

Horizontal Cable Systems

DESIGN·RAIL
by feeney®

1) Check Contents Of Packages: Verify that all parts have arrived and that they match the packing list.

1A) Coastal applications: Confirm grommets fit post holes and isolation pads are correct for your system.

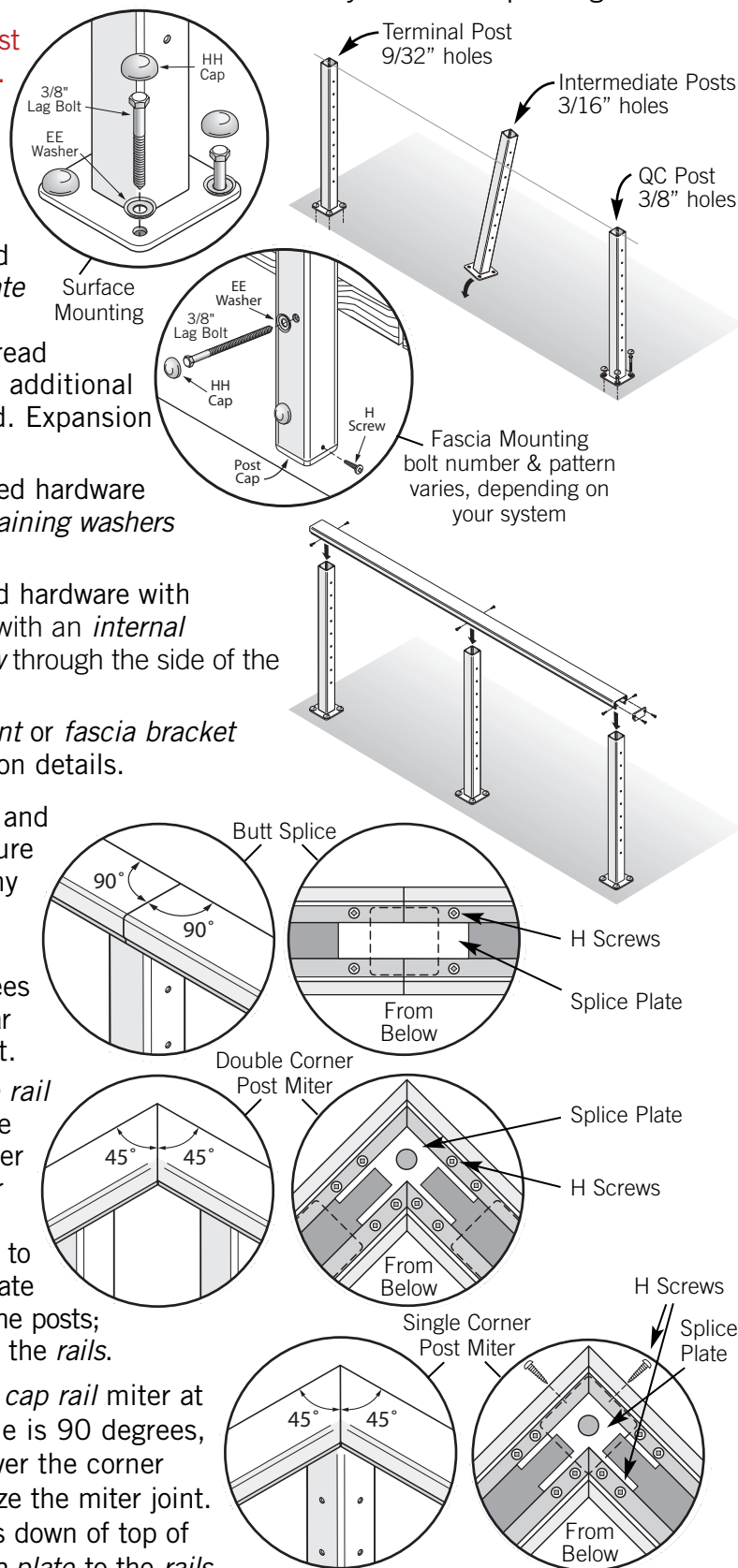
2) Anchor Posts: Position all main *posts* (space *posts* a maximum of 5' or 6' on center - depending on system). The *posts* for the *Threaded Terminal* fittings (with 9/32" holes) and the *posts* for the *Quick-Connect®SS* fittings (with 3/8" holes) should be positioned at opposite ends, and the *intermediate posts* (with 3/16") holes positioned in between. Remember, you must have a minimum of 3" of thread penetration into solid wood for proper attachment; additional wood blocking and/or longer bolts may be required. Expansion anchors can be supplied for concrete base.

- *Surface mounting:* anchor each *post* using provided hardware (see detailed sheet included in your order) with *retaining washers* and *large plastic caps*.
- *Fascia mounting:* anchor each *post* using provided hardware with *retaining washers* and *large plastic caps*. Finish with an *internal post cap* by pre-drilling post & screwing a *H screw* through the side of the post and cap flange to secure cap.

If you are mounting posts using the *stanchion mount* or *fascia bracket mount* methods, please call for additional installation details.

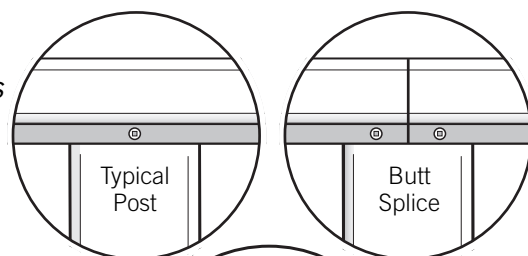
3) Cut & Snap Cap Rails: Cut the *cap rail* to length and then snap it into position on top of the *posts*. Be sure to attach *decorative end plates* (see step #5) to any ends that butt-up against a wall face or that have limited access.

- *Butt splices:* always cut the *cap rail* at 90 degrees and center the joint over a *post*. Use a rectangular splice plate with four *H screws* to secure this joint.
- *Mitered joints with double corner posts:* the *cap rail* will extend past each of the corner *posts* and the actual miter joint will be unsupported. Remember to cut each *cap rail* miter at 1/2 the total corner angle (i.e. if the corner angle is 90 degrees, cut each miter at 45 degrees). Add one *splice plate* to connect and stabilize the miter joint. Insert the plate before setting the two rail sections down of top of the posts; use eight (8) *H screws* to secure the *splice plate* to the rails.
- *Mitered joints with single corner posts:* cut each *cap rail* miter at 1/2 the total corner angle (i.e. if the corner angle is 90 degrees, cut each miter at 45 degrees) Center the joint over the corner *post*. Add one *splice plate* to connect and stabilize the miter joint. Insert the plate before setting the two rail sections down of top of the *ost*; use eight (8) *H screws* to secure the *splice plate* to the rails. Also, on each side of the miter cut, screw a *H screw* through the *cap rail* flange and into the *post* face.

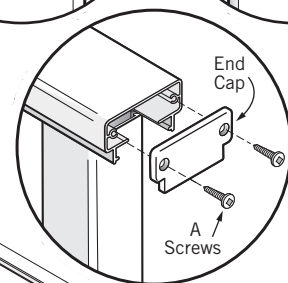


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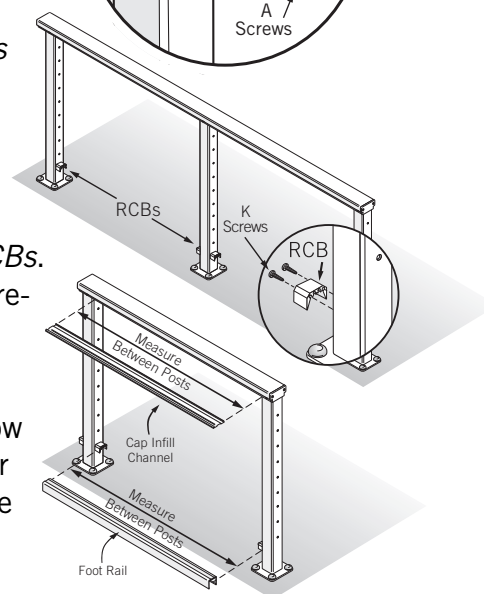
4) Fasten *Cap Rails*: Secure the *cap rail* to each *post* using two *H screws* (four screws for butt splices); screws should run through the *cap rail* flange and into the center of the *post* face. Attach screws to both the front and back of each post.



5) Attach *Decorative End Caps*: Attach the *decorative end caps* to all of the exposed *cap rail* ends using two *A screws*. This applies to 200, 300, and 350 Cap Rail options. **(If not using a foot rail then skip to step #8)**



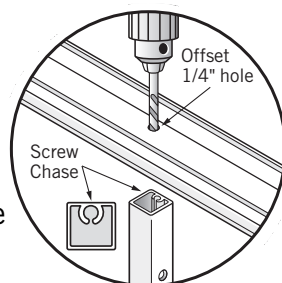
6) Attach *RCBs*: If using a *foot rail*, locate the *rail connecting block* (*RCB*) holes on each *post* (these are pre-drilled except on stair rail *posts* where all the holes must be drilled in the field). Attach the *RCBs* to the posts using two *K screws*. The *RCBs* should be mounted wings down for frames using *cable systems*.



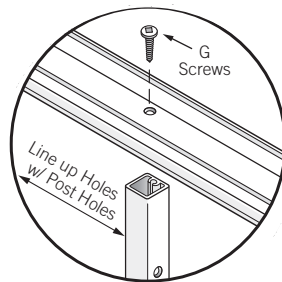
7) Cut *Foot Rails*: Measure between each set of *posts* just above the *RCBs*. Cut the *foot rail* for each section to $-\frac{1}{16}$ " of your corresponding measurement. Do not attach the *foot rails* to the frame at this time.

8) Cut *Cap Infill Channels*: Measure between each set of *posts* just below the *cap rail*. Cut the *cap infill channel* for each section to $-\frac{1}{16}$ " of your corresponding measurement. Do not attach the *cap infill channels* to the *cap rail* at this time.

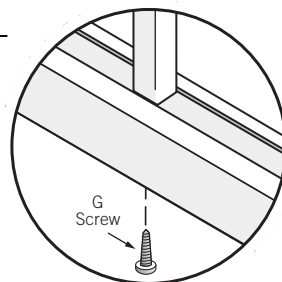
9) Locate & Drill *Picket Attachment Holes*: If your *posts* are spaced more than 3 feet apart, you will need at least one mid-span *picket* placed between each set of *posts* (quantity & spacing of mid-span *pickets* will depend on your frame design). Determine the position of the *pickets* to create equally spaced sections between posts. Drill $\frac{1}{4}$ " diameter holes in the *cap infill channels* and *foot rails* (if applicable) at all picket locations. Please note that each *picket* has a built-in screw chase hole located on the inside edge of the *picket*, **not the center** of the *picket* (see diagram); therefore you'll need to slightly offset the $\frac{1}{4}$ " holes to line up the screw chase hole.



10) Attach *Pickets To Cap Infill Channel*: Identify which end is the top end of each *picket* by comparing the spacing of the first cable hole in each *picket* to that of the first (top) pre-drilled cable hole on the *posts*. Using the *G screws* attach the top end of the *picket(s)* to the *cap infill channel*. **(If not using a foot rails then skip to step #13).**

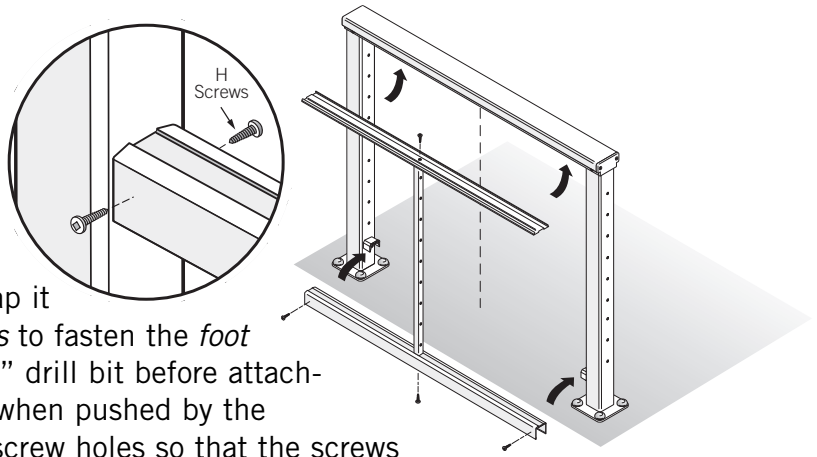


11) Attach *Pickets To Foot Rail*: Using the *G screws* attach the bottom end of the *picket(s)* to the *foot rail*. Assemble all sections using the same procedure.



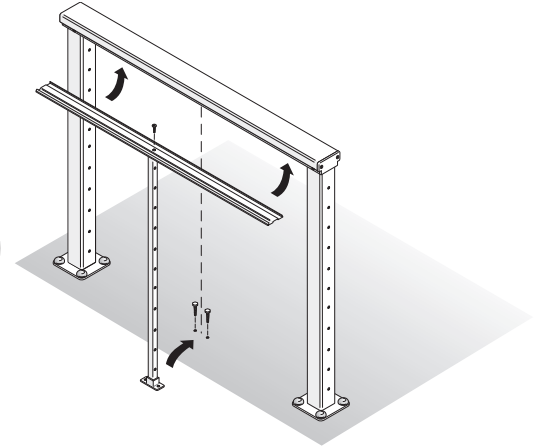
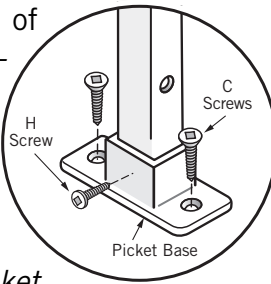
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12) Install Assembled Panels: Lift the panels (assembled *cap infill channel*, *foot rail* & *picket*) into position on the frame by first setting the *foot rail* on top of the *RCBs* and then tilting the panel vertically into position. The top of the *cap infill channel* should just clear the bottom of the *cap rail*. At this point you should be able to lift the entire section up by the *cap infill channel* and snap it up into place inside the *cap rail*. Use two *H screws* to fasten the *foot rail* to each *RCB*. Pre-drill these holes with a 9/64" drill bit before attaching screws, as the wings of the *RCBs* tend to flex when pushed by the *H screw*. Also, be sure to slightly offset opposing screw holes so that the screws don't hit one another inside the *RCB*. Complete this for all sections. You are now ready to install the cables. **(Skip to step #14).**



13) Install Assembled Picket Panels Using Picket Base:

Loosely slip a *picket base* onto the bottom of each of the *pickets*. Slide the entire panel (*cap infill channel*, *picket* & *picket base*) into position under the *cap rail* then lift and snap the *cap infill channel* into the bottom of the *cap rail*. Line-up and plumb each *picket* and secure the *picket base* to the deck surface using two *C screws*. A *H screw* can be used to center and secure the *picket* to the *picket base*. You are now ready to install the cables.



14) Install The CableRail Cables (applies to horizontal cables only—not stairs):

- **Coastal Applications:** Make sure all grommets are inserted into posts before threading cable.

- Identify the proper length cable assemblies for each run of railing.

- To start, pass the *Threaded Terminals* through the *Threaded Terminal end post* (9/32" holes) and attach a *nylon flat washer* and *Snug-Grip® washer nut* onto the end of each terminal.

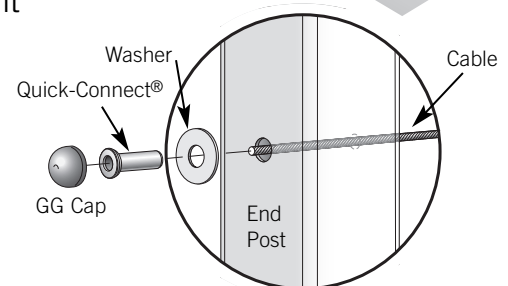
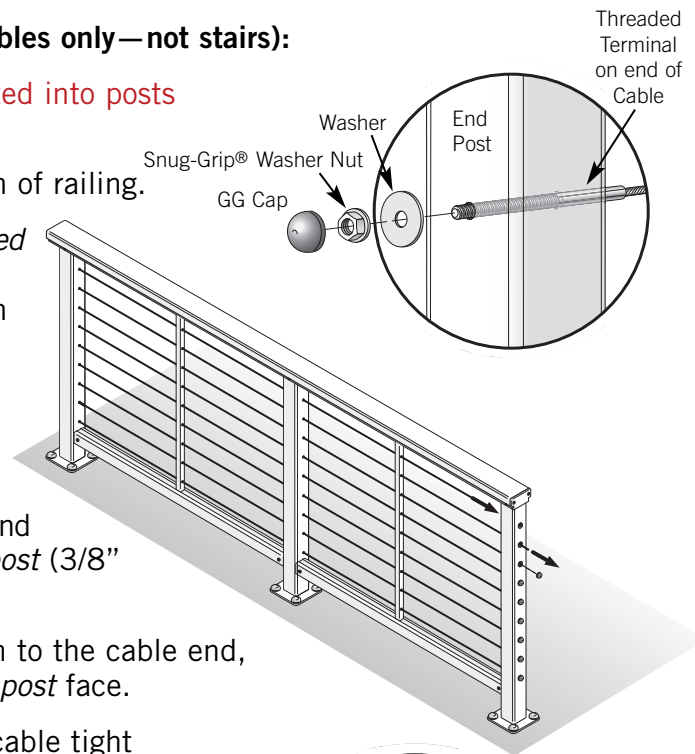
- Spin the *washer-nuts* a couple of threads onto the *Threaded Terminals*.

- Using a *lacing needle* (optional tool item), lace the free end of the cable through all of the *intermediate posts* and *pickets* and continue through the *Quick-Connect®SS end post* (3/8" holes) at the opposite end.

- Slip a *nylon flat washer* and *Quick-Connect®SS* fitting on to the cable end, and slide them into the *post* until they rest against the *post face*.

- Holding the *Quick-Connect®SS* with one hand, pull the cable tight with the other. The fitting automatically locks when you release the cable.

- Using a 7/16" wrench, tighten the *Snug-Grip® washer nuts* until the cables are taut. Hold the shaft of the *Threaded Terminal* with *Vise-grip®* pliers while tightening.



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- Saw off the excess threads as close to the *washer-nut* as possible, and touch up cut ends with an electric grinder or abrasive cut-off wheel.
- Using cable cutters or a cut-off disk, trim the excess cable from behind the *Quick-Connect®SS* fitting, and grind flush any exposed ends with an electric grinder or abrasive cut-off wheel.
- Snap-on the *colored vinyl dome caps* (or accessory option *stainless steel end caps*) over the lip of the exposed *Quick-Connect®SS* fittings and *Snug-Grip® washer nuts*. You're done.

Maintenance: Any scratches on the railing can be refinished with touch-up paint. Frames and cables can be cleaned with warm soapy water and a sponge or soft cloth.

FLAT HEAD SCREWS

A. 7294: #8 x 1" SCREW,
FLAT HEAD, PHILLIPS DRIVE

B. 7289: #10 x 3/4" SS SCREW,
FLAT HEAD, SQUARE DRIVE

C. 7273: #12 x 1" SS SCREW,
FLAT HEAD, SQUARE DRIVE

D. 7265: #14 x 2" SS
MAGNA-COAT SCREW,
TYPE F, FLAT HEAD,
TORX DRIVE

HEX HEAD SCREWS

E. 7017: #14 x 1" SS SELF-TAPPING
SCREW, HEX WASHER HEAD

F. 8024: 5/16" x 1" SS SELF-TAPPING
SCREW, HEX WASHER HEAD

PAN HEAD SCREWS

G. 7272: #10 x 3/4" SS SCREW,
PAN HEAD, SQUARE DRIVE

H. 7270: #8 x 3/4" SS SELF-TAPPING
SCREW, PAN HEAD, SQUARE DRIVE

I. 7285: #8 x 1" SS SELF-TAPPING
SCREW, PAN HEAD, SQUARE DRIVE

J. 7271: #10 x 1-1/2" SS SELF-TAPPING
SCREW, PAN HEAD, SQUARE DRIVE

K. 7267: #10 x 1-3/4" SS SELF-TAPPING
SCREW, PAN HEAD, SQUARE DRIVE

L. 7355: #10 x 2" SS SELF-TAPPING
SCREW, PAN HEAD, SQUARE DRIVE

M. 7282: #14 x 3" SS SCREW, PAN
HEAD, #3 PHILLIPS DRIVE

N. 7966: #14 x 4" SS SCREW, PAN
HEAD, #3 PHILLIPS DRIVE

LAG SCREWS

O. 7277: 3/8" x 3-1/2" LAG SCREW,
HEX HEAD

P. 6565: 3/8" x 4-1/2" LAG SCREW,
HEX HEAD

Q. 7280: 3/8" x 5" LAG SCREW,
HEX HEAD

R. 7278: 3/8" x 6" LAG SCREW,
HEX HEAD

BOLTS

X. 8017: 3/8"-16 x 5"
CAP SCREW, HEX HEAD

Y. 8016: 3/8"-16 x 6"
CAP SCREW, HEX HEAD

Z. 8004: 3/8"-16 x 7"
CAP SCREW, HEX HEAD

EXPANSION ANCHORS

S. 7276: 1/4" x 2-1/4"
EXPANSION ANCHOR

T. 8015: 3/8" x 3"
EXPANSION ANCHOR

U. 7356: 3/8" x 3-3/4"
EXPANSION ANCHOR

V. 7288: 3/8" x 5"
EXPANSION ANCHOR

W. 7284: 3/8" x 6-1/2"
EXPANSION ANCHOR

RETAINING WASHERS

CC. 7070: 1/4" ID WASHER,
FOR SMALL VINYL CAPS

DD. 7062: 1/4" ID WASHER,
FOR LARGE VINYL CAPS

EE. 7063: 3/8" ID WASHER,
FOR LARGE VINYL CAPS

FF. 7064: 9/16" ID WASHER,
FOR LARGE VINYL CAPS

CAPS

GG. PART # VARIES:
VINYL CAP (SMALL)

HH. PART # VARIES:
VINYL CAP (LARGE)

DesignRail® Reference Drawing:

STANDARD ASSEMBLY HARDWARE

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