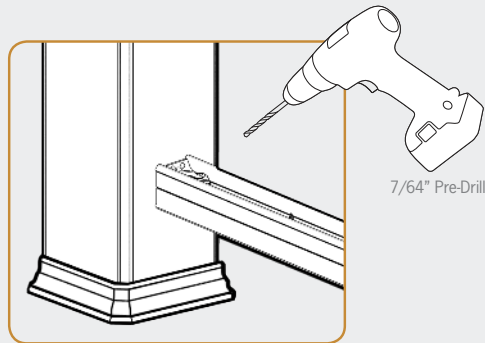


**For sections up to 6':** Place one Foot Block in the center of the rail  
**For sections 6' to 8':** Space two Foot Blocks approximately at 1/3 intervals on the rail  
**For sections 8' to 10':** Space three Foot Blocks approximately at 1/4 intervals on the rail

## 4

### INSTALL BOTTOM SUPPORT RAIL

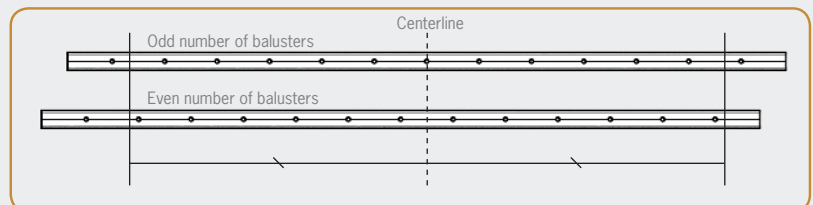
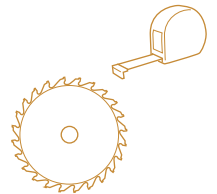
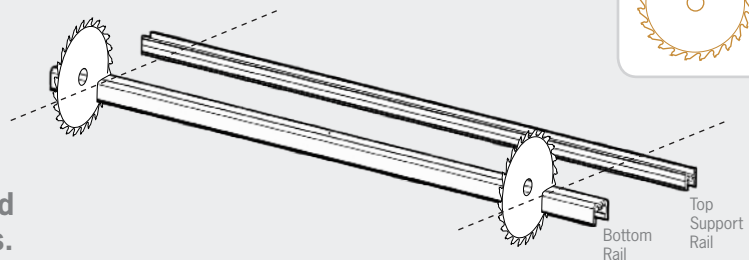
- Position Bottom Support Rail assembly onto Support Blocks.



## 5

### SPACE BALUSTER AND TRIM RAILS

- Measure distance between the posts at the Bottom Support Rail.
- Transfer measurement to Bottom Rail and center either on a pre-drilled hole or between two pre-drilled holes.
- Cut Bottom Rail and Top Support Rail to length.

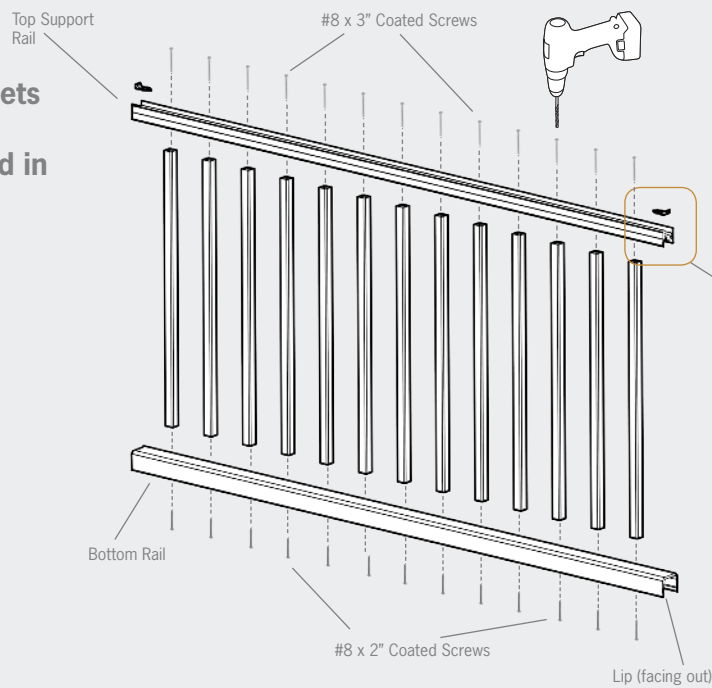


The space between the end baluster and post can not exceed 4"

## 6

### ASSEMBLE BALUSTER SECTION

- Attach Mounting Brackets at each end of the Top Support Rail as outlined in Step 3.



See step 3 for bracket installation

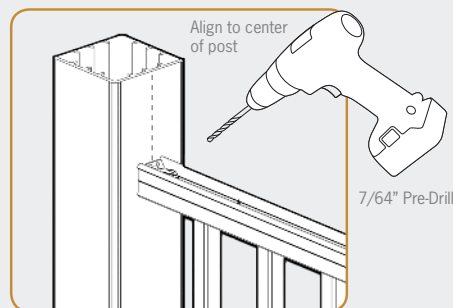
Pre-Drill 7/64"  
#8 x 3/4" Coated Screws

## 7

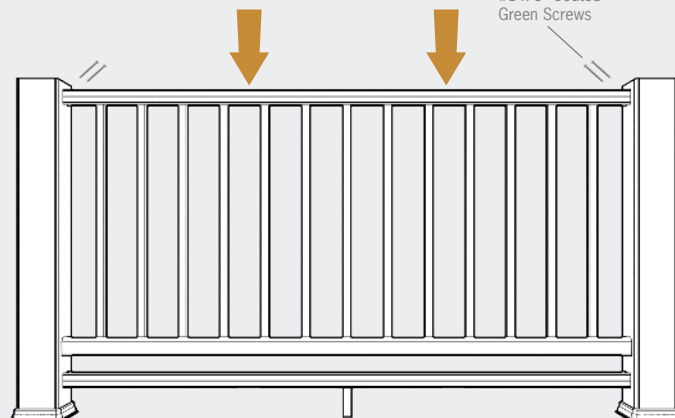
### INSTALL RAIL ASSEMBLY

- Align top Support Rail to center of posts.

Position rail assembly with lip of Bottom Rail toward outside of deck, over bottom Support Rail.



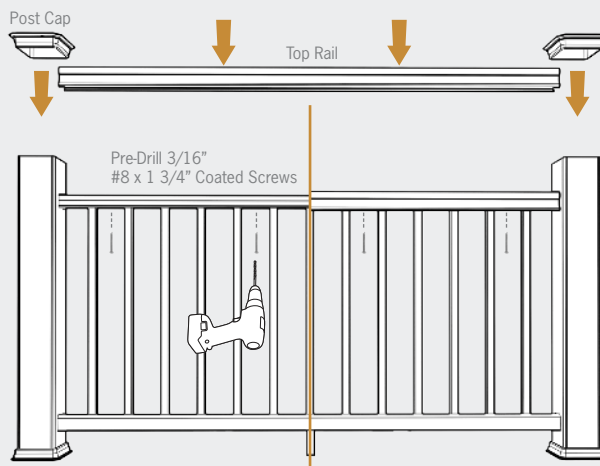
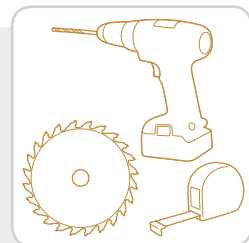
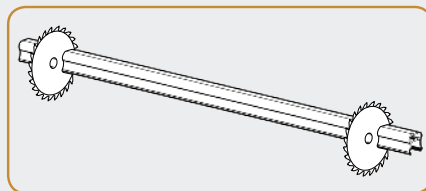
#8 x 3" Coated Green Screws



### 8

#### INSTALL TOP RAIL AND POST CAPS

- Measure and cut Top Rail to length. Trim both ends for a clean cut.
- Attach Post caps using exterior grade caulk applied to the underside of the cap.

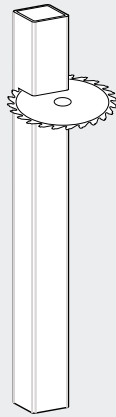


**Caution:** Screws must be 1 3/4" so they won't go through the Top Rail on straight rail sections.

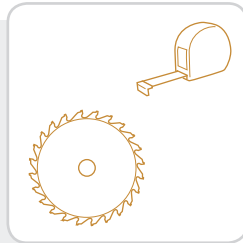
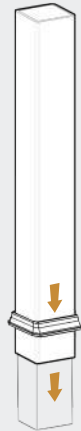
## 1

### INSTALL POST COVERS

- Trim Post Covers to desired length.



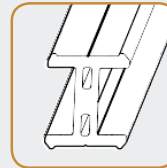
- Slide Post Cover and Post Skirt over post. Do not force.
- Ensure post are square and plumb.



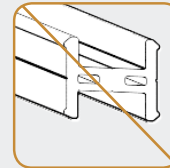
## 2

### TRIM RAILS

Support Rails are rotated 90° for stair rail applications.

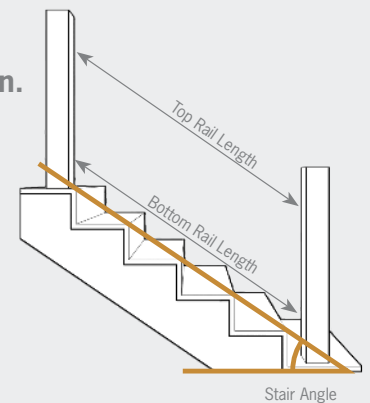


Right



Wrong

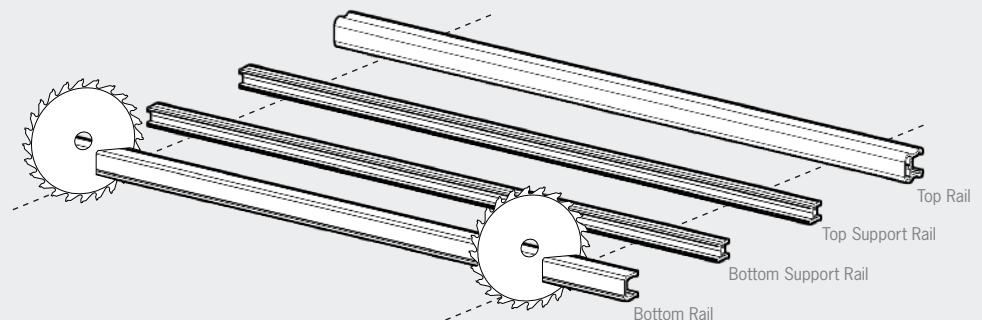
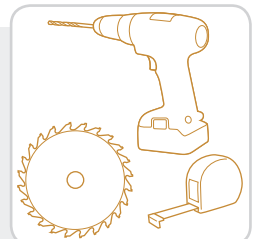
- Determine measurements and angle as shown.
- Trim both the Top Support Rail and the Bottom Support Rail to those dimensions. Test fit rails to check for accuracy.



## 3

### TRIM RAILS

- Transfer measurement from Bottom Support Rail to Bottom Rail.
- Trim Top Rail to match Top Support Rail at appropriate angle.

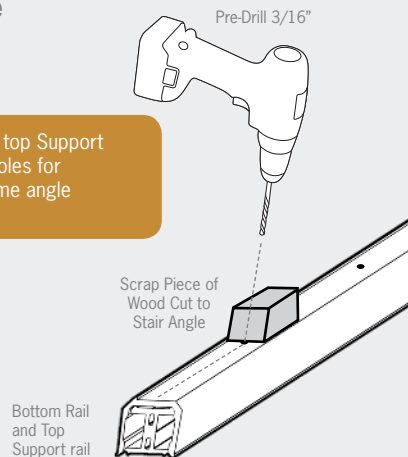


## 4

### Drill Baluster Holes

- Place the Bottom Rail and the Top Support Rail together as shown to keep the holes aligned.
- Separate the two rails, once all holes are drilled.

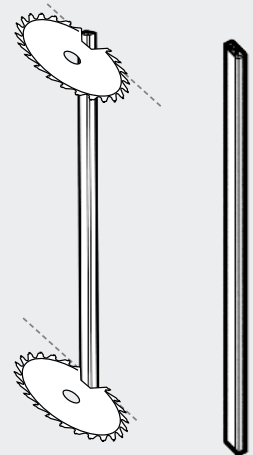
Drill 3/16" hole through the top Support Rail using the Bottom Rail holes for alignment, drilling at the same angle used to cut rail ends.



## 5

### TRIM BALUSTERS

**Important:** Start cut at top edge to maximize the length. Trim Baluster ends to required angle as shown.



Aluminum stair Balusters are pre-cut to a stair angle and are not to be cut on the job site.

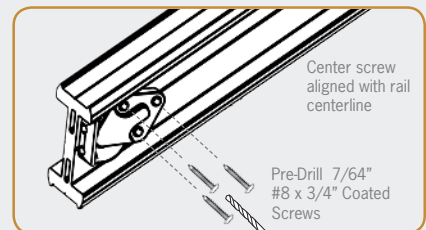
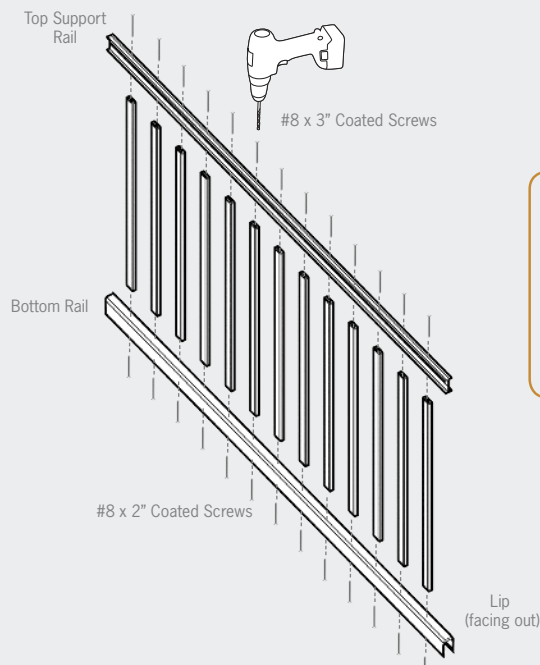
## 6

### ASSEMBLE BALUSTER SECTION

- Attach Brackets to Top Support Rail.

Tip for Bottom Rail: Partially drive screws into all Balusters before driving them in completely.

Brackets must be on the side of the rail facing the stairs.



## 7

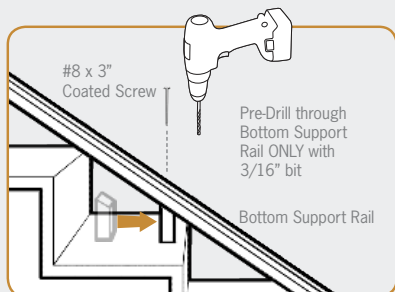
### INSTALL BOTTOM SUPPORT RAIL

Brackets must be on the side of the rail facing the stairs.

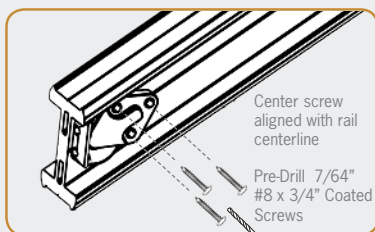


**For sections up to 6':** Place one Foot Block in the center of the rail

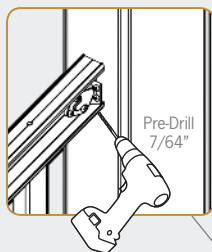
**For sections 6' to 8':** Space two Foot Blocks approximately at 1/3 intervals on the rail



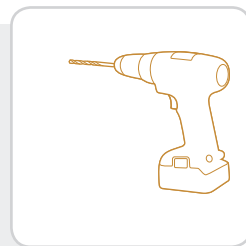
- Wedge Foot Block under Support Rail & attach.



- Attach Mounting Brackets to Bottom Support Rails.

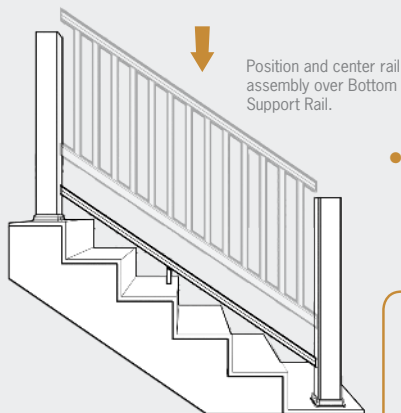


- Secure Mounting Brackets to posts.

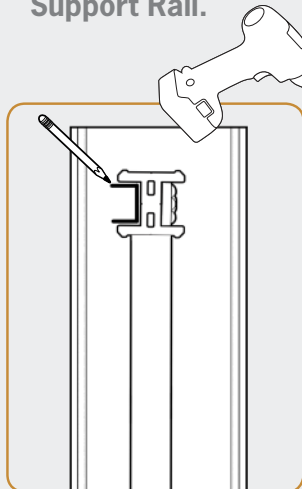


## 8

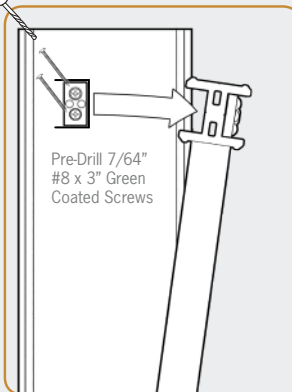
### INSTALL RAIL ASSEMBLY



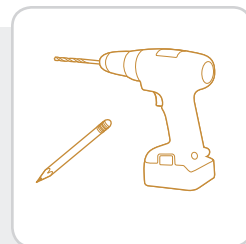
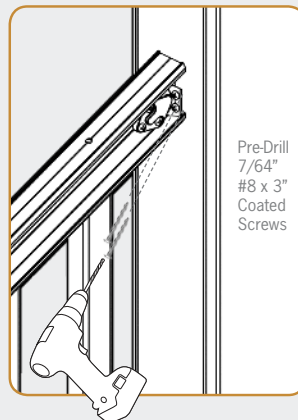
- Mark Ends of Top Support Rail.



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



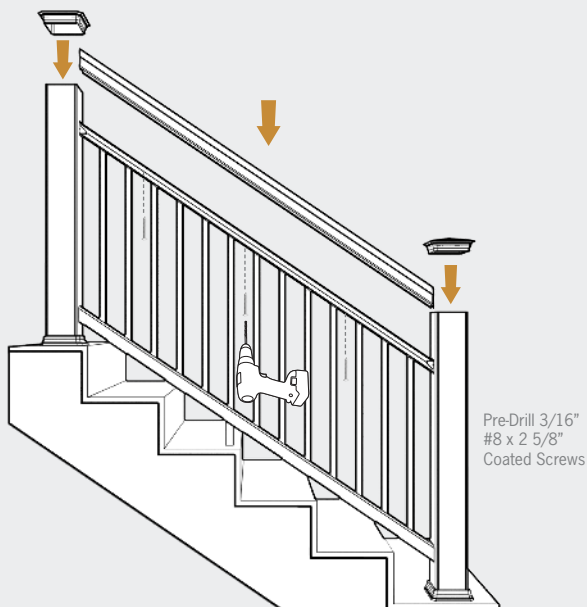
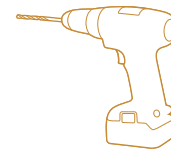
- Secure Mounting Brackets to Posts.



## 9

### INSTALL TOP RAIL AND POST CAPS

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



For typical stair angles, use provided 2 5/8" screws to fasten the Top Rail.



# RadianceRail® Installation Guide



TimberTech  
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1.800.307.7780