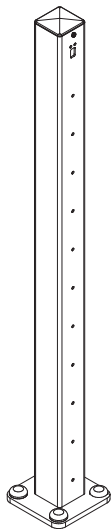


# Installation Instructions

## for DesignRail® Modern Kits

*Note: Prior to beginning installation, verify all parts and thoroughly review all of the installation instructions. Consult local building code for all railing construction requirements in your area.*

*For complete information on installation, care & maintenance, warranty, and product registration, visit [feeneyinc.com/product/design-rail-modern](http://feeneyinc.com/product/design-rail-modern)*



DesignRail® Modern Kits Kit Configurations *page 2*

DesignRail® Modern Kits General Information *page 3*

### DesignRail® Modern Post Kits

Layout Guidelines *page 4*

Package Contents *page 5*

Post Kits Level Condition Installation *page 6*

Post Kits Stair Condition Installation *page 10*

### DesignRail® Modern Rail Kits

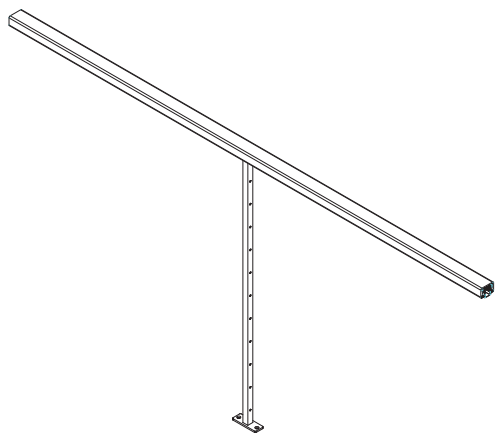
Package Contents *page 5*

Rail Kits Level Condition Installation *page 7*

Rail Kits Stair Condition Installation *page 11*

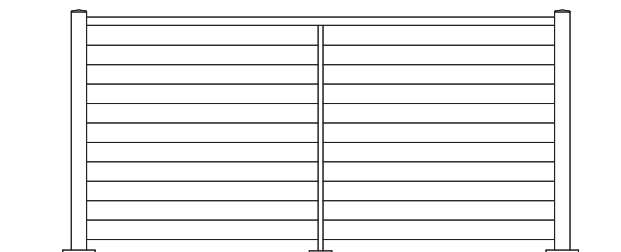
Drink Rail Adapter *page 17*

DesignRail® Kits Accessories *page 18*

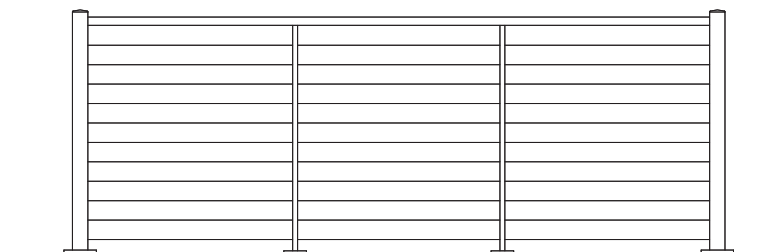


# DesignRail® Modern Kits - Kit Configurations

## LEVEL KITS

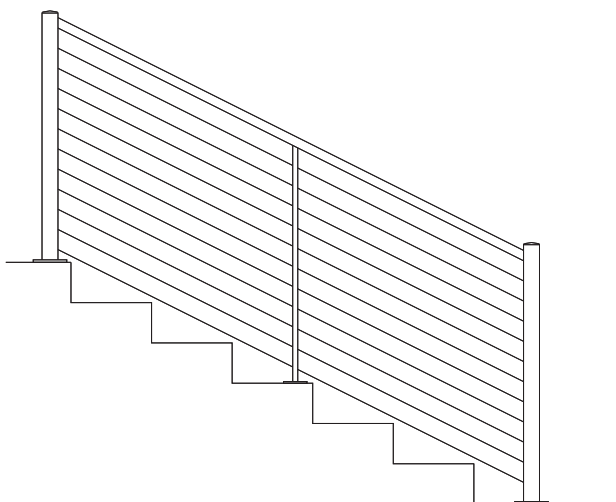


6' Level Rail Kit (with 1 intermediate picket)

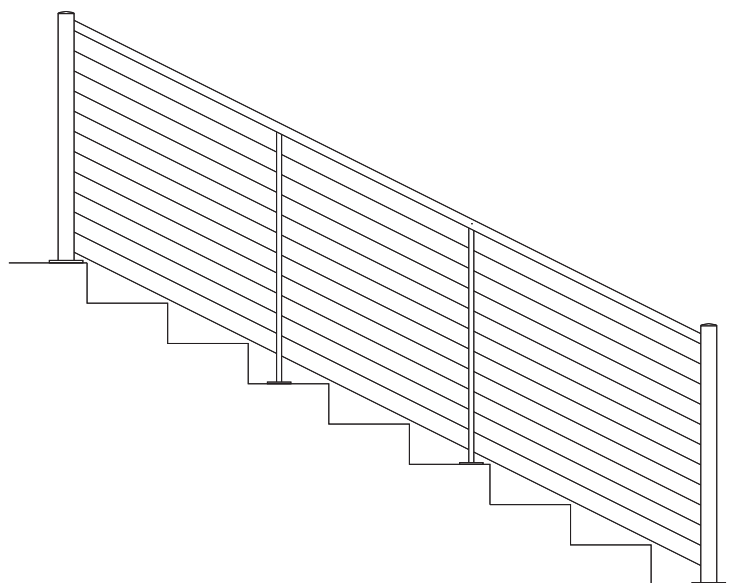


8' Level Rail Kit (with 2 intermediate pickets)

## STAIR KITS



6' Stair Rail Kit (with 1 intermediate picket)



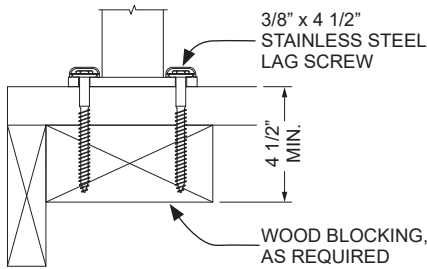
8' Stair Rail Kit (with 2 intermediate pickets)

# DesignRail® Modern Kits - General Information

DesignRail® Modern Kits are comprised of Post Kits, Rail Kits and Accessories.

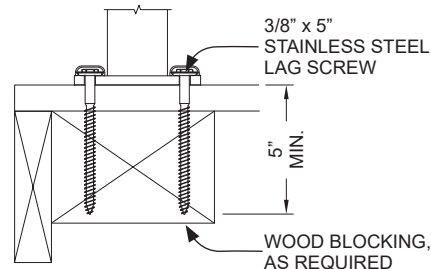
DesignRail® Modern Post Kits are pre-drilled for 1/8" CableRail Kits. (6200 & 6300 Series)

DesignRail® Post Kits come with a pre-attached base plate and are supplied with stainless steel lag screws for attachment to wood. Sufficient wood blocking is required to ensure proper lag screw thread engagement into solid wood structure (See Figures 1.1 and 1.2 below). Visit [www.feeneyinc.com/DRinfo](http://www.feeneyinc.com/DRinfo) for information on mounting into other materials.



LAG SCREW BLOCKING REQUIREMENTS FOR 36" POST KITS

Figure 1.1



LAG SCREW BLOCKING REQUIREMENTS FOR 42" POST KITS

Figure 1.2

Post Kits and Rail Kits are available in 36" or 42" railing heights for level conditions and 36" height for stair conditions.

Isolation Bushings are recommended to prevent contact of dissimilar metals in harsh environments, such as coastal regions or other areas exposed to salt water or other airborne contaminants. Isolation Pads are recommended to prevent direct contact of pressure treated wood with aluminum products. See DesignRail® Kit accessories for Isolation Bushings and Isolation Pads (sold separately).

The recommended overall installation sequence is as follows:

1. Determine post layout
2. Install Level Post Kits\*
3. Install Level Rail Kits\*
4. Install Stair Post Kits (if applicable)
5. Install Stair Rail Kits (if applicable)
6. Install CableRail Kits

**\*Important Note:** If LED Lighting will be installed it is recommended to read the LED Lighting installation instructions prior to Post Kit installation.

If Drink Rail will be installed the top of the Posts will need to be trimmed prior to Post Kit installation (see page 17).

## TOOLS NEEDED:

- |  |                              |
|--|------------------------------|
| - Safety glasses   | - Level                      |
| - Ear protection   | - Small file                 |
| - Gloves   | - Electric drill             |
| - Measuring tape   | - #2 square-drive bits       |
| - Felt tip marker  | - Drill bits, assorted sizes |
| - Miter saw with fine-tooth blade for non-ferrous metals | - 9/16" socket wrench        |
| - String   | - Non-marring quick clamps   |

(See CableRail instructions for information on tools required for CableRail Installation.)

# Post Kits - Layout Guidelines

Position posts over sufficient blocking. (See Figures 1.1 and 1.2 on Page 2)

Position termination posts (TT) and (QC) posts between 3" and 3-3/4" away from structure for installation of CableRail Kits.

Space posts no more than 6-ft apart (center to center) when using 6-ft Rail Kits and no more than 8-ft apart (center to center) when using 8-ft Rail Kits.

Use Intermediate Picket(s) (included in the Rail Kits) at a maximum distance of 36-inches to reduce cable deflection.

Straight runs should not exceed 70-ft, and runs with bends (2 bends at most) should not exceed 40-ft.

If the project requires Stair Post Kits make sure to line-up the Level Post Kits using the same setback as the Newel Stair Post Kits (NR/NL/NP). (See Figure 4.1 on Page 10 for more information)

When transitioning from level to stairs in a straight line, use a Newel Passthrough Post Kit (NP) to continue cables straight through and down the stairs. (See Figures 1.3 and 1.4)

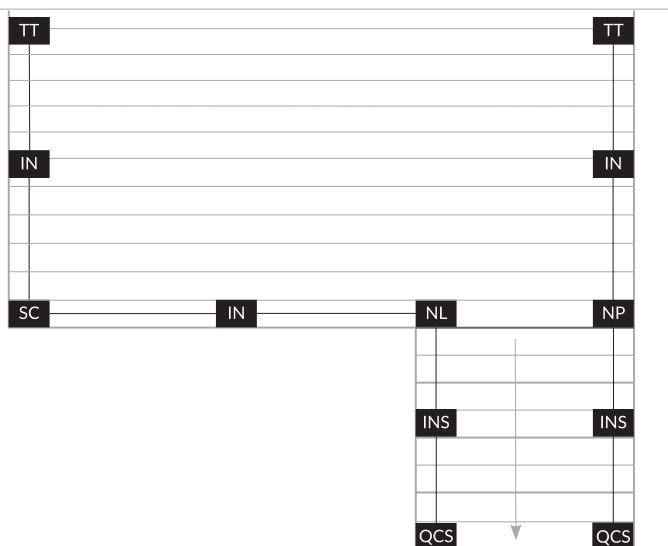
When transitioning from level to stairs at a 90-degree turn, use a Newel Termination Post Kit Left (NL) or a Newel Termination Post Right Post Kit (NR). (see Figures 1.3 and 1.4)

For stand-alone stairs use Quick-Connect® Stair Post Kits (QCS) at the bottom of the stairs and Threaded Terminal Stair Post Kits (TTS) at the top of the stairs. Use Intermediate Stair posts as needed for stairs longer than 72" (when using 6' Stair Rail Kits) or longer than 94" (when using 8' Stair Rail Kits).

## POST KIT TYPES

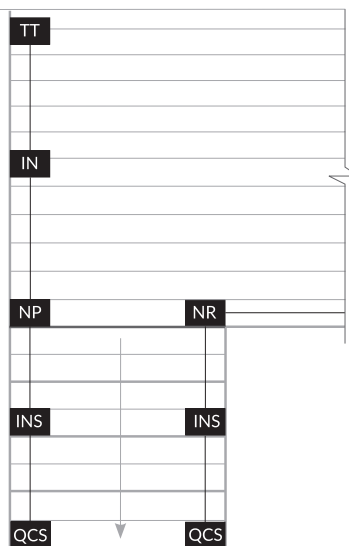
IN	Intermediate Post Kit
TT	Threaded Terminal Post Kit
QC	Quick-Connect® Post Kit
SC	Single Corner Post Kit
NR	Newel Termination Post Kit (Right)
NL	Newel Termination Post Kit (Left)
NP	Newel Passthrough Post Kit
INS	Intermediate Stair Post Kit
TTS	Threaded Terminal Stair Post Kit
QCS	Quick-Connect® Stair Post Kit
45	45-Degree Post Kit
B	Blank Post Kit*

\*Blank Post Kits are available for unique installation conditions, where a standard post kit will not work. When drilling holes in the posts for cable assemblies, use touch up paint to cover the exposed aluminum. Always, use isolation bushings for projects located in harsh environments. Failure to take proper installation precautions may void warranty.



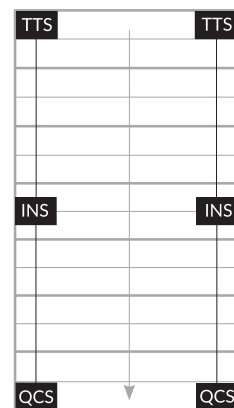
SAMPLE LAYOUT WITH STAIR ON RIGHT SIDE OF DECK

Figure 1.3



SAMPLE LAYOUT WITH STAIR ON LEFT SIDE OF DECK

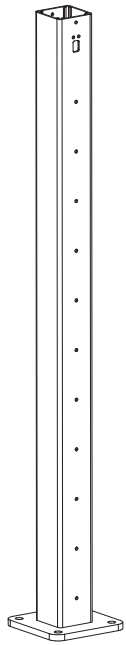
Figure 1.4



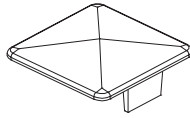
SAMPLE LAYOUT STAND-ALONE STAIR

Figure 1.5

## Post Kits - Package Contents



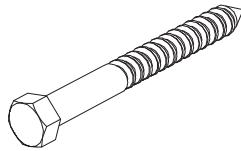
(1x) Pre-drilled post with attached base plate  
(36" Level Post Shown)



(1x) POST CAP



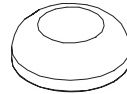
(2x) #8 x 3/4" STAINLESS STEEL SELF-DRILLING SCREWS  
(INS Post Kit includes 4)



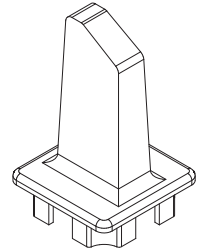
(4x) 3/8" LAG SCREW  
4-1/2" long for 36" Post Kits  
5" long for 42" Post Kits



(4x) RETAINING WASHERS



(4x) VINYL CAP



(1x) - STAIR POST ADAPTER

INS POST KITS ONLY



(2x) 1123 ISOLATION BUSHING

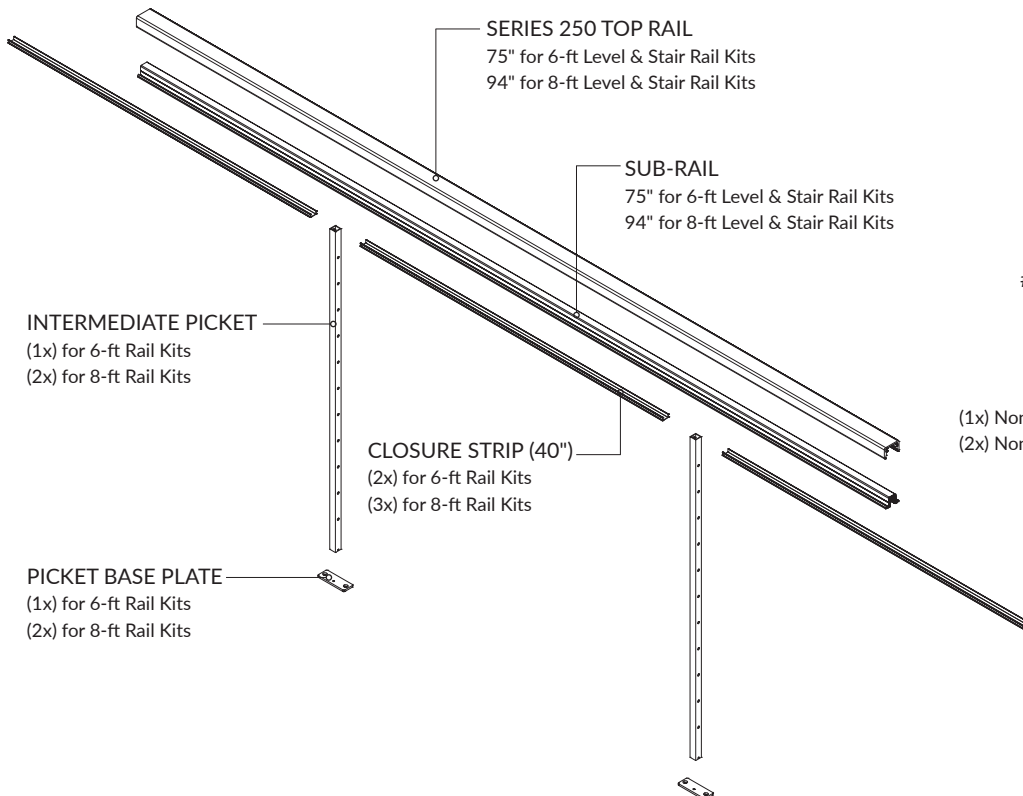


(2x) 1124 ISOLATION BUSHING

42"NP POST KITS ONLY

## Rail Kits - Package Contents

Note: Image below depicts an 8-ft Rail Kit.



SERIES 250 TOP RAIL  
75" for 6-ft Level & Stair Rail Kits  
94" for 8-ft Level & Stair Rail Kits

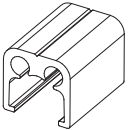
SUB-RAIL  
75" for 6-ft Level & Stair Rail Kits  
94" for 8-ft Level & Stair Rail Kits

INTERMEDIATE PICKET  
(1x) for 6-ft Rail Kits  
(2x) for 8-ft Rail Kits

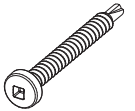
CLOSURE STRIP (40")  
(2x) for 6-ft Rail Kits  
(3x) for 8-ft Rail Kits

PICKET BASE PLATE  
(1x) for 6-ft Rail Kits  
(2x) for 8-ft Rail Kits

LEVEL TOP RCB  
(2x) for Level Rail Kits



(4x) #10 x 1-3/4" SELF-DRILLING SCREWS



#8 x 3/8" SELF-TAPPING SCREWS  
(6x) for 6-ft Rail Kits  
(8x) for 8-ft Rail Kits

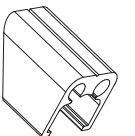


#10 x 3/4" FLAT HEAD SCREWS  
(1x) Non-Painted / (2x) Painted for 6-ft Rail Kits  
(2x) Non-Painted / (4x) Painted for 8-ft Rail Kits

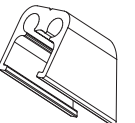


STAIR RAIL KITS ONLY

STAIR RCB FOR UPPER NEWEL POST  
(1x) for Stair Rail Kits



STAIR RCB FOR LOWER NEWEL POST  
(1x) for Stair Rail Kits



# Post Kits - Level Condition Installation

## IMPORTANT NOTE:

*If LED Lighting will be installed it is recommended to read the LED Lighting installation instructions prior to Post Kit installation.*

*If Drink Rail will be installed the top of the Posts will need to be trimmed prior to Post Kit installation (see page 17).*

## STEP 1 – ATTACH POSTS

Review all post locations and blocking requirements.  
(See Figures 1.1 and 1.2 on pg. 3)

Attach the posts to the surface using the mounting lag screws. (See Figure 2.1)

*Note: If project is located in a harsh environment, or is using pressure treated wood, use Isolation Pads (sold separately) to protect the base plates from mounting surface contaminants (see Isolation Pad packaging for installation instructions).*

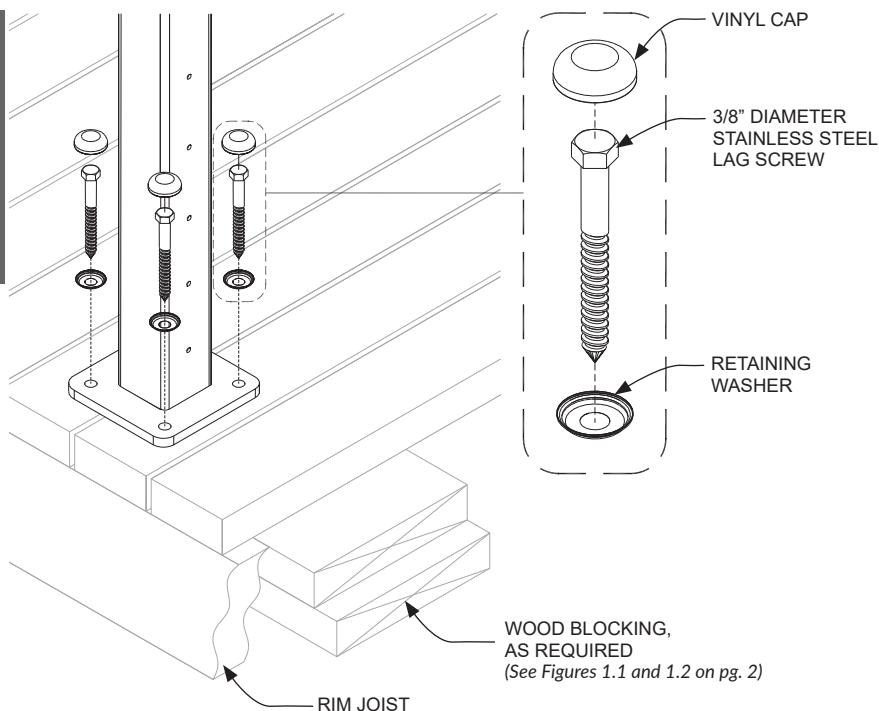


Figure 2.1

Mount the end posts first, then move to the intermediate posts. **Be sure that the posts are oriented so that the Rail Connecting Bracket (RCB) holes are facing the adjacent posts.** Use a string line and level to make sure that all of the posts are in a straight line and **plumb**; shim as necessary. Cover the lag screw heads using the Vinyl Caps and Retaining Washers.

## STEP 2 – PRE-DRILL POST CAPS

Place the Post Cap on top of the post, oriented so that the tabs are behind the pre-drilled hole locations at the top of the post.

Using the pre-drilled hole at the top of the post as a guide, drill a hole through the Post Cap tab with a 9/64" diameter drill bit. Ensure the post cap is fully seated during pre-drilling by pressing downwards on the Post Cap. (See Figure 2.2)

Pre-form screw threads by driving a #8 x 3/4" Self-Drilling Screw through the hole and into the post cap. This will make it easier during final install.

Remove the screws and set aside, the post caps may remain in place. The screws will be installed after the Top Rails are in place.

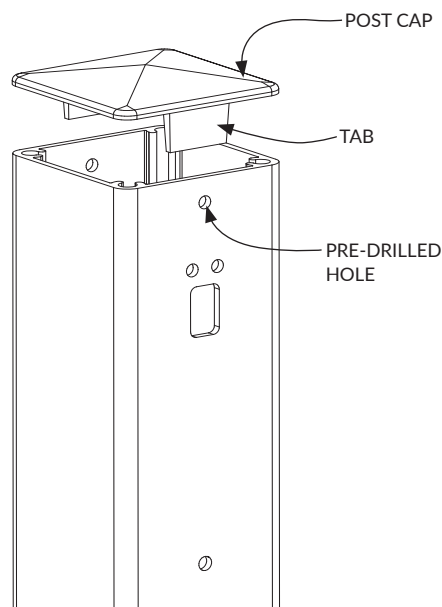


Figure 2.2

# Rail Kits - Level Condition Installation

## STEP 1 – ATTACH RCBs TO POSTS

Attach the Top Rail Connecting Brackets (RCBs) to each post using the #10 x 1-3/4" Self-Drilling screws. (See Figure 3.1)

Each RCB requires two screws and the RCB holes are pre-drilled on all posts (Blank Posts are not pre-drilled)

*Note: The rectangular hole is provided for optional lighting.*

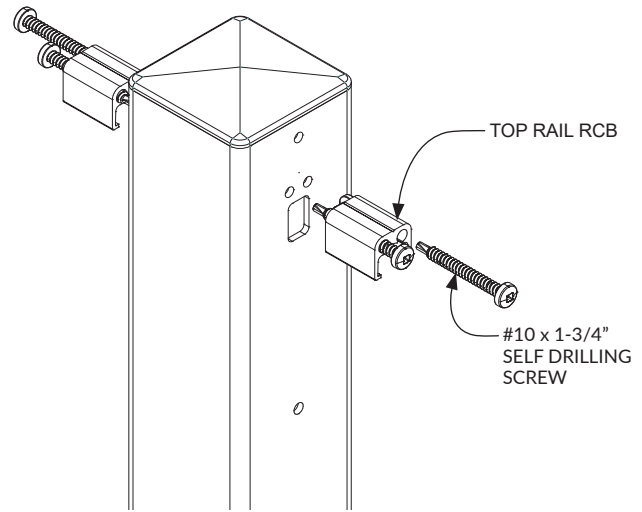


Figure 3.1

## STEP 2 – INSTALL SUB-RAIL

After verifying posts are **plumb**, measure the distance between each set of posts. Be sure to measure just above the Top Rail RCBs. Cut the Sub-Rail to length to match the corresponding measurements. (See Figure 3.2)

Insert the Sub-Rail between the posts and slide down, fully-seating it onto the RCBs. (See Figure 3.3)

Using a 9/64" diameter drill bit pre-drill the Sub-Rail through the RCB on both sides. Drill the holes approximately 1/2" away from the post and in the groove on the side of the Sub-Rail. Connect the Sub-Rail to the RCBs using (2x) #8 x 3/8" Self-Tapping Screws. (See Figure 3.4)

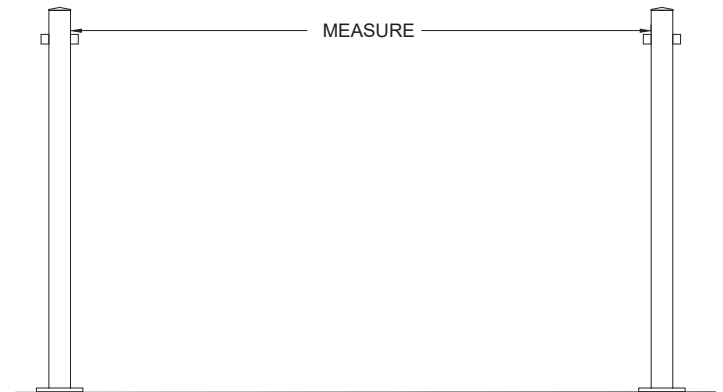


Figure 3.2

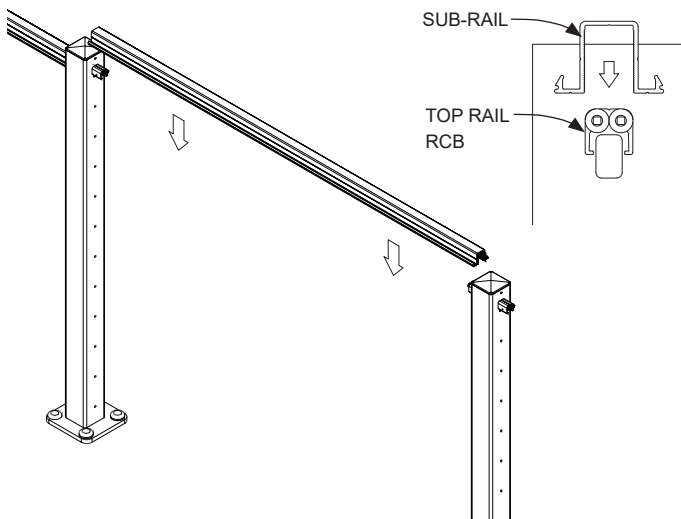


Figure 3.3

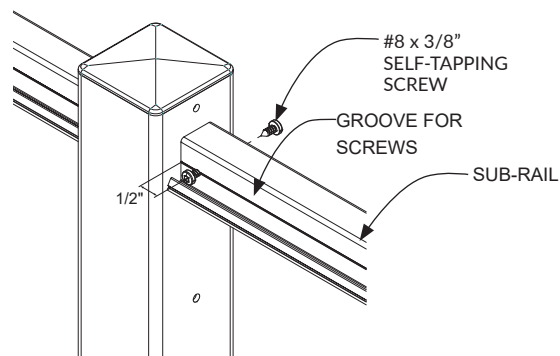


Figure 3.4

## STEP 3 - INSTALL INTERMEDIATE PICKETS

Attach the Picket Base Plate to the bottom of the Intermediate Picket using a #10 x 3/4" screw (unpainted). The Picket Base Plate will be installed on the bottom of the Intermediate Picket, the top of the Intermediate Picket is indicated with a 'dimple'. (See Figure 3.5)

*Secure the Intermediate Picket to avoid it from rotating while attaching the Picket Base Plate. This may be done by clamping to a work surface. Ensure adequate protection to avoid damaging the powder-coat finish.*

Place the Intermediate Picket by pivoting it under the Sub-Rail and engaging the top into the Sub-Rail channel. Ensure the picket is centered in the opening between two posts (for 6-ft Rail Kits), or evenly spaced with a second picket between posts (for 8-ft Rail Kits). (See Figure 3.6)

Ensure the picket is plumb and secure the Picket Base Plate to the deck or floor using (2x) #10 x 1" Flat Head Screws (painted).

Using a 9/64" diameter drill bit pre-drill the Sub-Rail through the Intermediate Picket on both sides, be sure all screws are placed in the groove in the Sub-Rail. Connect the Intermediate Picket to the Sub-Rail using (2x) #8 x 3/8" Self-Tapping Screws. (See Figure 3.7)

*Note that an approximate 1/4-inch gap will remain above the top of the Intermediate Picket, it will not fully touch the top of the channel in the Sub-Rail (this creates clearance for optional LED Lighting).*

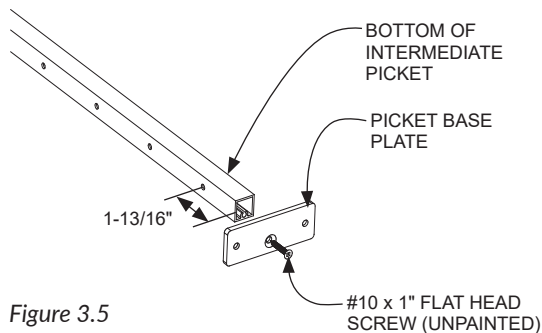


Figure 3.5

## STEP 4 - INSTALL TOP RAIL

Measure the distance between each set of posts.

Trim the Top Rails to match the corresponding measurements.

*Note: The rails can be trimmed 1/32" to 1/16" short to prevent scratching of the posts when installed.*

Place the Top Rail over the Sub-Rail, and snap the profiles together using two hands, you may need to use a non-marring quick clamp. (See Figure 3.8)

*Note: Ensure that the Top Rail is fully engaged with Sub-Rail, particularly near the Intermediate Picket location(s).*

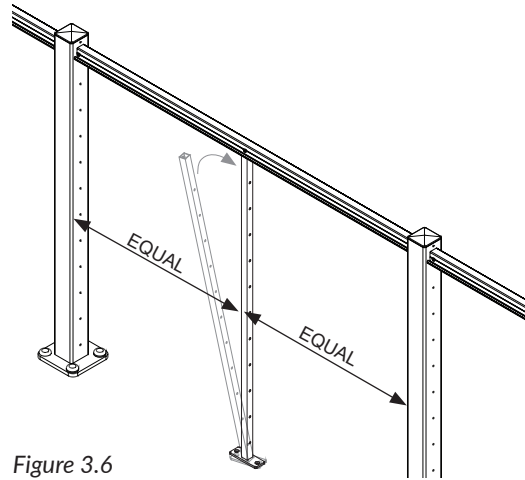


Figure 3.6

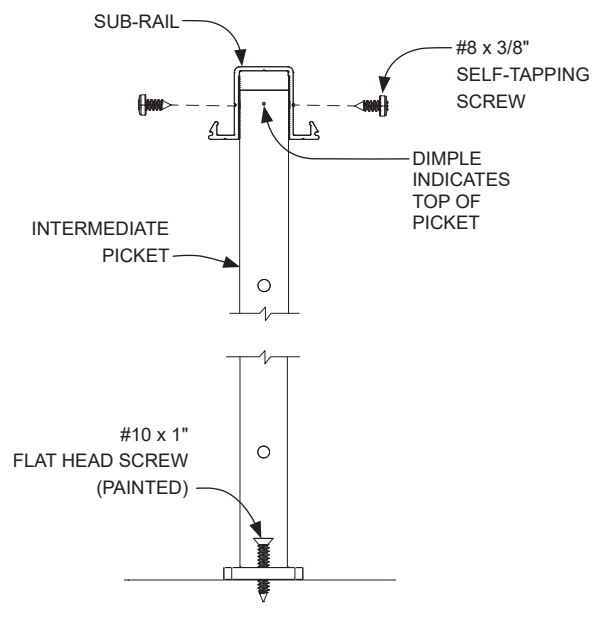


Figure 3.7

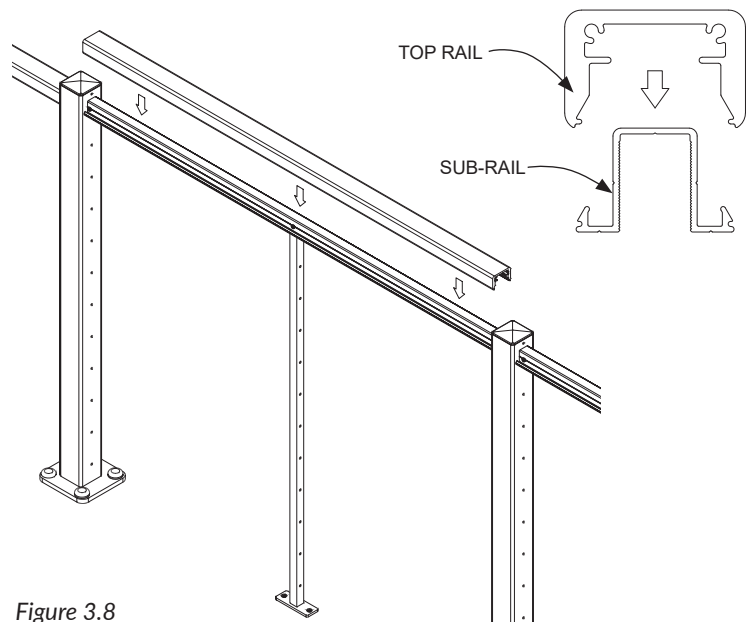


Figure 3.8



## STEP 5 - INSTALL CLOSURE STRIPS

If Feeney LED lighting will be installed the metal Closure Strips will be replaced with diffuser lenses, this step can be skipped.

Measure underneath, from the face of the Intermediate Picket to the adjacent post faces, or from the face of one Intermediate Picket to the next (for 8-ft Rail Kits). Trim the Closure Strips to match the corresponding measurements.

*Note: The closure strips can be trimmed 1/32" to 1/16" short to prevent scratching of the posts when installed.*

Press the Closure Strips into the bottom channel of the Sub-Rail until they click and lock into place. (See Figure 3.9)

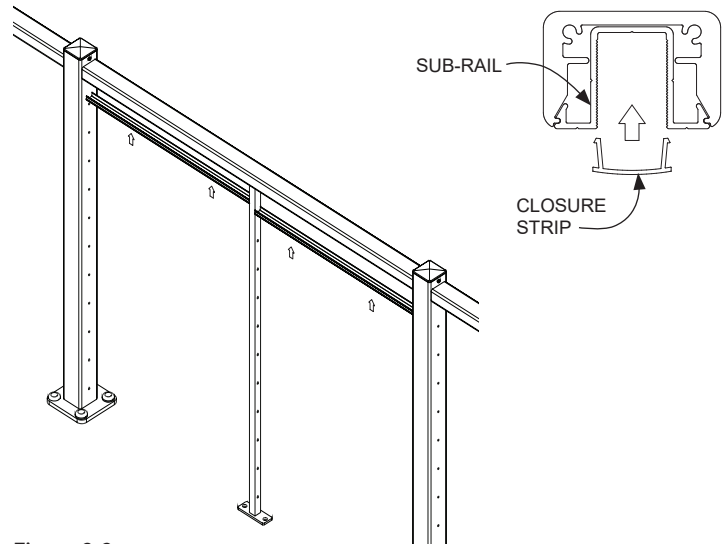


Figure 3.9

## STEP 6 - INSTALL POSTS CAPS

Secure the Post Caps with (2x) #8 x 3/4" Self-Drilling Screws. (See Figure 3.10)

*Note: It is recommended to use an extended length #2 square drive bit to prevent the drill from damaging the Top Rail. Prior to installing screws, it is recommended to place a protective barrier such as masking tape, or cardboard over the Top Rail to prevent damage.*

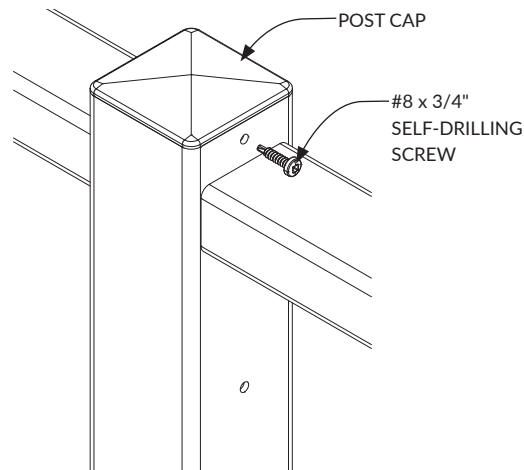


Figure 3.10

### NEXT STEPS:

Continue to Stair Post Kit installation, if applicable. (See Page 10)

OR

Continue to Drink Rail Installation, if applicable. (see Page 14)

OR

Continue to CableRail infill installation. (See CableRail packaging for instructions)

*Note: If project is located in a harsh environment (such as within 2 miles of saltwater) install Isolation Bushings in all posts. (See packaging for installation instructions)*

# Post Kits - Stair Condition Installation

## STEP 1 - ATTACH POSTS

Review all post locations and blocking requirements. (See Figures 1.1 and 1.2 on pg. 3) Use a string line and level to make sure that all of the posts are in a straight line.

Maximum Post setback depends on stair angle. The steeper the stairs, the less allowable setback. (see chart in Figure 4.1) Maximum setback should be measured from front of nosing to front edge of base plate. (See Figure 4.1) All stair posts and adjacent level posts must have the same setback in order to line-up correctly.

Mount the Newel or Threaded Terminal Stair Posts (NR/NL/NP or TTS) at the top of the stairs first, followed by the Quick-Connect® Stair posts (QCS) at the bottom of the stairs. Then mount the Intermediate Stair posts (INS). Use the same setback on all stair posts to ensure that Top Rail and cables follow the stair angle.

Be sure that all posts are oriented in the correct direction so that the RCB holes are facing RCB holes on adjacent posts. (See Figure 4.2) Also be sure that the pre-drilled cable holes are aligned with the angle of the stair, by making the high side holes face the top of the stair, and the low side holes face the bottom of the stair. (See Figure 4.2)

Attach the posts to the surface using the included Lag Screws and Retaining Washers. (See Figure 4.1) Double check that the Posts are plumb, if not use shims, as necessary. Cover the lag screw heads using the Vinyl Caps.

*Note: If project is located in a harsh environment, use Isolation Pads (sold separately) to protect the base plates from mounting surface contaminants (see packaging for installation information).*

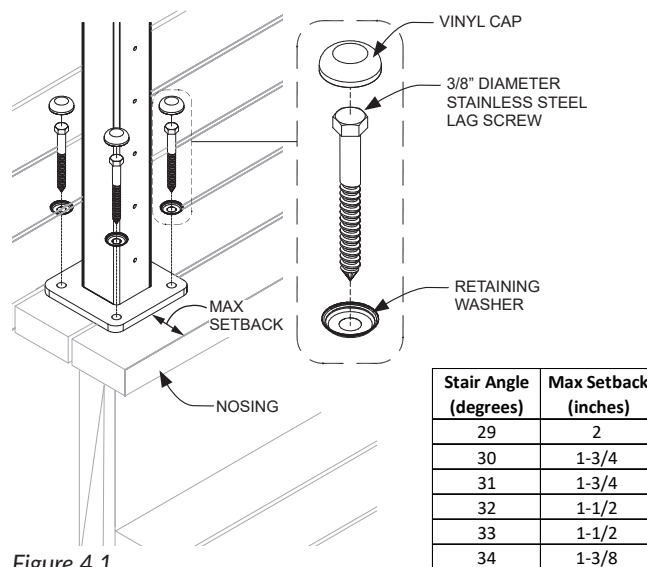


Figure 4.1

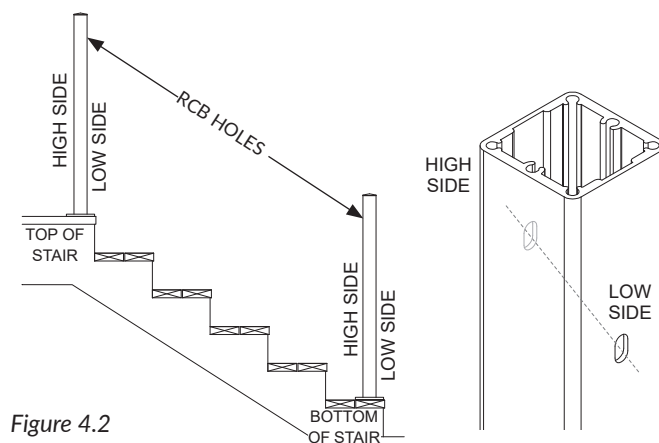


Figure 4.2

## STEP 2 - INSTALL/PRE-DRILL POST CAPS

Place the Post Cap on top of the post, oriented so that the tabs are behind the pre-drilled hole locations at the top of the Posts. (See Figure 4.3)

Using the pre-drilled hole at the top of the post as a guide, drill a hole through the Post Cap tab with a 9/64\" data-bbox="25 720 517 788"/>

**At the Upper Newel Posts Only** - Pre-form screw threads by driving a #8 x 3/4\" data-bbox="25 801 517 888"/>

**At the Lower Newel Posts Only** - Install the Post Caps with (2x) #8 x 3/4\" data-bbox="25 900 517 935"/>

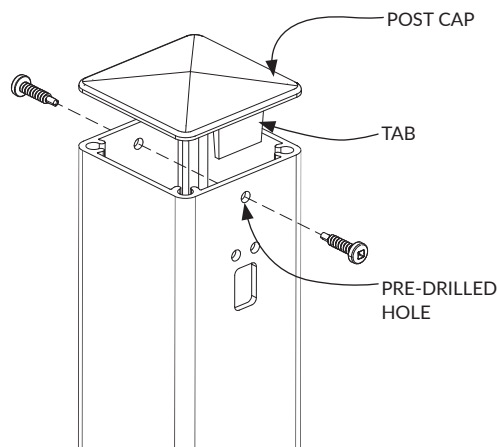


Figure 4.3

## STEP 2A – INSTALL STAIR POST ADAPTERS

If project requires Intermediate Stair Post (INS), use the pre-drilled holes at the top of Intermediate Stair Post as a guide, pre-drill holes through the Stair Post Adapter with a 9/64" diameter drill bit. Ensure the Stair Post Adapter is fully seated during pre-drilling by pressing downwards on it.

Install Stair Post Adapter using four #8 x 3/4" Self-Drilling Screws. Be sure to orient the Stair Post Adapter so that the top slope is aligned with the direction of slope for the holes in the post. (See Figure 4.4)

*Note: If LED lighting will be installed, it is necessary to drill a 5/8" hole on either side of the Stair Post Adapter, to allow the light strip to pass through. (See below)*

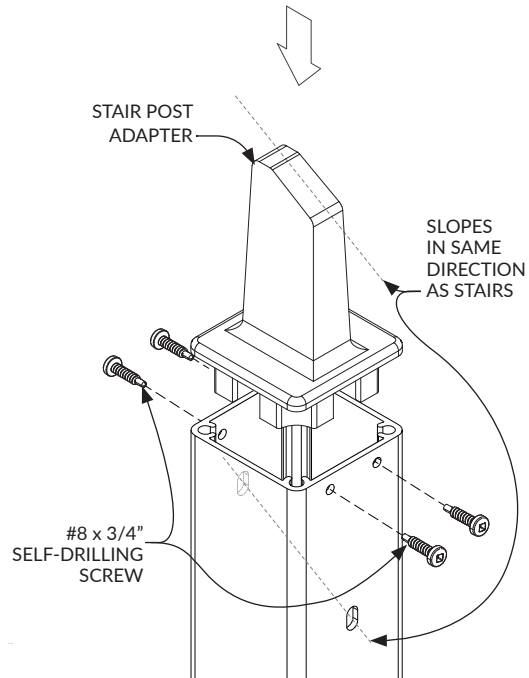
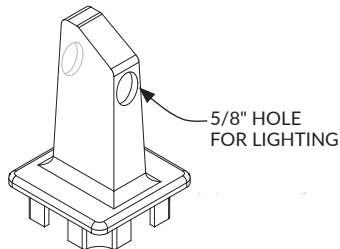


Figure 4.4

## Rail Kits - Stair Condition Installation

### STEP 1 – ATTACH RCBs TO POSTS

Attach the Top Rail Connecting Brackets (RCBs) to each post using (2x) #10 x 1-3/4" Self-Drilling Screws. (See Figure 5.1)

Each RCB requires two screws and the RCB holes are pre-drilled in all posts where required.

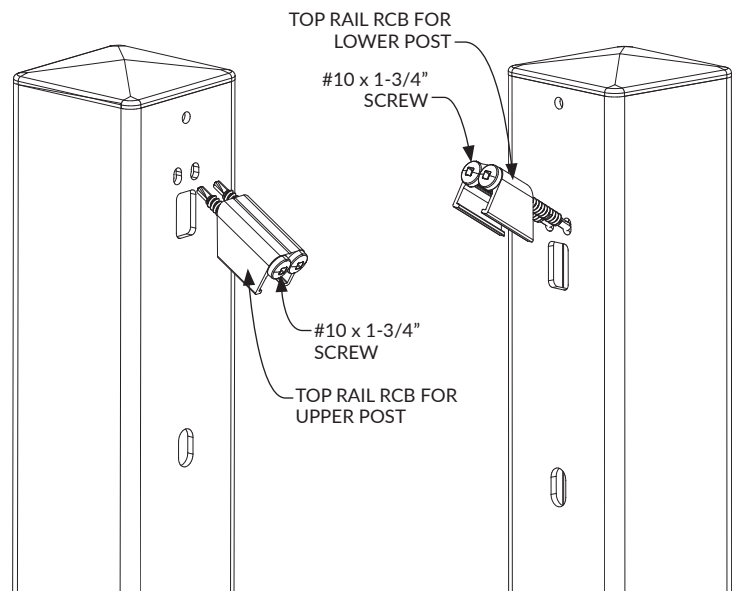
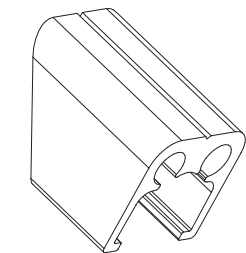
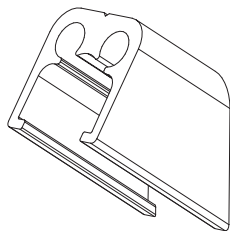


Figure 5.1



(x1) STAIR TOP RAIL RCB FOR UPPER POST



(x1) STAIR TOP RAIL RCB FOR LOWER POST

## STEP 1A – 42" NEWEL PASSTHROUGH POST

If project uses a 42" Newel Pass through Post Kit (NP), the top two level cables need to be installed prior to the Stair Rail Kit installation.

*Note: If project is in a harsh environment, use the included Isolation Bushings on the holes for the top two cables. The bottom 11 cables will require a separate package of Isolation Bushings (ISO-INT-PKG, sold separately). For the other posts install the bushings per the packaging instructions (see isolation bushings on page 19)*

Install the top two cables on the level portion (reference CableRail installation instructions). Attach the Rail RCB for Upper Post to the Newel Pass through Post using (2x) #10 x 1-3/4" Self-Drilling screws. (See Figure 5.2)

*Note: Do not use an end cap on the Quick-Connect® fitting of the second cable from the top. The Sub-Rail and Top Rail will cover the fitting, once installed. (See Figure 5.3)*

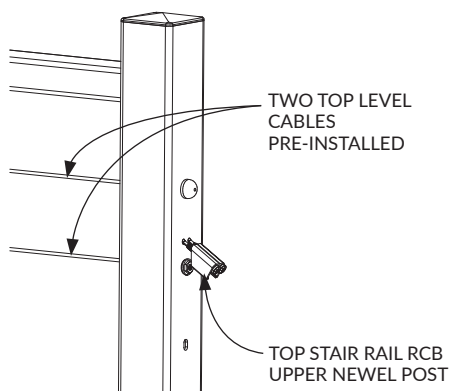


Figure 5.2

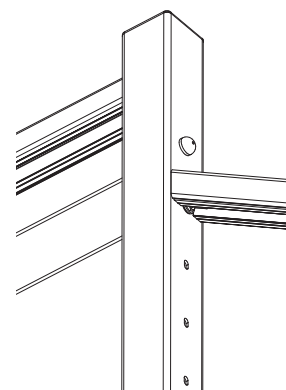


Figure 5.3

## STEP 2 – INSTALL SUB-RAIL

After verifying posts are **plumb**, measure the distance between each set of posts. Be sure to measure just above the Top Rail RCBs. Cut the Sub-Rail to length to match the corresponding measurements. Be sure to miter the cuts on both ends of the Sub-Rail to accommodate the stair angle. (See Figure 5.4) If splicing Top Rail over Intermediate Stair Post (INS), leave the splice end square (90°). (See Step 2A below)

Insert the Sub-Rail between the posts and slide down, fully-seating it onto the RCBs. (See Figure 5.5)

Using a 9/64" diameter drill bit pre-drill the Sub-Rail through the RCB on both sides. Drill the holes approximately 1/2" away from the post and in the groove on the side of the Sub-Rail. Connect the Sub-Rail to the RCBs using (2x) #8 x 3/8" Self-Tapping Screws. (See Figure 5.6)

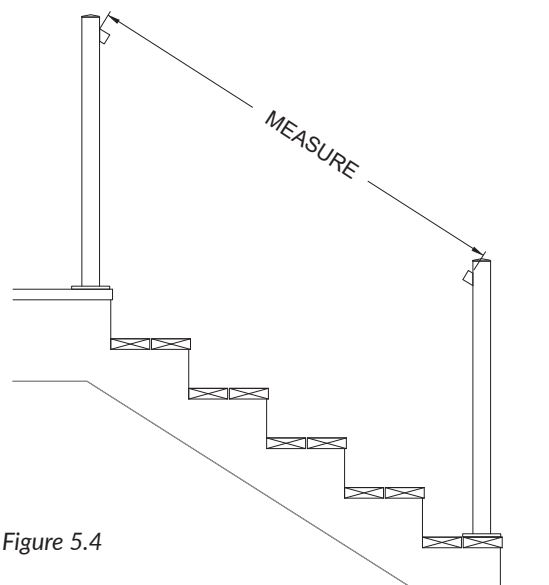


Figure 5.4

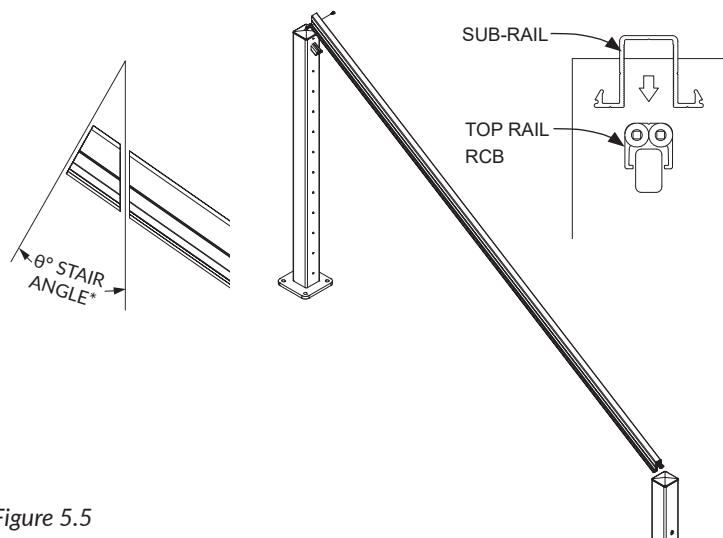


Figure 5.5

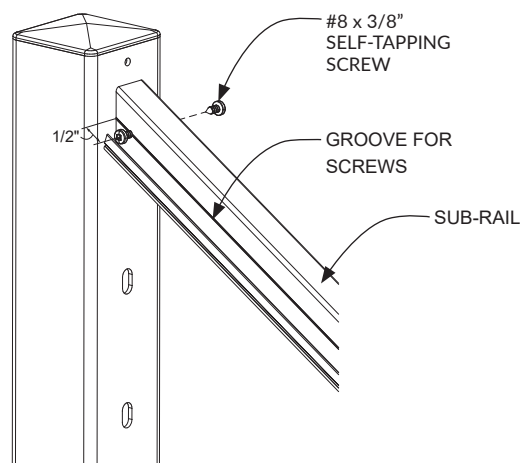


Figure 5.6

## STEP 2A – SPLICE SUB-RAIL

If an Intermediate Stair Post (INS) is being used, the Sub-Rail segments will need to be spliced over the Stair Post Adapter.

The adjoining Sub-Rail sections will need to be square at the ends where they will be spliced together. (See Figure 5.7)

Slide the Sub-Rails down and over the RCBs and the Stair Post Adapter.

*Note: The Sub-Rail pieces need to be aligned at the joint for a clean Top Rail connection. Use a quick clamp to hold a straight rigid object, such as, a board or scrap aluminum extrusion, to keep the two sections of Sub-Rail aligned while attaching to the Stair Post Adapter.*

Using a 9/64" diameter drill bit pre-drill the Sub-Rails through the Stair Post Adapter. Drill the holes approximately 1/2" away from the splice joint and in the groove on the side of the Sub-Rail. Connect the Sub-Rails to the Stair Post Adapter using (2x) #8 x 3/8" Self-Tapping Screws. (See Figure 5.7)

*Note: Complete the pre-drilling and screw installation for both Sub-Rail segments at the splice location on one side, then remove the clamps and straight edge and repeat the pre-drilling and screw installation on the opposite side.*

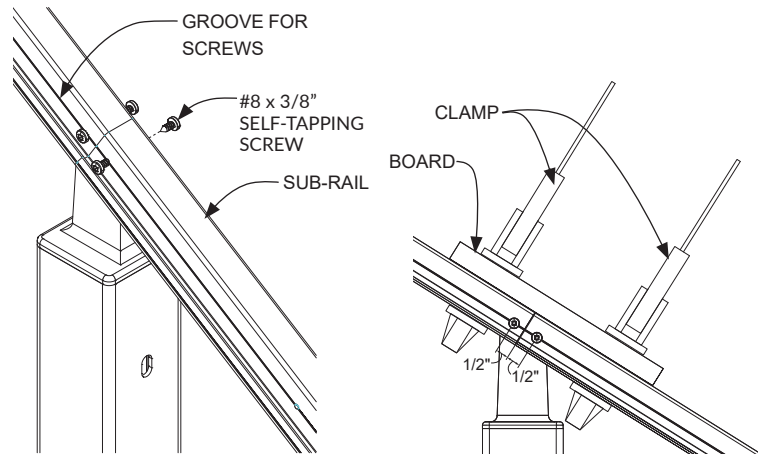


Figure 5.7

## STEP 3 – INSTALL INTERMEDIATE STAIR PICKETS

Determine the location that the Intermediate Stair Picket(s) will be installed. Locate the Intermediate Stair Picket as close as possible to center in the opening between two posts (for 6-ft Rail Kits), or as close as possible to evenly spaced with a second picket between posts (for 8-ft Rail Kits).

*Note: Avoid locating Intermediate Pickets too close to the stair nosing. The Intermediate Picket should be placed so that the Picket Base Plate does not protrude past the front of the tread.*

Use the Intermediate Picket to determine the vertical height from underneath the Sub-Rail to the stair tread. Place the Intermediate Picket upside-down (**with the angled end down**) at the desired picket location. Ensure the picket is plumb and mark tread as well as the Intermediate Picket and the Sub-Rail at the intersection. (See Figure 5.8)

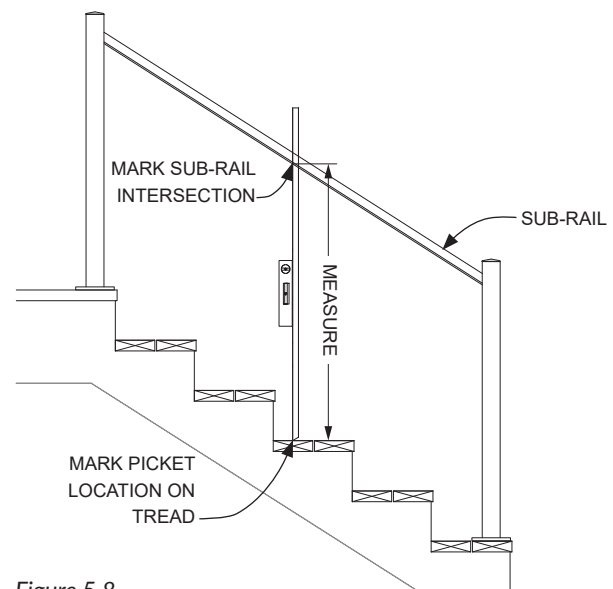


Figure 5.8

Add 9/16" to the marked measurement to determine the Intermediate Stair Picket cutting location. Trim the bottom of the Intermediate Stair Picket to length. (See Figure 5.9)

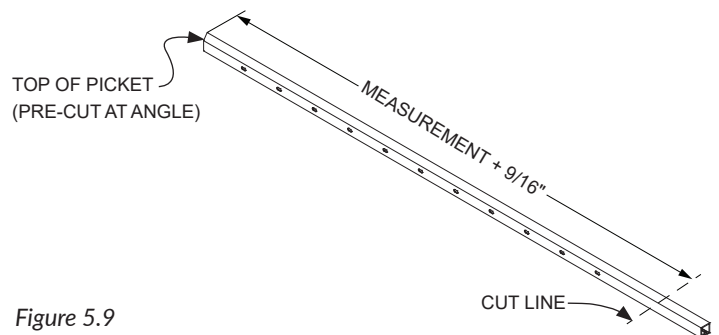


Figure 5.9

Attach the Picket Base Plate to the bottom of the Intermediate Picket using a #10 x 3/4" screw (unpainted). The Picket Base Plate will be installed on the bottom of the Intermediate Picket that was trimmed to length; the top of the Intermediate Picket is pre-cut at an angle. (See Figure 5.10)

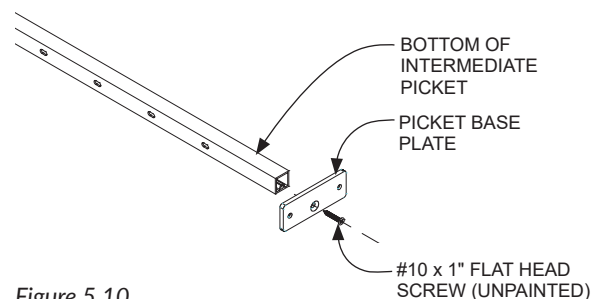


Figure 5.10

*Secure the Intermediate Picket to avoid it from rotating while attaching the Picket Base Plate. This may be done by clamping to a work surface. Ensure adequate protection to avoid damaging the powder-coat finish.*

### STEP 3 - INSTALL INTERMEDIATE STAIR PICKETS (continued)

The Intermediate Picket must be placed at the exact location that was used to measure and determine cut length. Use the marks previously made on the tread and the Sub-Rail. Place the Intermediate Picket by pivoting it under the Sub-Rail and engaging the top into the Sub-Rail channel. (See Figure 5.11)

Ensure the picket is plumb and secure the Picket Base Plate to the stair tread using (2x) #10 x 1" Flat Head Screws (painted).

Using a 9/64" diameter drill bit pre-drill the Sub-Rail through the Intermediate Picket on both sides, be sure all screws are placed in the groove in the Sub-Rail. Connect the Intermediate Picket to the Sub-Rail using (2x) #8 x 3/8" Self-Tapping Screws. (See Figure 5.12)

*Note that an approximate 1/4-inch gap will remain above the top of the Intermediate Picket, it will not fully touch the top of the channel in the Sub-Rail (this creates clearance for optional LED Lighting).*

Before proceeding to Top Rail installation check holes align with a string or cable. If any adjustments need to be made it is best to make them prior to attaching the top rail.

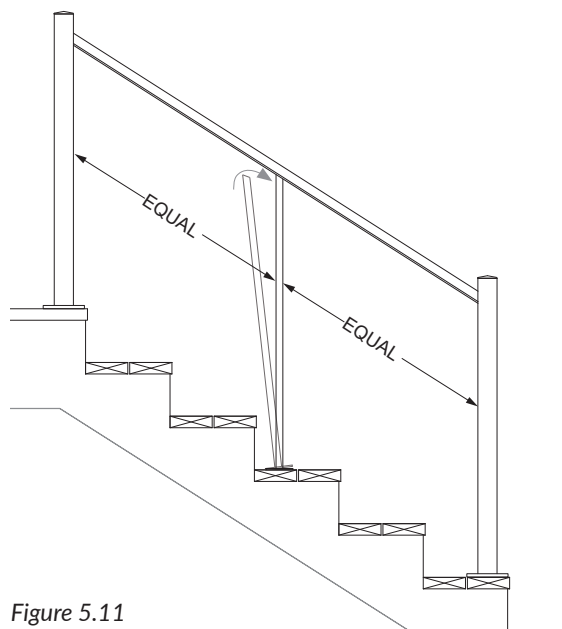


Figure 5.11

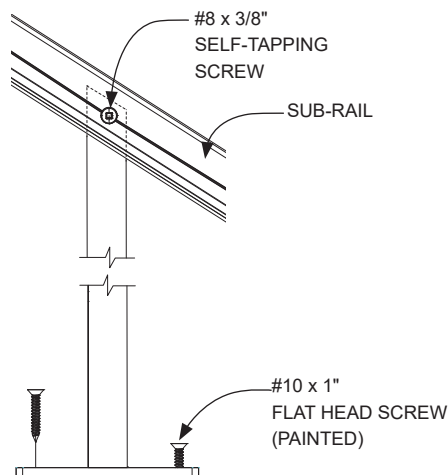


Figure 5.12

### STEP 4 - INSTALL TOP RAIL

Measure the distance between each set of posts.

Trim the Top Rails to match the corresponding measurements. Be sure to miter the cuts on both ends of the Top Rail to accommodate the stair angle. (See Figure 5.13)

If splicing Top Rail over Intermediate Stair Post (INS), leave the splice end square (90°). (See Step 4A on Page 15)

*Note: The rails can be trimmed 1/32" to 1/16" short to prevent scratching of the posts when installed.*

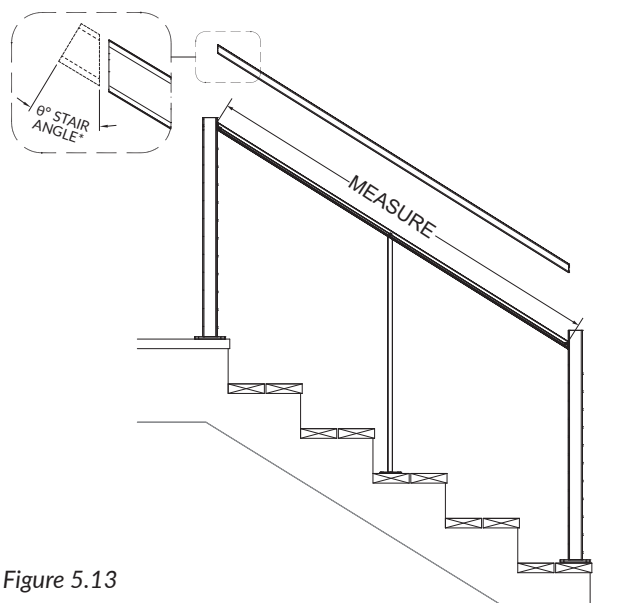


Figure 5.13



## STEP 4 – INSTALL TOP RAIL (continued)

Place the Top Rail over the Sub-Rail, and snap the profiles together using two hands, you may need to use a non-marring quick clamp. (See Figure 5.14)

*Note: Ensure that the Top Rail is fully engaged with Sub-Rail, particularly near the Intermediate Picket location(s).*

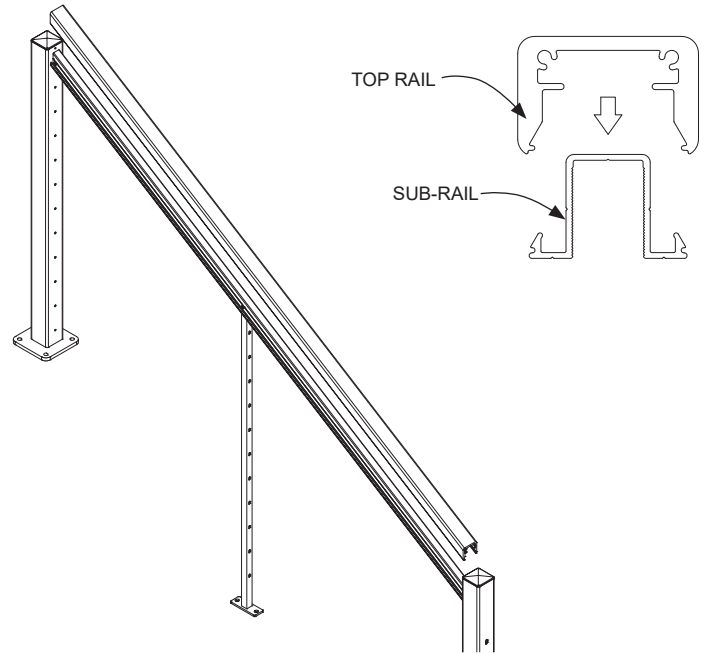


Figure 5.14

## STEP 4A – SPLICE TOP RAIL

If an Intermediate Stair Post (INS) is being used, the Top Rail will need to be spliced over the Stair Post Adapter.

The Sub-Rail should have been previously spliced over the Stair Post Adapter prior to this step. (See Step 2A on page 13)

The adjoining Top Rail sections will need to be square at the ends where they will be spliced together. If possible, offset the joints of the Top Rail and the Sub-Rail. (See Figure 5.15)

Place the Top Rail over the Sub-Rail, and snap the profiles together using two hands, you may need to use a non-marring quick clamp to assist. Start by engaging the Top Rail into the Sub-Rail at the opposite end, and 'walking' it down towards the end at the Stair Post Adapter.

*Note: Ensure that the Top Rail is fully engaged with Sub-Rail, pay special attention near the Intermediate Picket and Stair Post Adapter location(s).*

Start with the bottom segment of Top Rail and work upwards along the stair.

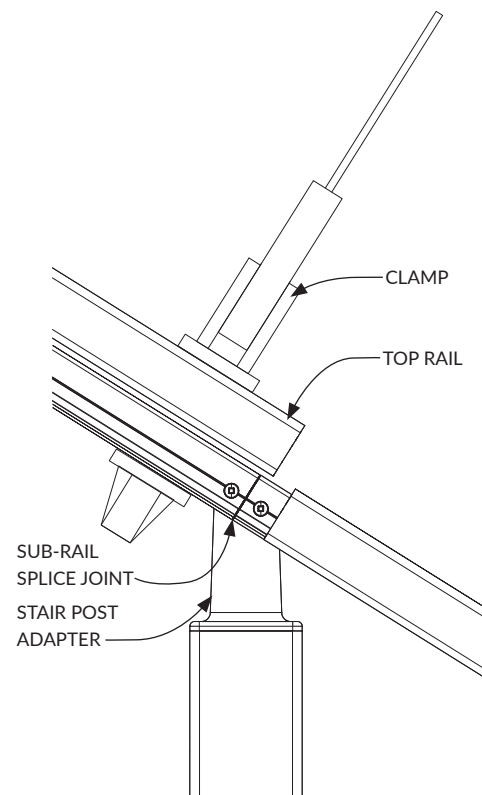


Figure 5.15

## STEP 5 - INSTALL CLOSURE STRIPS

If Feeney LED lighting will be installed the metal Closure Strips will be replaced with diffuser lenses, this step can be skipped.

Measure underneath the Sub-Rail, from the face of the Intermediate Picket to the adjacent post faces, or from the face of one Intermediate Picket to the next (for 8-ft Rail Kits), or from the Face of the Picket to the Stair Post Adapter. Trim the Closure Strips to match the corresponding measurements.

*Note: The closure strips can be trimmed 1/32" to 1/16" short to prevent scratching of the posts when installed. Also, consider the Rail angle which will require cutting the Closure Strip on an angle or cutting slightly shorter than the measured opening.*

Press the Closure Strips into the bottom channel of the Sub-Rail until they click and lock into place. Ensure they are fully engaged into the Sub-Rail Channel. (See Figure 5.16)

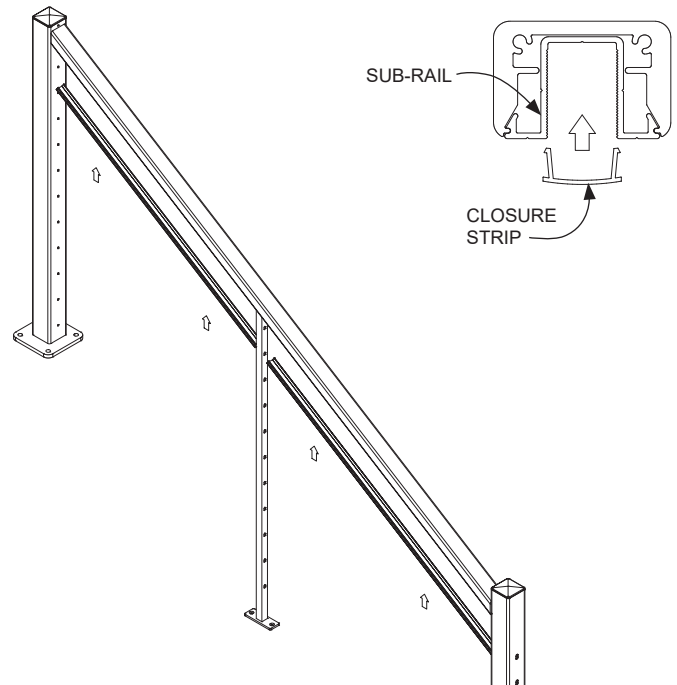


Figure 5.16

## STEP 6 - INSTALL POSTS CAPS

**At the Upper Newel Posts Only** - Install the Post Caps with (2x) #8 x 3/4" Self-Drilling Screws. (See Figure 5.17)

*Note: It is recommended to use an extended length #2 square drive bit to prevent the drill from damaging the Top Rail. Prior to installing screws it is recommended to place a protective barrier such as masking tape, or cardboard over the Top Rail to prevent damage.*

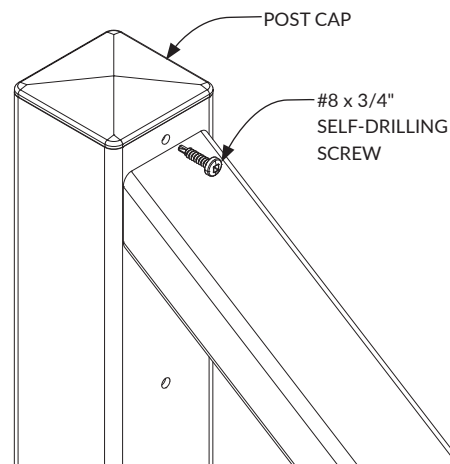


Figure 5.17

## NEXT STEPS:

Continue to Drink Rail Installation, if applicable. (see Page 14)

OR

Continue to CableRail infill installation. (See CableRail packaging for instructions)

*Note: If project is located in a harsh environment (such as within 2 miles of saltwater) install Isolation Bushings in all posts. (See packaging for installation instructions)*



# Drink Rail Installation

## STEP 1 – TRIM TOPS OF POSTS

Cut 13/16" off the top of all Posts that will have Drink Rail passing over the top. (See Figure 6.1)

*Note: It is optional to place the Drink Rail between the End Posts. If this option is desired, do not trim the tops of the End Posts.*

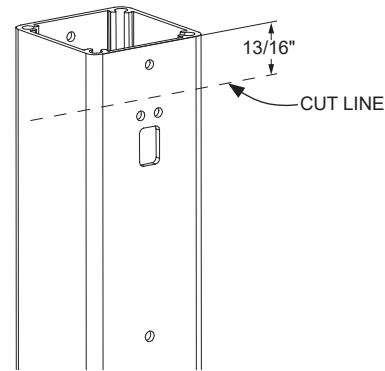


Figure 6.1

## STEP 2 – INSTALL DRINK RAIL ADAPTER

Place the Drink Rail Adapter over the Top Rail, starting on one end of the Top Rail. Drink Rail Adapter segments are 47" long and can be trimmed as necessary.

*Note: The profile will center itself when placed over the posts, ensure that joints occurring away from posts are centered on the Top Rail. Non-marring clamps may be used to hold the Drink Rail in place.*

Using a 9/64" diameter drill bit, pre-drill the Drink Rail and top of the Top Rail. Use a 3/16" diameter drill bit to increase the hole diameter in the Drink Rail only. Drill the holes within 2" of joints and ends, and in the screw grooves on the Drink Rail profile. Space additional holes approximately 18" on center.

Secure the Drink Rail to the Top Rail using #8 x 3/8" Self-Tapping Screws. (See Figure 6.2)

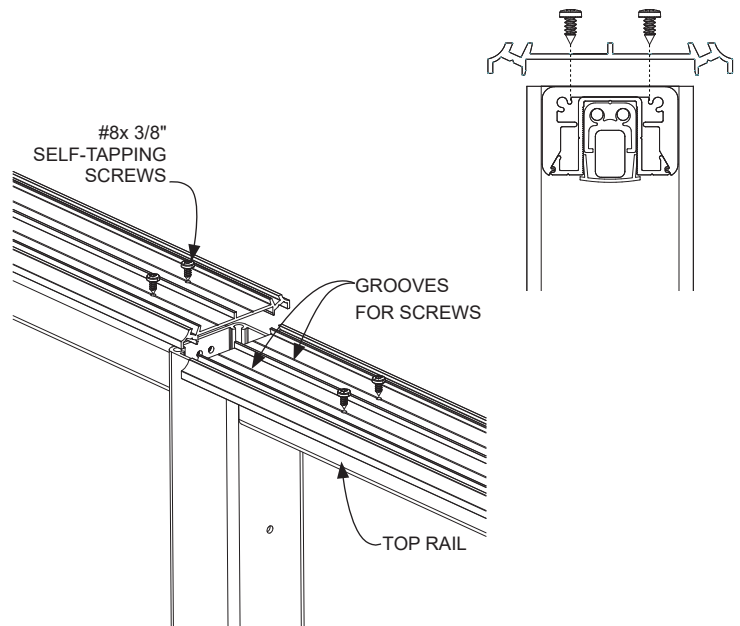


Figure 6.2

Attach additional segments of Drink Rail Adapter until the full length of rail is covered.

## STEP 3 – INSTALL WOOD OR COMPOSITE CAP

The Drink Rail will accommodate wood or composite cap from 3-1/2 inches to 5-1/2" inches wide.

Center the wood or composite cap over the Drink Rail and hold it in place using clamps. Pre-drill through the Drink Rail profile in the angled screw channel, in the small groove using a 3/16" diameter drill bit.

Secure the wood or composite cap to the Drink Rail using #8 stainless-steel screws (not provided). Place screws within 2" of the ends and joints and space approximately 18" on center. (See Figure 6.3)

*Note: The maximum length of the screws should not exceed thickness of the wood or composite cap being used.*

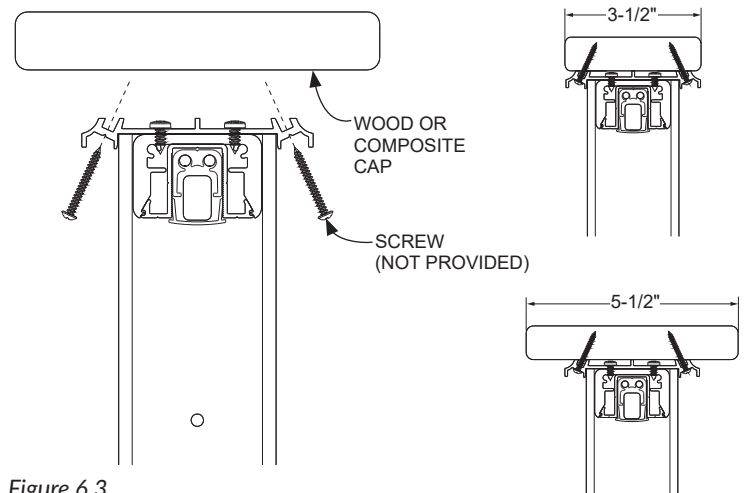


Figure 6.3

# DesignRail® Kits - Accessories *(sold separately)*

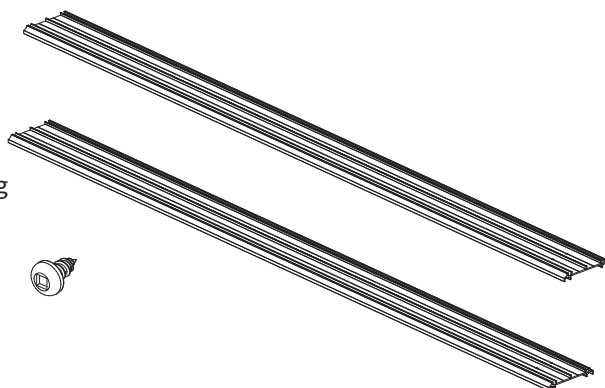
## DRINK RAIL ADAPTER

Allows for attachment of a Wood or Composite Cap.

Kit includes (2x) 47" segments, 94" total, and (16x) #8 x 3/8" Self-Tapping Screws for attaching the Drink Rail Adapter to the Top Rail.

DRA : DRNK-BLK-PKG (Black)

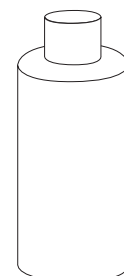
DRA : DRNK-BLK-PKG (Textured Black)



## TOUCH-UP PAINT

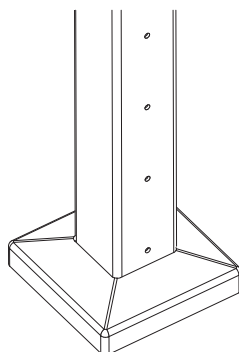
Color matched to help cover small abrasions.

(DRA : TUP-BB-BLK-PKG)



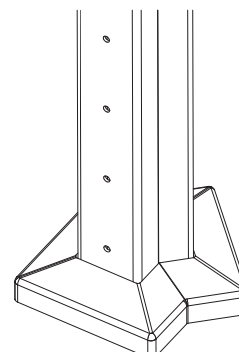
## BASEPLATE COVERS

These easy to install two-piece covers conceal the lag screw heads and base plates of the posts to give the railing a beautiful finishing touch. Great for retrofitting pre-existing DesignRail® installations too.



DRA : BPC-SQ-BLK-PKG  
(Square / Black)

DRA : BPC-SQ-TBLK-PKG  
(Square / Textured Black)



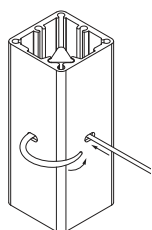
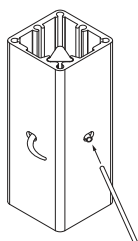
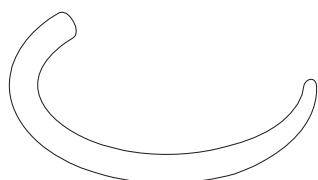
DRA : BPC-45-BLK-PKG  
(45-Degree / Black)

DRA : BPC-45-TBLK-PKG  
(45-Degree / Textured Black)

## CURVED LACING NEEDLE

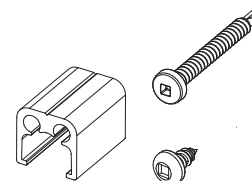
For quickly lacing cable ends through Single Corner posts.

(3321-CURVE-PKG)

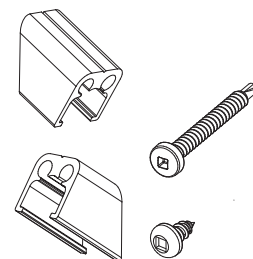


## RAIL CUT KITS

Use Cut Kits when cutting a single Rail Kit into multiple parts for smaller railing sections, reducing costs and wasted material.



DRA : MOD-CUT-LVL-PKG (Level)

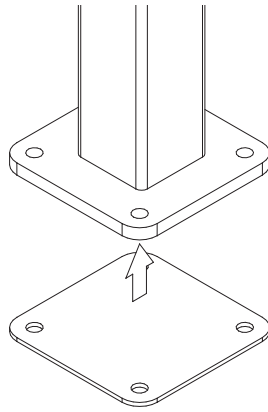


DRA : MOD-CUT-STR-PKG (Stair)

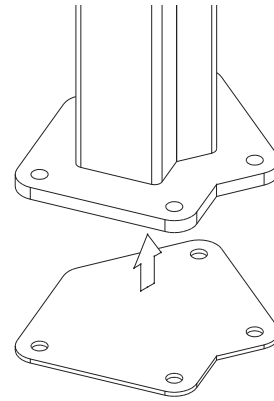
# DesignRail® Kits - Accessories *(sold separately)*

## ISOLATION PADS

High-density neoprene pads that protect posts and base plates from chemical corrosion that may be caused by contact with concrete or pressure treated wood surfaces.



DRA : ISOP-SQ-PKG (Square)

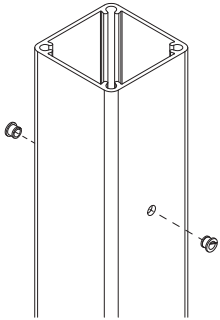


DRA : ISOP-45-PKG (45-Degree)

## ISOLATION BUSHINGS

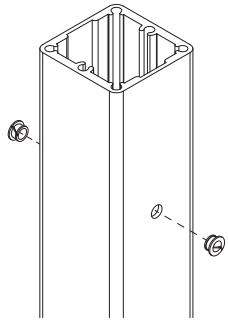
Use Isolation Bushings in pre-drilled CableRail post holes when installing a railing in areas with harsher environments.

(DRA : ISO-INT-PKG)



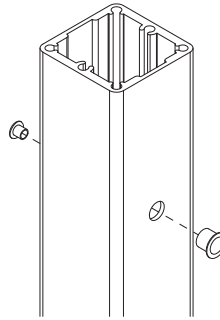
INTERMEDIATE POST  
45-DEGREE POST  
OR NEWEL PASSTHROUGH POST

(DRA : ISO-TT-PKG)

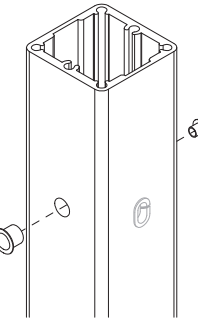


THREADED TERMINAL POST

(DRA : ISO-QC-PKG)

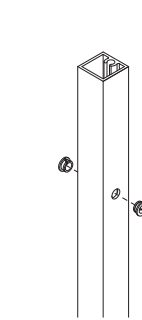


QUICK-CONNECT® POST



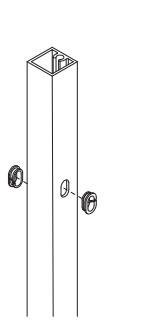
NEWEL TERMINATION  
POST (RIGHT OR LEFT)

(DRA : ISO-PK-PKG)



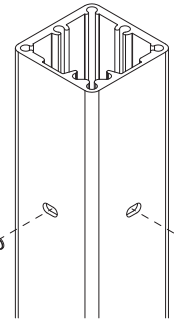
INTERMEDIATE PICKET  
IN LEVEL RAIL KIT

(DRA : ISO-PKS-PKG)

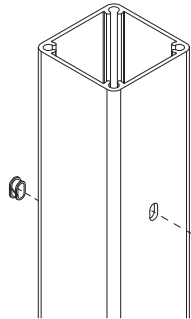


INTERMEDIATE PICKET  
IN STAIR RAIL KIT

(DRA : ISO-SCIS-PKG)

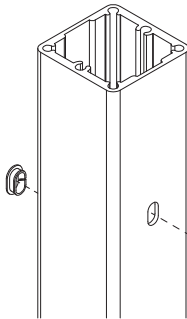


SINGLE CORNER POST

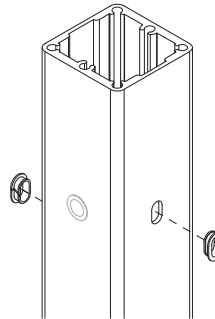


INTERMEDIATE STAIR POST

(DRA : ISO-TTS-PKG)

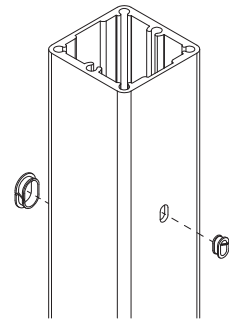


THREADED TERMINAL  
STAIR POST



NEWEL TERMINATION  
POST (RIGHT OR LEFT)

(DRA : ISO-QCS-PKG)



QUICK-CONNECT®  
STAIR POST



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