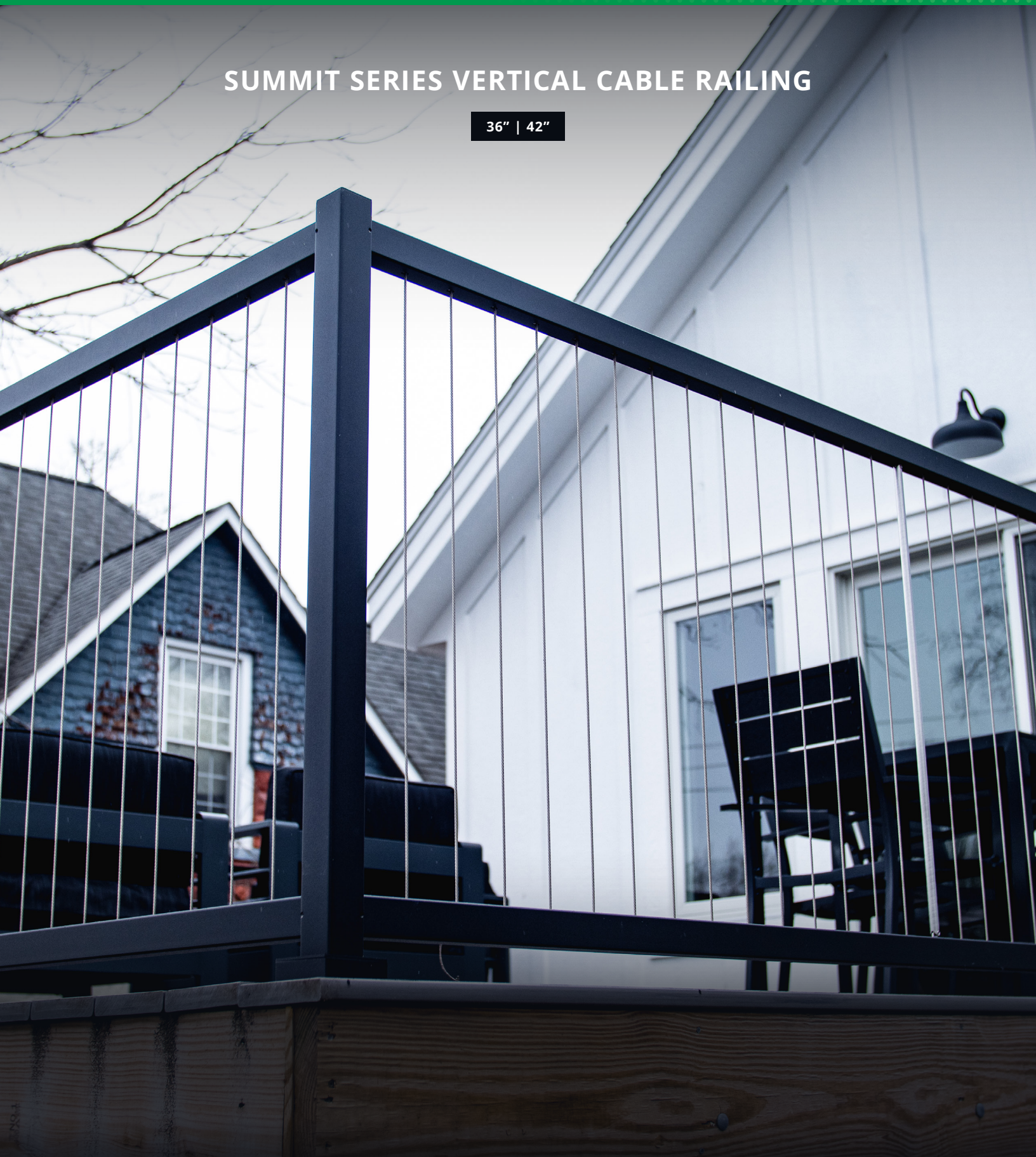
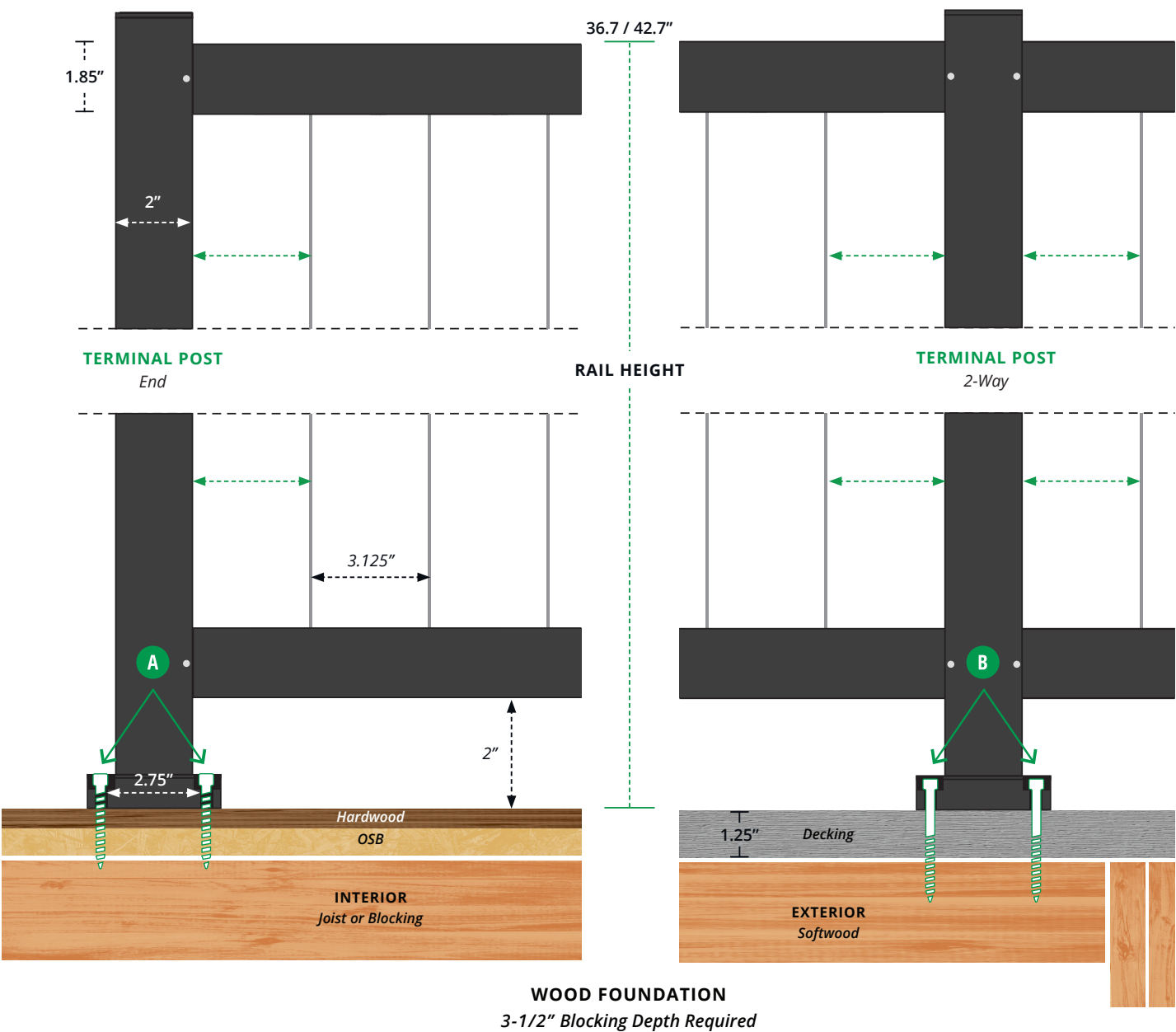


SUMMIT SERIES VERTICAL CABLE RAILING

36" | 42"



PRODUCT SPECIFICATIONS



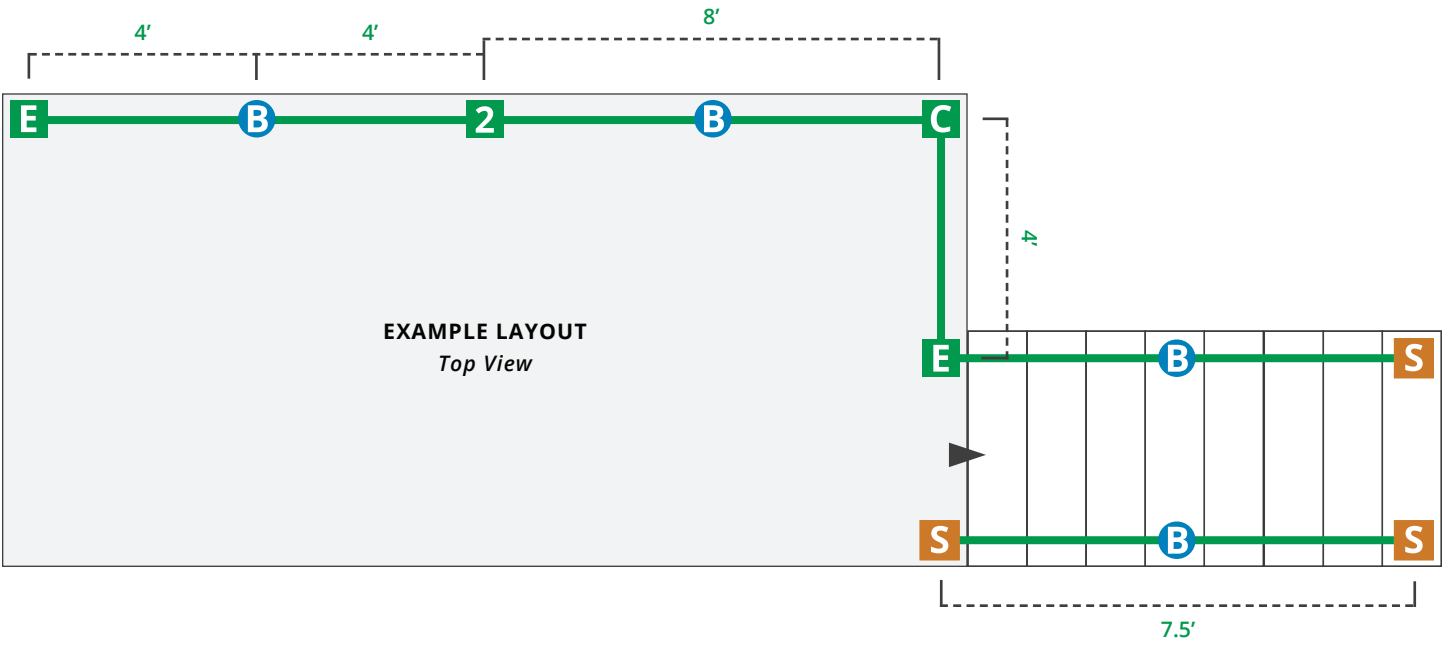
For interior applications, mount posts using (4) 1/4" x 3-1/2" stainless steel star drive socket head cap screws.* **(A)**

For exterior applications, mount posts using (4) 1/4" x 4-1/2" stainless steel star drive socket head cap screws.* **(B)**

IMPORTANT: If there is no interior blocking, consult a local builder for a custom solution to secure against a 200 lbs concentrated load at the handrail.

*Custom Cable Bullet screw with 3" of continuous threading to maximize holding strength. Posts **MUST** be anchored to project structural frame (joists, blocking). All screw threading should be engaged in structural material. If mounting directly to structural material, use 3-1/2" long mounting screws. If mounting through non-structural material (veneer or trim), use 4-1/2" long mounting screws.

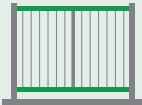
POST OVERVIEW



POST LAYOUT OVERVIEW

- E | END POSTS.** End posts are mortised on one side and should be used on level surfaces where a level span of rail is coming to an end. This includes the landing at the top of a stair run if the rail will continue into a level run.
- 2 | 2-WAY POSTS.** Two-way posts are mortised on opposite sides to continue rail on a level run.
- C | CORNER POSTS.** Corner posts are mortised on adjacent sides to turn rail on a level run at a corner.
- B | SUPPORT BARS.** Any section (level or stair) longer than 48 inches must use a support bar in order to meet code requirements.
- S | STAIR POSTS.** Stair posts are blank and oversized which allows them to be cut down to allow for flexibility in determining overall rail height and post positioning on the stair tread. Rail is attached to the faces of stair posts using internal brackets.

PROJECT LAYOUT GUIDELINES

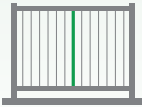


A | LEVEL POST SPACING 8' MAX. Our level panels are designed to cover long runs quickly. (8-foot sections don't require any cutting), but they can easily be cut down to customize your layout. Your posts should be no further than 8 feet apart on center.

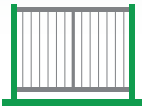


B | STAIR POST SPACING 7.5' MAX. To accommodate angled rails, stair panels can span a maximum of 7.5 feet from the inside post faces as measured along the rail. Longer spans will need additional stair posts and stair panels.

STAIR PITCH 30-38°. We recommend a pitch of 30-38°, otherwise your handrail may require some routing to install.



C | SUPPORT BARS. Add support bars on any section greater than 48 inches. Your aluminum rail must be supported in order to meet code requirements.



D | STRUCTURAL POST MOUNTING. Posts must be mounted to a structural frame and require 3 1/2" of blocking. See *page 1* for post mounting screw recommendations based on your foundation.

CONFUSED?

Scan the code to watch video tutorials for every step of the process.



IMPORTANT: All recommendations and rail components are designed to comply with the International Residential Code (IRC). Because building codes may vary it is the installer's responsibility to verify that the installed system complies with all applicable state and local building codes.

For more information visit: cablebullet.com/pages/terms-conditions

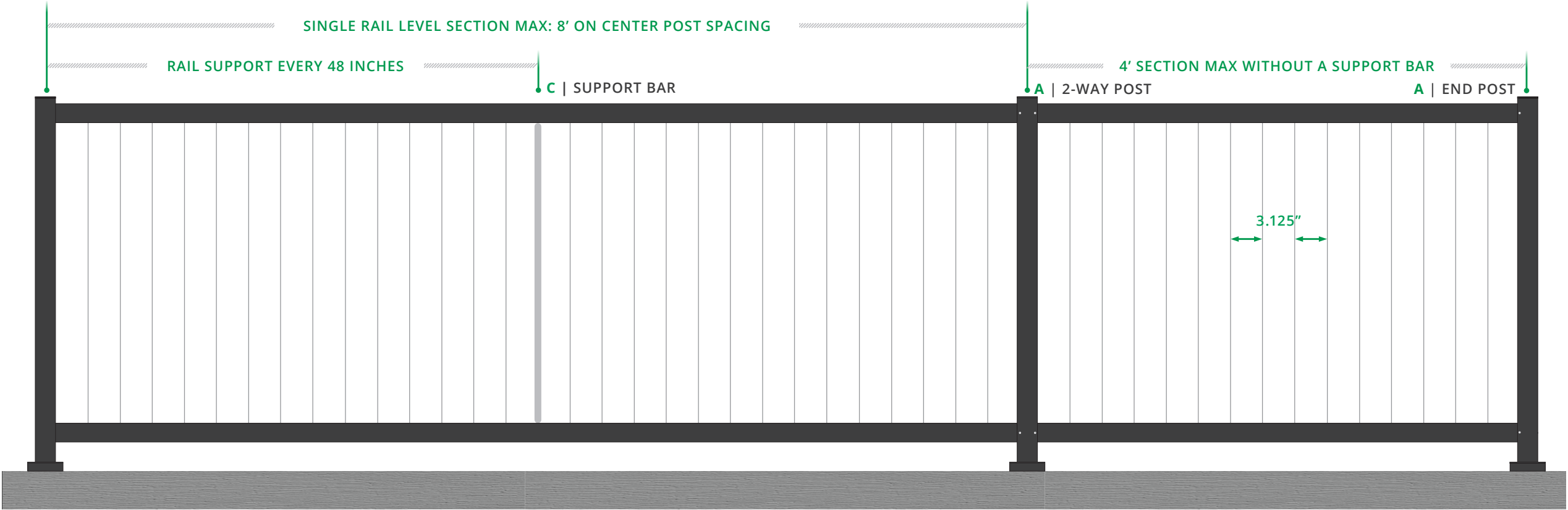
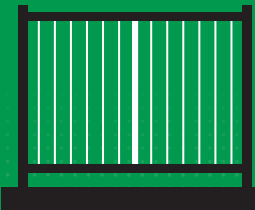
1 | Level Posts & Rails
page 5



2 | Stair Posts & Rails
page 7



3 | Cable Infill & Support Bars
page 13



INSTALLING LEVEL SECTIONS

TOOLS

- 3/16 x 12" drill bit*
- #25 x 6" drill bit*
- 3/32 Allen Wrench*
- 3/16 Allen Wrench*
- 3/32 x 3-1/2" Hex Socket Head Power Bit*
- T30 x 6" Star Drive Power Bit*
- Magnetic Multi-Bit Screwdriver*
- T-Handle Tap Wrench*
- #10-32 Taper Tap*
- ChalkShot**
- Miter saw with non-ferrous aluminum cutting blade
- Power Drill
- Speed square
- Level
- Measuring tape
- Fine-point pencil

SUPPLIES

- 10-32 x 1/4" Stainless Steel Half Dog Point Hex Socket set screws*
- Post mounting screws** (size and type may vary by project)
- Cable Bullet Leveling Plate** or shims
- Painter's tape (optional)

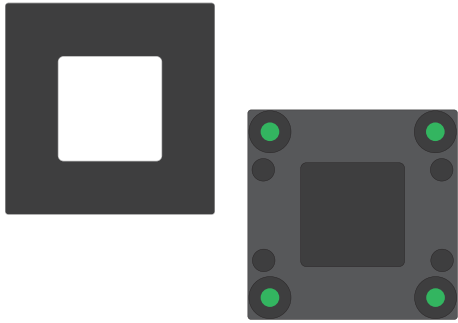
*included in installation kit

**available at cablebullet.com

HOW-TO VIDEO



Top View



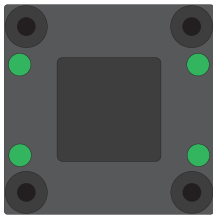
- 1 | Place all level railing posts in their approximate locations according to the layout guidelines on page 3, and outline the exact placement of post edges.

Remove the post's base cover plate, and mark each pilot hole with ChalkShot.

- 2 | Remove the post, and use the 3/16 drill bit to drill all 4 pilot holes. Pilot hole depth must accommodate the mounting screws required for your project's surface (see page 1).

Replace post ensuring mortises are positioned correctly, and secure using the appropriate post mounting screws and the T30 power bit. Do not fully tighten screws until your post is leveled and plumb.

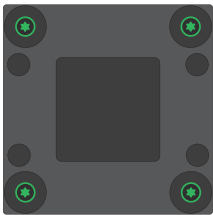
Top View



- 3 | Using a 3/16 Allen wrench and a level, adjust post leveling screws to plumb your post.

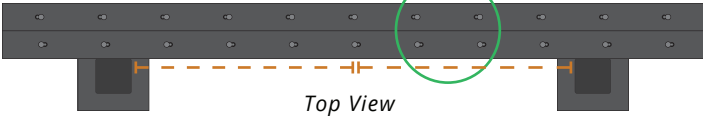
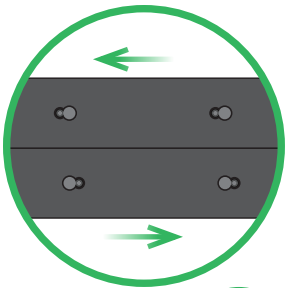
PRO TIP: If your surface is especially soft, use shims or a Cable Bullet Leveling Plate under your post leveling screws to provide additional support.

Top View



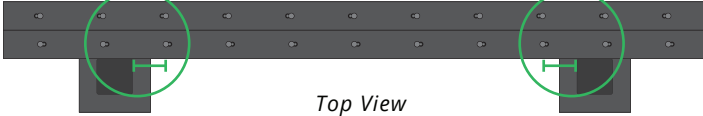
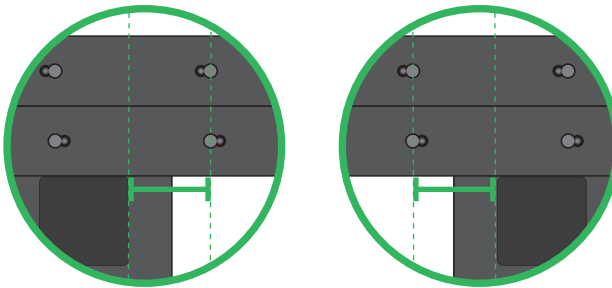
- 4 | Once all posts are plumb, tighten each post mounting screw to secure. Replace the base cover plate.

If your section is 8 feet (or 4 feet if using 48" panels), your rails are already cut to the appropriate length and you can skip to step 9! If you need a section cut to a custom length, continue to step 5.

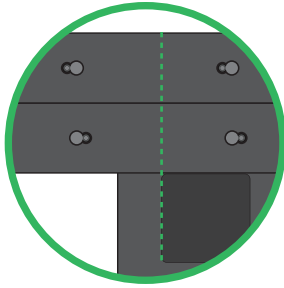
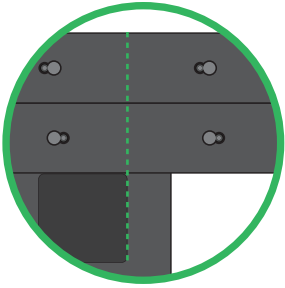


- 5 | Lay 2 lengths of rail alongside your posts with the tensioning holes facing up. Make sure your set screw holes (smaller) are running in opposite directions.

IMPORTANT: If your rail section is longer than 48", you'll want to make sure an odd number of tensioning holes will be in use on your rail in order to center your support bar.

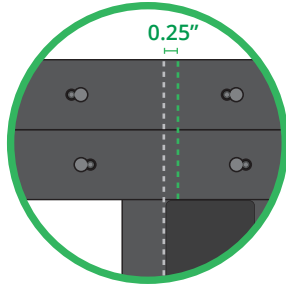
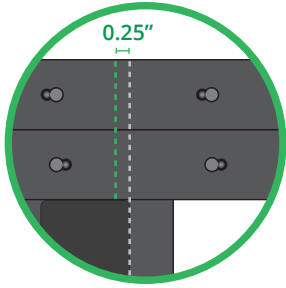


- 6 | Measure the distance between the face of your posts and the center of each of the outermost tensioning (larger) holes. Adjust your rails so that all tensioning holes are equidistant from your posts. This will ensure even cable spacing beside your posts as well as perfectly center your support bar if you are using one.

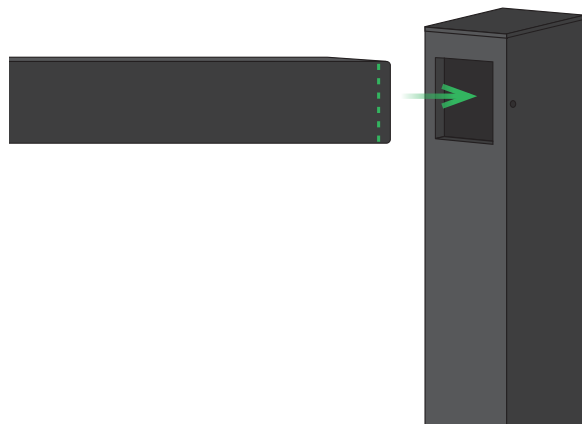


- 7 | Once the rail is properly positioned, mark the ends of each rail where they intersect the post faces.

PRO TIP: Use painter's tape to mark these measurements for easy reference later on.



- 8 | Measure 1/4" past each post face marking to find your cutting location. Cut your rails using a miter saw with a non-ferrous aluminum cutting blade.



9 | Slide your top rail into place on the posts using the marks made in step 7 as a guide (1/4" from rail end).

10 | Using the #25 drill bit, locate the set screw hole on the post and drill through **one** wall of your rail. Drive in the 10/32 set screws **by hand** using a 3/32 Allen wrench or power bit to secure your rail on one side before drilling and securing the other end of the top rail.



PRO TIP: Installing the top rail first reduces the risk of it falling on and damaging the bottom rail during installation.

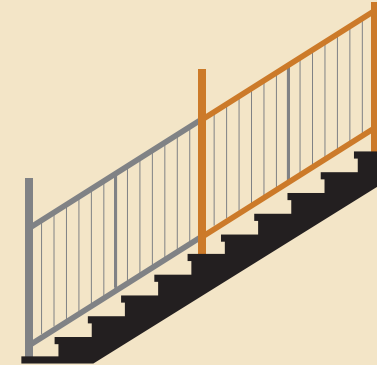


PRO TIP: If threading was marred during drilling, re-tap the hole using the #10-32 taper tap.

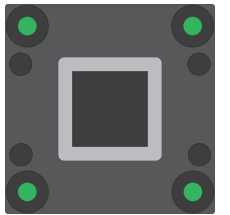
11 | Once the top rail is secured, repeat steps 9-10 on the bottom rail.



IMPORTANT: Our stair posts are designed to be cut down to allow for flexibility in determining overall rail height and post positioning on the stair tread. If more than one stair post is required for your layout, **complete sections (both posts and rails) one at a time starting at the top of your stairs.** For each subsequent stair section, repeat the process below starting at step 2.



Top View



1 | Determine all approximate stair post locations according to layout guidelines on page 3, and outline the exact placement of post edges and angles. Set all posts but the topmost stair post aside.

2 | With the topmost stair post in position, remove the post's base cover plate, and mark each pilot hole with ChalkShot.

INSTALLING STAIR SECTIONS

TOOLS

- ❑ 3/16 x 12" drill bit*
- ❑ 5/32 x 2-1/16" drill bit*
- ❑ 1/8" Allen Wrench*
- ❑ 3/32 Allen Wrench*
- ❑ 5/32 Allen Wrench*
- ❑ 3/16 Allen Wrench*
- ❑ 3/32 x 3-1/2" Hex Socket Head Power Bit*
- ❑ T20 x 3-1/2" Star Drive Power Bit*
- ❑ T30 x 6" Star Drive Power Bit*
- ❑ Magnetic Multi-Bit Screwdriver*
- ❑ T-Handle Tap Wrench*
- ❑ #10-24 Taper Tap*
- ❑ #10-32 Taper Tap*
- ❑ Summit Series Stair Rail Template*

- ❑ ChalkShot**
- ❑ Miter saw with non-ferrous aluminum cutting blade
- ❑ Power drill
- ❑ Right angle drill (recommended)
- ❑ Speed square
- ❑ Level
- ❑ Measuring tape
- ❑ 2-4 rubber clamps (small profile and high poundage rating are best)
- ❑ Fine-point pencil
- ❑ Spring-loaded center punch (optional)

SUPPLIES

- ❑ 10-24 x 3/4" Stainless Steel Socket Head Cap Screws*
- ❑ Stair rail brackets*

- ❑ 10/32 x 1/4" Stainless Steel Half Dog Point Hex Socket set screws*
- ❑ 1/4-20 x 1/4" Stainless Steel Half Dog Point Hex Socket Set Screws* (if using support bars)
- ❑ Vertical Cable Rail Support Bar Pins* (if using support bars)
- ❑ #8-32 x 1/2" Stainless Steel Star Drive Pan Head Machine Screw*
- ❑ Post mounting screws** (size and type may vary by project)
- ❑ Cable Bullet Leveling Plate** or shims
- ❑ 0.5" shims
- ❑ Canned air
- ❑ Painter's tape
- ❑ Machine oil (optional)

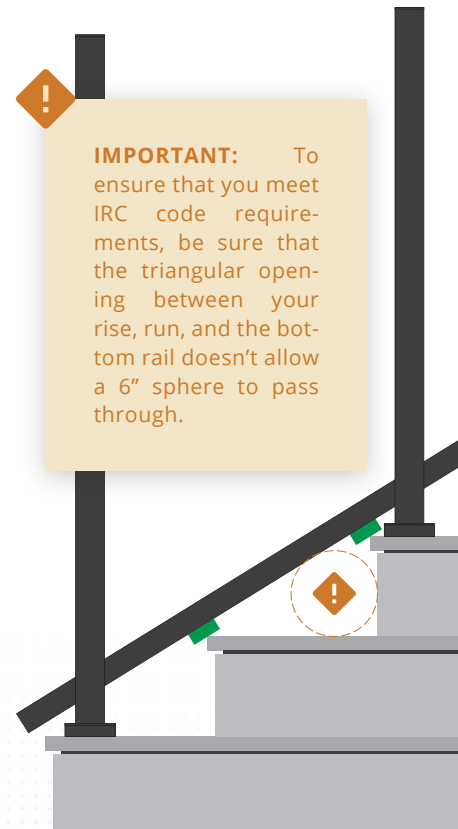
*included in installation kit

**available at cablebullet.com

HOW-TO VIDEO

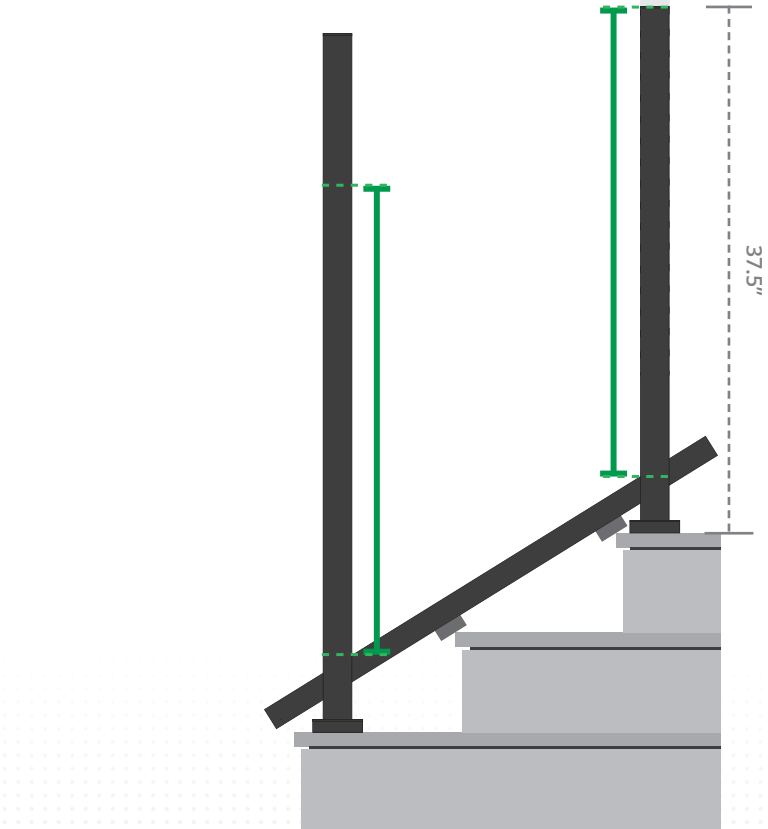


IMPORTANT: To ensure that you meet IRC code requirements, be sure that the triangular opening between your rise, run, and the bottom rail doesn't allow a 6" sphere to pass through.



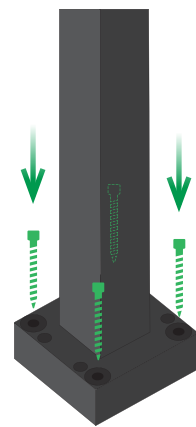
3 | Place a stick of rail on two 0.5" shims* on the nosing of your stairs. Clamp in place.

*The spacing between your bottom rail and the nosing of your stairs might vary depending on your project. We recommend 0.5", but shim height may be adjusted between 0.25" and 0.75" to accommodate.

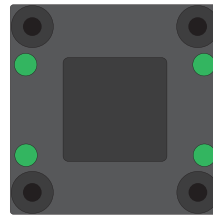


4 | To determine the finished height of your bottom post, measure from the top of the rail to the top of your **upper** post. If you are transitioning from a 42" level run to a stair run, mark your upper post 37.5" from the mounting surface. Measure from the top of your rail to this new mark to find the height of your bottom post.

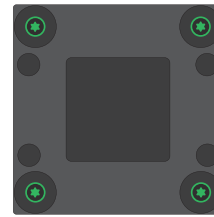
Transfer this measurement to the bottom post. After unclamping the rail, remove the bottom post, and cut it down to size using a Miter saw with non-ferrous aluminum cutting blade. Install the post top into your bottom rail.



Top View



Top View



- 5 | Before replacing your post on the stair tread, use the 3/16 drill bit to drill all 4 pilot holes marked in step 2. Pilot hole depth must accommodate the mounting screws required for your project's surface. (See page 1)

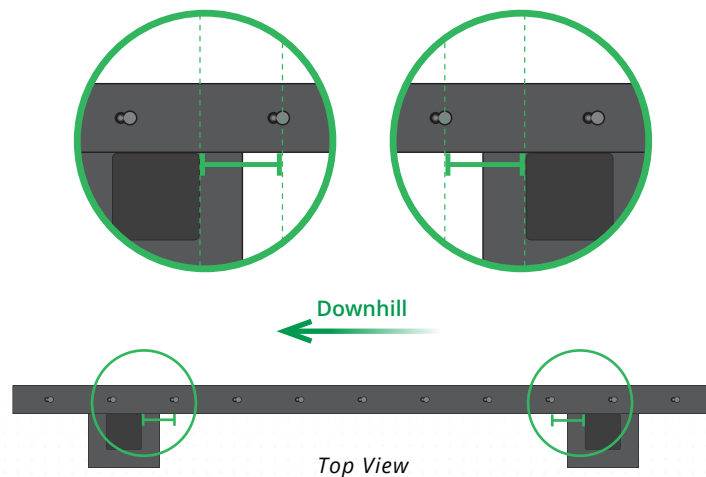
Set your post back in place, and secure using the appropriate post mounting screws and the T30 power bit. Do not fully tighten screws until your post is leveled and plumb.



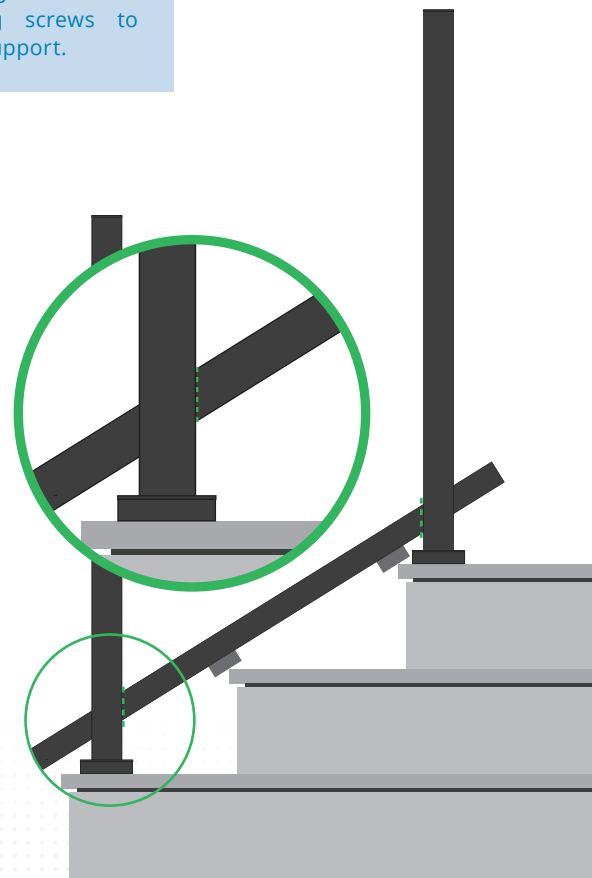
PRO TIP: If your surface is especially soft, use shims or a Cable Bullet Leveling Plate under your post leveling screws to provide additional support.

- 6 | Using a 3/16 Allen wrench and a level adjust post leveling screws to plumb your post.

- 7 | Once the post is plumb, tighten each post mounting screw with the T30 Power bit to secure. Replace the base cover plate.

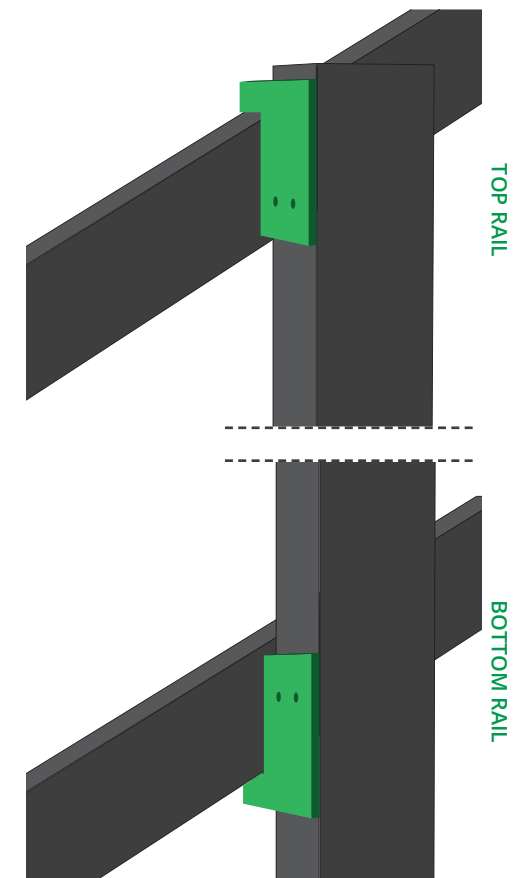
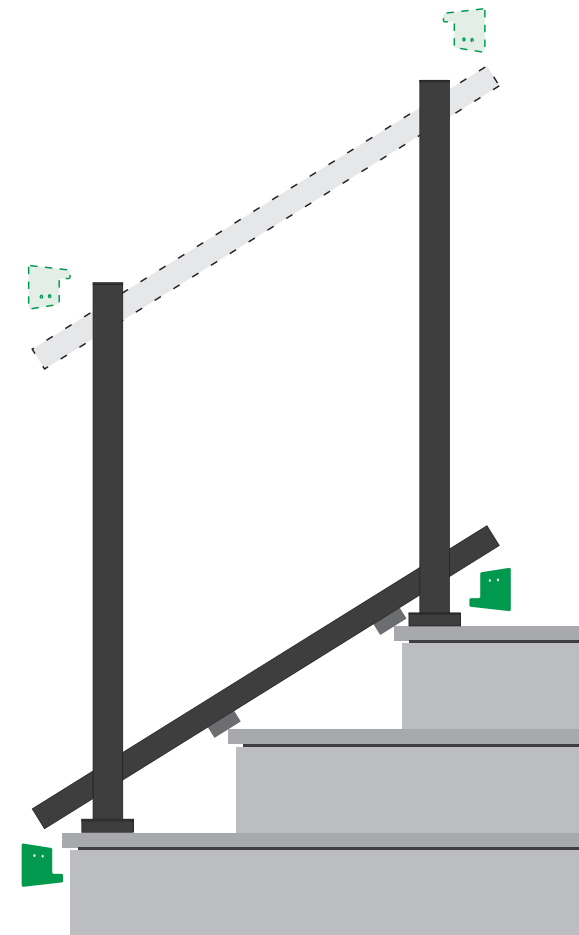


Top View



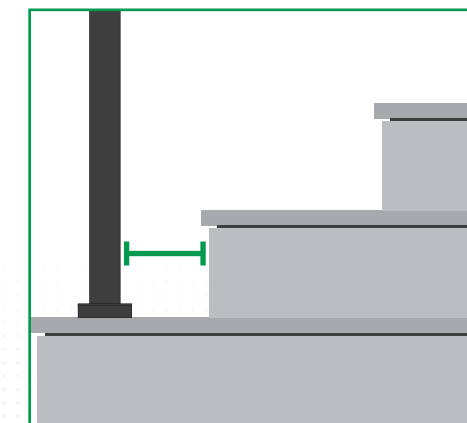
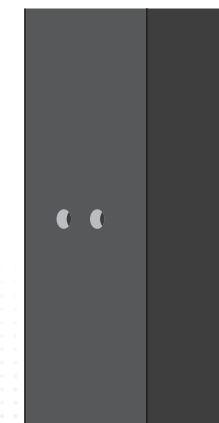
- 8 | Place the rail back on your shims making sure the set screw holes (smaller) are facing downhill, and loosely clamp in place. Adjust the rail until the two outermost tensioning holes (larger) are equidistant from the face of your posts. If your section is longer than 48" make sure an odd number of tensioning holes will be in use so that your support bar will be centered.

- 9 | Mark the side of the rail where it intersects the post face on each end.



- 10 | Place the Stair Rail Template against the post face with the long end pointing in the direction that cables will run and the dog leg wedged against the opposite side of the rail from the cable holes (under for the bottom rail and over for the top rail). Mark the template holes with either a fine-point pencil or a spring loaded center punch. Repeat this step on the other post.

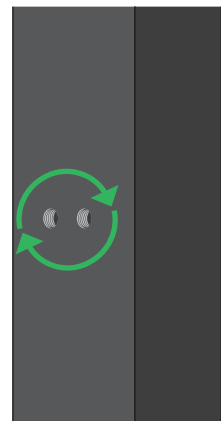
- 11 | Remove the rail and cut it down to size using the marks from step 9.



IMPORTANT: It is not advised to drill pilot holes with the template in place.

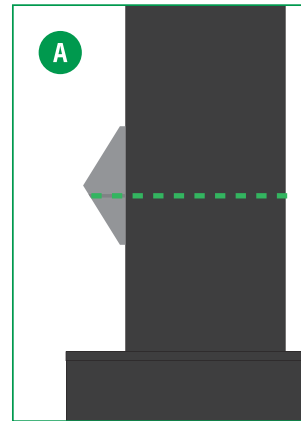
- 12 | Drill the pilot holes in your posts using the 5/32 drill bit*.

*If space is limited at the base of your bottom post, you may need to use a right-angle drill for this step.



13 | Tap all pilot holes using the #10-24 tap by inserting it into each pilot hole and turning clockwise until you are entirely into the post body. The tap will feel like it's pulling itself in. Blow out each hole with canned air, and tap a second time for a cleaner fit.

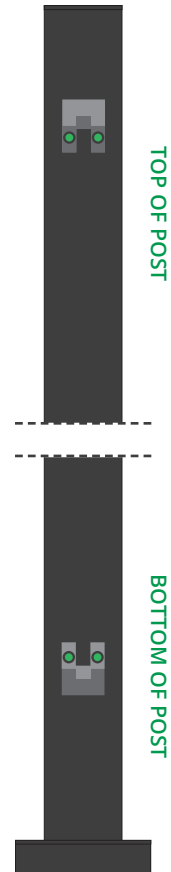
PRO TIP: Add some machine oil to your tap to decrease friction.



14 | With the U-shaped channel facing in the direction of the cables, attach each stair rail bracket using the 10-24 Head Cap screws and a 5/32 Allen wrench.

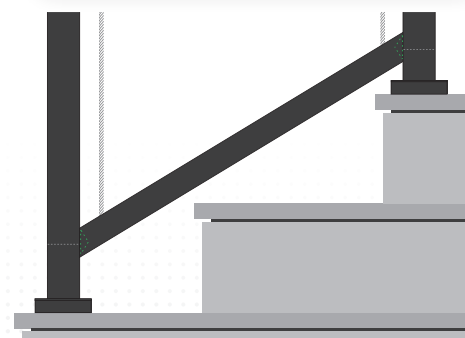
At this point, use painter's tape to mark the side of the posts according to the etched groove on the stair rail brackets **A**. This will be where you'll drill to attach the rail.

IMPORTANT: Our stair rail brackets can accommodate a stair pitch of 30-38°. If your pitch falls outside of these parameters, your handrail may require some routing to install.

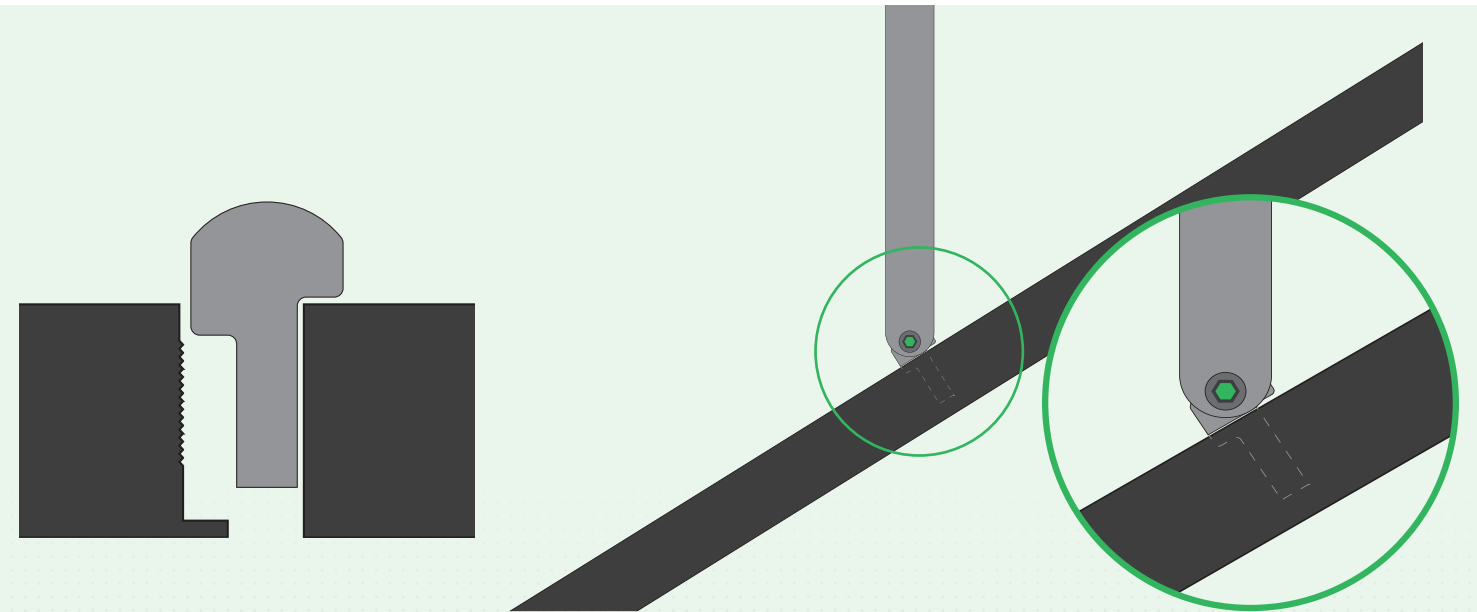


15 | Install one length of cable into each of the two outermost tensioning holes on the rail by inserting a crimped end and securing it **by hand** with a 10-32 set screw and a 3/32 Allen wrench or power bit. The set screw should be driven in until it is just flush with the rail.

IMPORTANT: Our stair rail brackets can accommodate a stair pitch of 30-38°. If your pitch falls outside of these parameters, your handrail may require some routing to install.

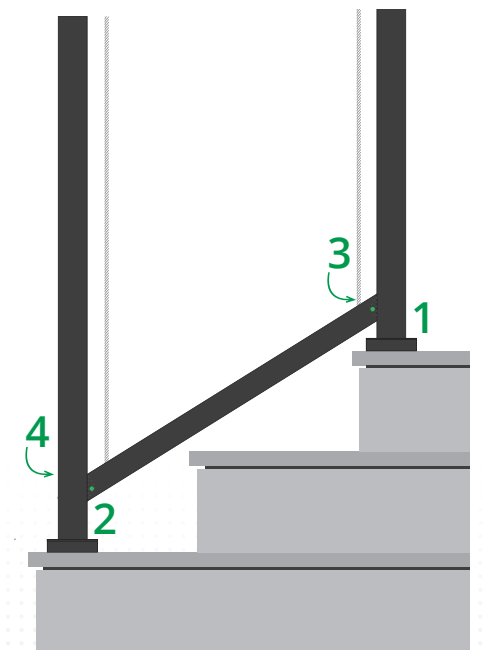
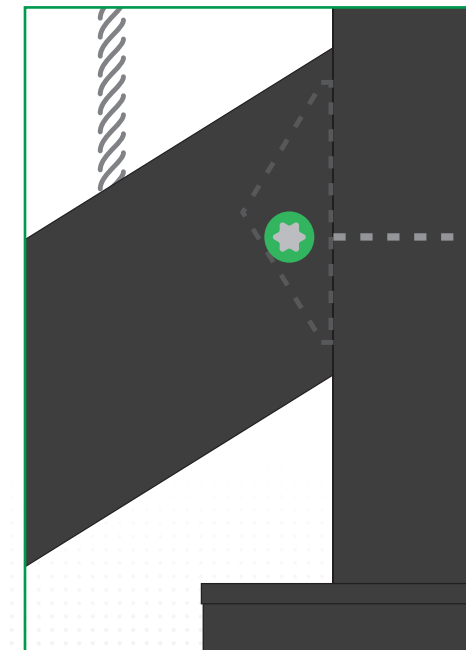
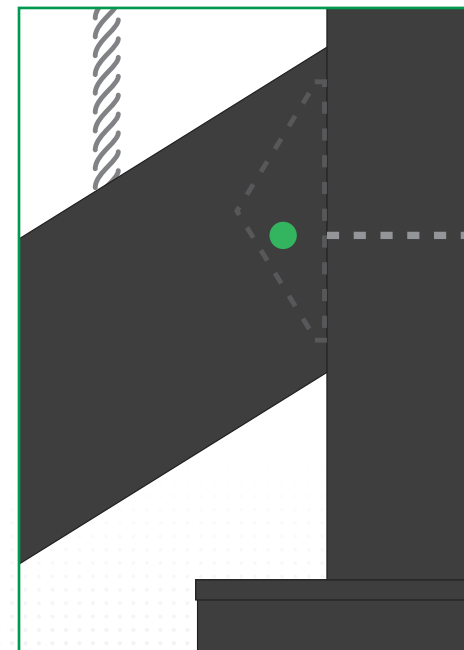


16 | Slide your rail over the stair rail brackets. (If you are using a support bar, proceed to step 16b after you have set your top rail in place. If you are currently installing the bottom rail or you do not need a support bar, skip to step 17.)



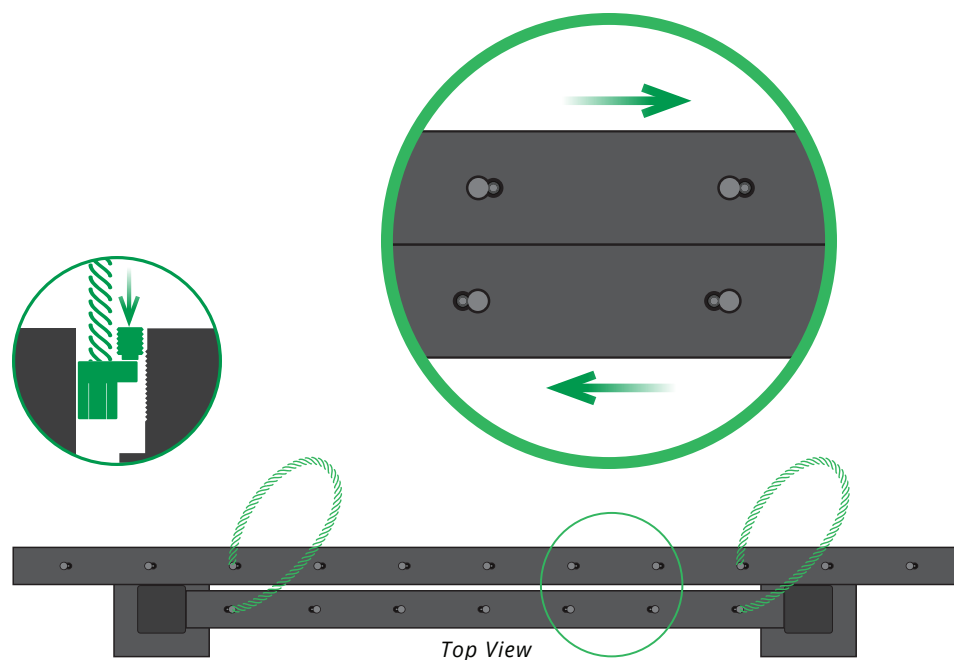
16b | If your section is longer than 48" and you have completed step 16 for your top rail, it is now time to install your support bar.

Starting at the bottom, insert one of the support bar pins into the center tensioning (larger) hole on your bottom rail making sure the cutout is flush against the post and opposite the set screw (smaller) hole. Secure either end of the support bar to the pin using the 1/8 Allen wrench and a 1/4-20 set screw. Repeat this process to attach the top of your support bar to the top rail.

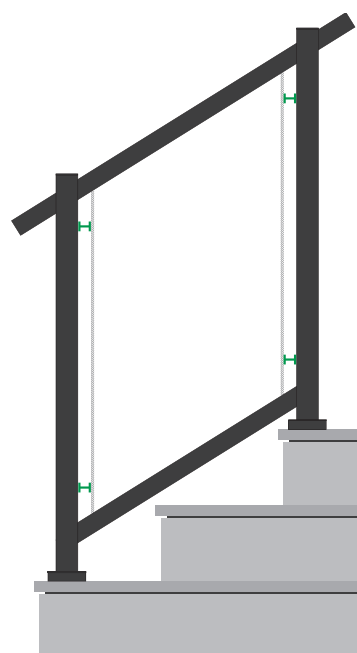


17 | Using the 5/32 drill bit, drill a 0.5" deep through the side of the rail and into the stair rail bracket. Your drilling location should be level with the marking made in step 14 and 0.25" away from the post face. Before drilling the other 3 pilot holes, drive a #8 pan head screws **by hand** into the hole you just drilled using the T20 power bit. Repeat this step on the same side of the rail but at the other bracket location before switching to the other side. A single piece of rail should have 4 screws going into 2 brackets.

PRO TIP: Mark 0.5" depth on your drill bit using painter's tape for consistency.

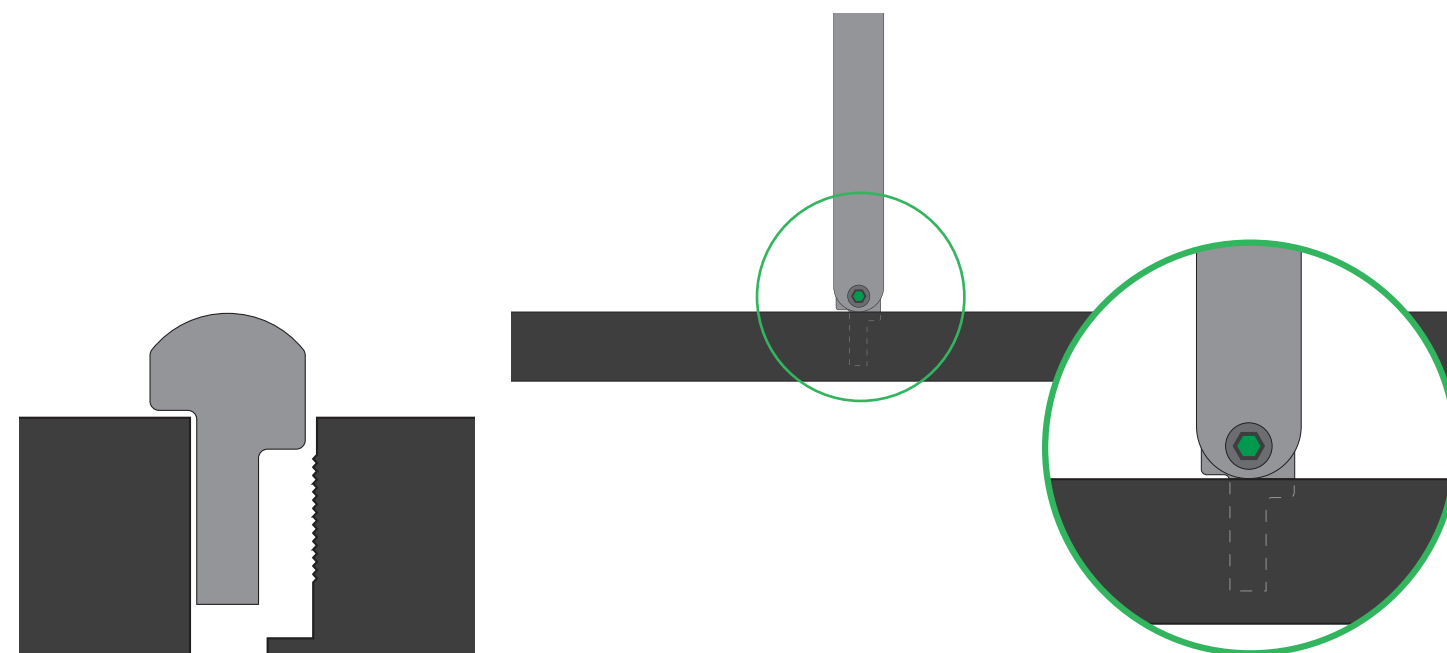


18 | Moving on to the top rail, place a stick of rail next to the installed bottom rail with the set screw holes facing in the opposite direction (uphill). Secure the other ends of the two cables from step 15 into appropriate tensioning holes on the top rail until the set screws are flush with the rail.



19 | Flip and lift the top rail until the cables are taut to determine the rail height. Loosely clamp in place. Adjust the rail until the two outermost tensioning holes (larger) are equidistant from the face of your posts. The cables should run parallel to the posts.

20 | Repeat steps 9-17 for the top rail. Remove the installed cables for step 11.



2 | If you are using a support bar, install it now (before applying tension) by inserting a support bar pin into the center tensioning hole on the bottom rail making sure the cutout is flush against the post and opposite the set screw (smaller) hole. Secure the support bar to the pin with a 1/4-20 set screw and the 1/8 Allen wrench. Place another support bar pin into the corresponding hole on the top rail, and slide the support bar onto it. Tighten the upper set screw.

CABLE INFILL & SUPPORT BARS

TOOLS

- 1/8" Allen Wrench*
- 3/32 Allen Wrench*
- 3/32 x 3-1/2" Hex Socket Head Power Bit*
- Magnetic Multi-Bit Screwdriver*
- T-Handle Tap Wrench*
- #10-32 Taper Tap*

HOW-TO VIDEO



SUPPLIES

- 10/32 x 1/4" Stainless Steel Half Dog Point Hex Socket set screws*
- 1/4-20 x 1/4" Stainless Steel Half Dog Point Hex Socket Set Screws* (if using support bars)
- Vertical Cable Rail Support Bar Pins* (if using support bars)

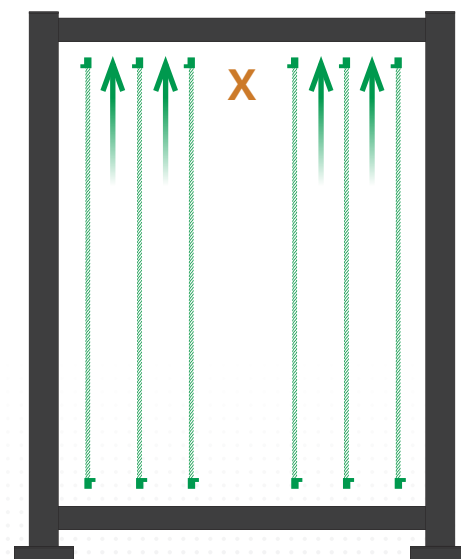
*Included in installation kit



IMPORTANT: *If your section is longer than 48", skip the center hole to allow for the support bar.

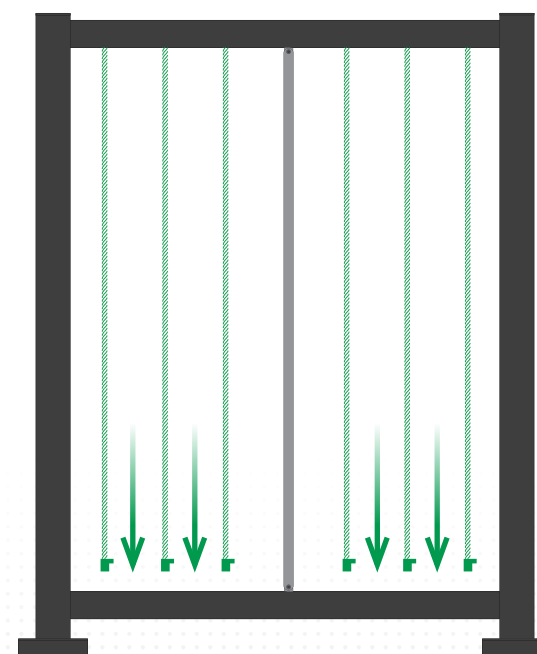


PRO TIP: If you have trouble driving in a set screw, run the #10-32 tap through the set screw hole.

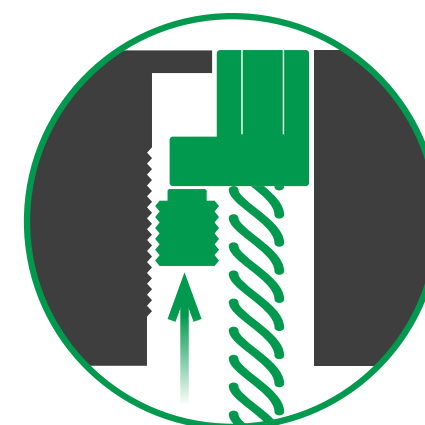


1 | Insert a pre-crimped cable end into a tensioning hole (larger) on the underside of your top rail.

Use a 3/32 Allen wrench or power bit to secure the cable in place by driving in a 10/32 set screw **by hand** until it is flush with the face of the rail. Repeat this step on every open tensioning hole on the top rail*.



3 | Use the 3/32 Allen wrench or power bit to install each cable in the corresponding hole on the bottom rail. Again, only drive in the set screw until it is flush with the rail face.



4 | Tension each cable **by hand** using the same Allen wrench or power bit. Properly tensioned cables should have the same feel as a bass guitar string.



IMPORTANT: It is normal for your project to settle over time resulting in loose cables. There is plenty of room in the set screw channels to re-tension cables as needed.

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