

CertainTeed Panorama™ Composite Railing System with Steel Balusters

THIS SHEET IS AN ADDENDUM TO THE PANORAMA COMPOSITE RAILING INSTALLATION INSTRUCTIONS. PLEASE CONSULT THE PANORAMA COMPOSITE RAILING INSTRUCTIONS FOR GENERAL INFORMATION, DETAILED INSTRUCTIONS AND ILLUSTRATIONS, REQUIREMENTS AND OTHER IMPORTANT INFORMATION.

INSTALLATION INSTRUCTIONS FOR STEEL BALUSTER RAILING SECTIONS

INSTALLATION INSTRUCTIONS FOR DECK OR PORCH RAILING WITH STEEL BALUSTERS

IMPORTANT NOTE: *Should there be any reason to field cut steel balusters, we recommend applying a high-performance zinc spray to protect cut ends against rust and corrosion.*

1. INSTALL POST SLEEVES

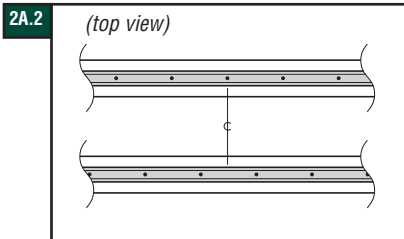
See Panorama Composite Railing Installation Instructions for complete details.

2A. ASSEMBLE FLAT RAILING SECTIONS

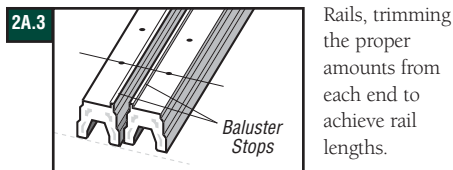
Assembly differs from the Panorama Composite Railing Installation Instructions **ONLY** with the balusters.

2A.1 Measure the distance between the Post Sleeves at the top and bottom (**Note: these two measurements may be slightly different.**) It's important that the posts are plumb.

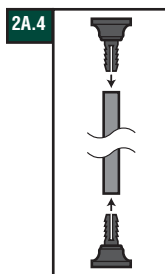
2A.2 Establish the center of the Universal Rails by applying the measurement between the Post Sleeves. You may choose to base the center of the Universal Rail on a pre-drilled hole **OR** exactly between two pre-drilled holes. This decision will affect the spacing between the Post Sleeve and adjacent Steel Baluster on each side of the Railing Assembly. Arrange the rail so you do not end at a post with a portion of a Steel Baluster Shoe.



2A.3 To ensure that the Steel Balusters will be installed plumb, place the two Universal Rails side-by-side on a flat surface, baluster stops both on the inside, aligning them according to the pre-drilled Baluster holes, **NOT** the ends. Now, measure and cut each Universal Rail carefully to minimize gaps. Measure from the established center (see 2A.2) of the Universal



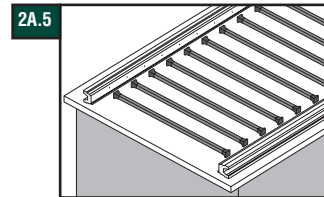
Rails, trimming the proper amounts from each end to achieve rail lengths.



2A.4 Insert one black Baluster Shoe completely into each end of every Steel Baluster.

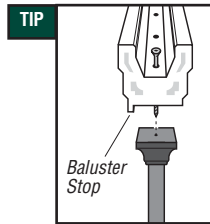
2A.5 Layout the components of the railing section on a flat work surface, roughly in the final, assembled position. Make sure the baluster stops are on the same side of the Railing Assembly. Direct a 3-inch

Baluster Screw into the channel of a Universal Rail, through the pre-drilled hole and into the center of the pilot hole of the black Baluster Shoe, already inserted in the Steel Baluster. Make sure the Baluster Shoe is installed square and does not overlap the

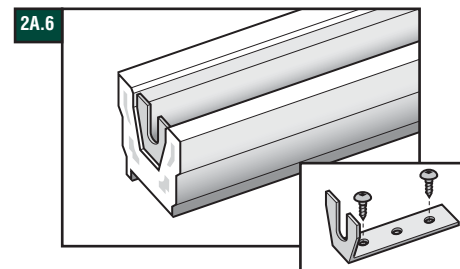


baluster stop on the Universal Rail. Repeat for the remaining Steel Balusters.

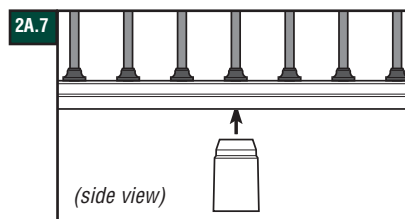
TIP: For the opposite Universal Rail, direct a 3-inch Baluster Screw into the channel of the Universal Rail, through the pre-drilled hole and into the center of the pilot hole of the black Baluster Shoe. Start the screw into the Baluster Shoe but do not tighten. This will provide space between the Universal Rail and the Baluster Shoe end to allow you to locate the remaining Baluster Shoes' pilot holes. Repeat for the remaining Steel Balusters. When all Steel Balusters have been started, return to each Steel Baluster and tighten. (**Note: Set clutch on drill to prevent over-tightening screws.**)



2A.6 Using (2) 10 x 3/4-inch screws, secure each Rail Bracket into the channels of the Universal Rails by aligning the Rail Brackets flush or slightly recessed inside each end cut. Make sure not to let the Rail Bracket face extend beyond the Universal Rail end cut. Secure the Rail Bracket through the two screw holes at each end of the Rail Bracket, leaving the center screw hole empty.



2A.7 Fit the beveled end of the Crush Block up into the channel of the bottom Universal Rail on the Railing Assembly, centered between the two cut ends. Using (2) 10 x 3/4-inch screws, secure the Crush Block from underneath, up into the channel of the bottom Universal Rail.



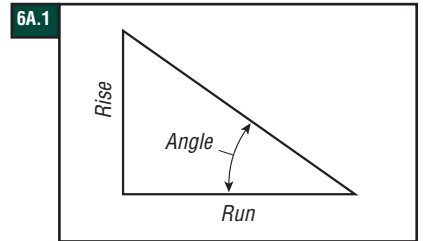
Sections 3., 4. and 5. INSTALL RAILING SECTIONS, TOP RAILS AND POST CAPS

See Panorama Composite Railing Installation Instructions for complete details.

INSTALLATION INSTRUCTIONS FOR STEEL BALUSTER STAIR RAILING SECTIONS

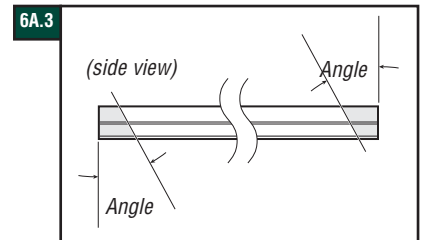
6A. ASSEMBLE STAIR RAILING SECTIONS

6A.1 Make sure Post Sleeves are installed and plumb. Evaluate the rise and run of the stairs to determine the proper stair angle. Be as accurate evaluating the stair angle as possible – every cut you make from this point forward will depend upon this angle.

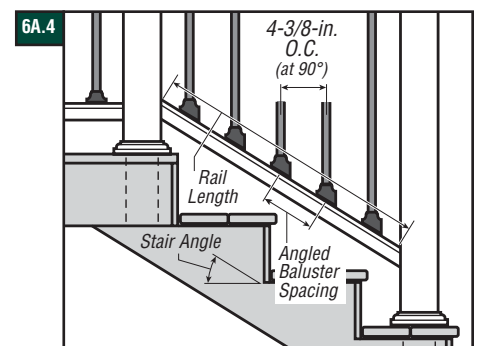


6A.2 Measure the distance between the Post Sleeves at the top and bottom (**Note: these two measurements may be slightly different.**)

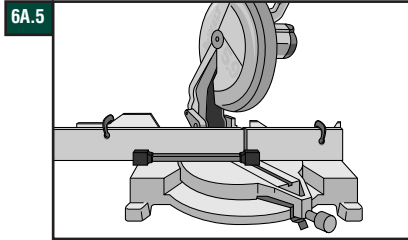
6A.3 Cut each Universal Rail to the proper length and angle, making sure that the baluster stop will be on the same side (yard side) of the finished Railing Assembly.



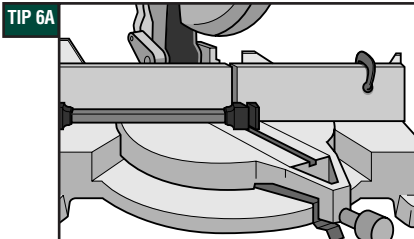
6A.4 Determine number of Steel Balusters needed on Stair Railing Assembly to maintain approximately the same Steel Baluster spacing as the flat deck railing. (Flat deck railing Steel Baluster spacing is 4-3/8 inches, on center.) Refer to the Stair Railing Table (**on back**) for additional baluster spacing help. Multiply number of Steel Balusters needed for Stair Railing Assembly by 2 to achieve total number of Stair Baluster Shoes.



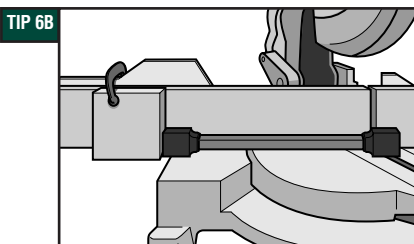
6A.5 Cut each black Stair Baluster Shoe at the proper angle. To safely cut the Stair Baluster Shoes, insert a Stair Baluster Shoe into each end of the supplied 8-inch steel tube (included in the Stair Baluster Shoe package) to prevent hands from getting close to the saw blade. Rotate the Stair Baluster Shoe so that the "raised dot" is in the upward position (the raised dot is a dissecting point for the saw blade to cut through) proceed to cut the Stair Baluster Shoe at the determined angle.



TIP: If using a chop saw with a rotating table, clamp a piece of lumber to the back fence of the saw. This will close the gap on each side of the blade. Set the saw to the correct angle and make a cut through the lumber. Lay the steel tube holder with the two Stair Baluster Shoes on the saw table and make the first cut, dissecting the raised dot. (**TIP 6A**) Use the cut Stair Baluster Shoe to mark another Stair Baluster Shoe across the raised dot, then insert it into the steel tube holder. Set up a wood block on the lumber fence that will act as a stop and position the marked line of the

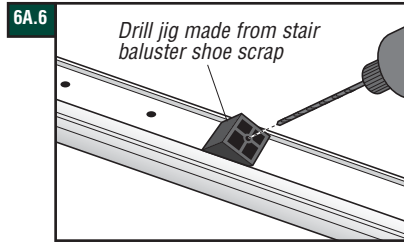


uncut Stair Baluster Shoe under the blade. (**TIP 6B**) Cut the Stair Baluster Shoe. Repeat this procedure until all Stair Baluster Shoes are cut.

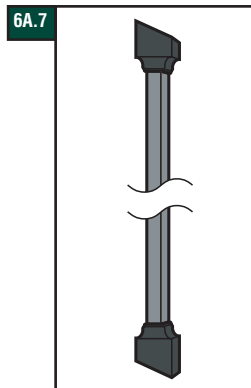


6A.6 Measure and mark for the Steel Baluster screw holes on the Universal Rails. Use the Stair Railing Table to determine angled Steel Baluster spacing for layout.

(See table below.) Drill 3/16-inch holes at the proper angle. Use the Stair Baluster Shoe cut to the stair angle to assist in aligning the drill to the proper angle.

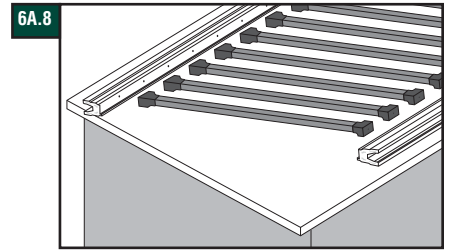


STAIR RAILING TABLE	RISE % RUN	STAIR ANGLE	BALUSTER SPACING O.C.
	.36	20°	4-21/32"
	.40	22°	4-23/32"
	.45	24°	4-25/32"
	.49	26°	4-7/8"
	.53	28°	4-31/32"
	.58	30°	5-1/16"
	.62	32°	5-5/32"
	.64	32.5°	5-3/16"
	.67	34°	5-9/32"
.73	36°	5-13/32"	
.78	38°	5-9/16"	



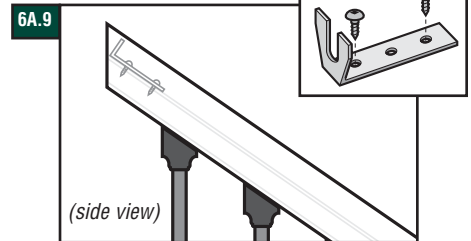
6A.7 Insert one black Stair Baluster Shoe into each end of every Steel Baluster, making sure the angled cuts of the Stair Baluster Shoes are positioned properly before inserting them completely. Now insert them completely into the Steel Balusters.

6A.8 Layout the components of the stair railing section on a flat work surface, roughly in the final, assembled position. Make sure the baluster stops are on the same side of the railing assembly. Direct a 3-inch Baluster Screw into the channel of the Universal Rail, through the pre-drilled hole and into the center pilot hole of the Stair Baluster Shoe. Make sure the Stair Baluster Shoe is installed square, at the proper angle, and does not overlap the baluster stop on the Universal Rail. Repeat for remaining Steel Balusters.



TIP: For the opposite Universal Rail, direct a 3-inch Baluster Screw in the channel of the Universal Rail, through the drilled hole and into the center of the pilot hole in the end of the Stair Baluster Shoe. Start the screw into the Stair Baluster Shoe, but do not tighten. This will provide space between the Universal Rail and the end of the Stair Baluster Shoe to allow you to locate the remaining Stair Baluster pilot holes. Repeat for the remaining Steel Balusters. When all the Steel Balusters have been started, return to each Steel Baluster and tighten.

6A.9 Using (2) 10 x 3/4-inch screws, secure each Rail Bracket into the channels of the Universal Rails by aligning the Rail Brackets just inside each end cut. Make sure that no part of the Rail Bracket extends beyond the Universal Rail end cut. Do not bend the Rail Brackets. Secure the Rail Bracket through the two screw holes at each end of the Rail Bracket, leaving the center screw hole empty.



Sections 7. and 8. INSTALL STAIR RAILING SECTIONS AND STAIR TOP RAILS

See Panorama Composite Railing Installation Instructions for complete details.

INSTALLATION INSTRUCTIONS FOR MITERED/ANGLED DECK AND PORCH RAILING

See Panorama Composite Railing Installation Instructions for complete details.

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