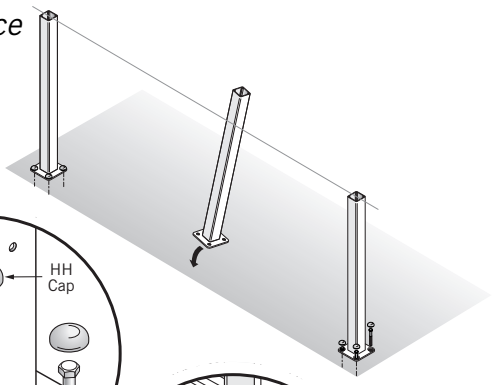
Vertical Cable Systems

DESIGN·RAIL by feeney®

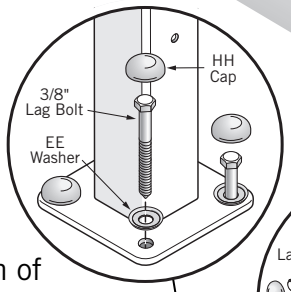
Important Note: *These instructions are for a standardized frame system with posts on 5-1/2 foot centers. Bay infills may vary depending on your distance between posts. Infill rails should be cut so the space between pickets, cables and posts should all appear to be consistent. For systems with 400 Cap Rail, see alternative instructions.*



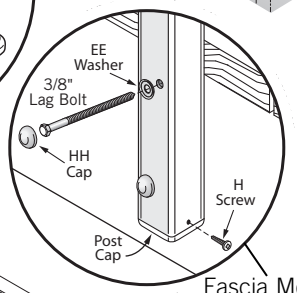
1) Check Contents Of Packages: Verify that all parts have arrived and that they match the packing list.

2) Gather and Identify All Posts: Use the *rail connecting block* (*RCB*) holes on each *post* to identify the post type:

- End posts – *RCB* holes on one side only.
- Intermediate posts – *RCB* holes on opposite sides.
- Single corner posts – *RCB* holes on adjacent sides.



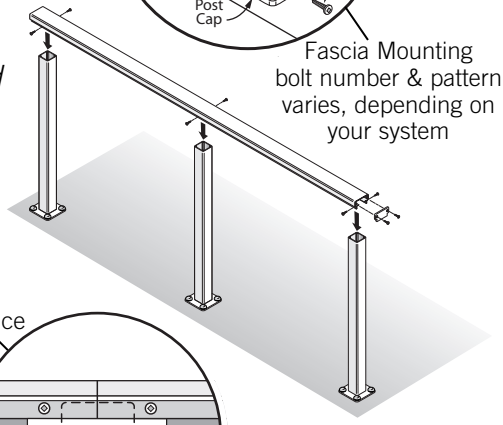
Surface Mounting



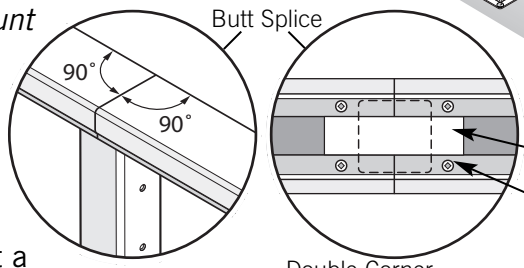
Fascia Mounting bolt number & pattern varies, depending on your system

2) Anchor *Posts*: Position all main *posts*. Space *posts* a maximum of 5-1/2 ft. on center for residential applications (5 ft. commercial applications). 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.

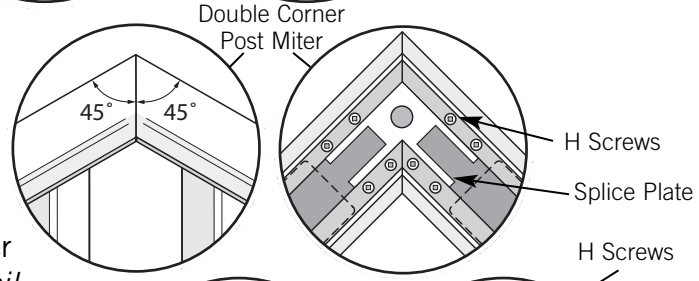
- *Surface mounting:* anchor each *post* using provided hardware (*see detailed sheet included in your order*) with *retaining washers* and l*arge plastic caps*.
- *Fascia mounting:* anchor each *post* using provided hardware with *retaining washers* and *large plastic caps*. Finish with an *internal 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.



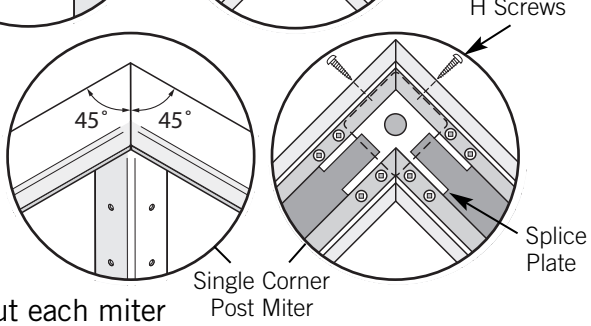
3) Cut & Snap *Cap Rails*: Cut the *cap rail* (Series 200, 300 & 350 only) to length and then snap it into position on top of the *posts*. Be sure to attach *decorative end plates* to any ends that butt-up against a wall face or that have limited access.



- *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.



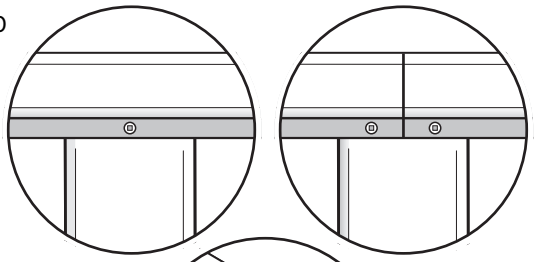
- *Mitered joints with double corner posts:* the *cap rail* will extend past each of the corner *posts* and the actual miter joint will be unsupported. Remember to cut each *cap rail* miter at 1/2 the total corner angle (i.e. if the corner angle is 90 degrees, cut each miter at 45 degrees). Add one *splice plate* to connect and stabilize the miter oint. 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*.



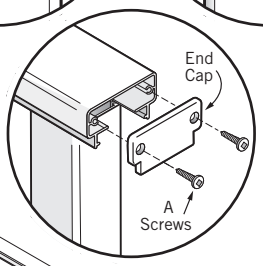
- *Mitered joints with single corner posts:* cut each *cap rail* miter at 1/2 the total corner angle (i.e. if the corner angle is 90 degrees, cut each miter at 45 degrees) Center the joint over the corner *post*. Add one *splice plate* to connect and stabilize the miter

(continued on next page)

joint. Insert the plate before setting the two rail sections down of top of the *post*; 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.

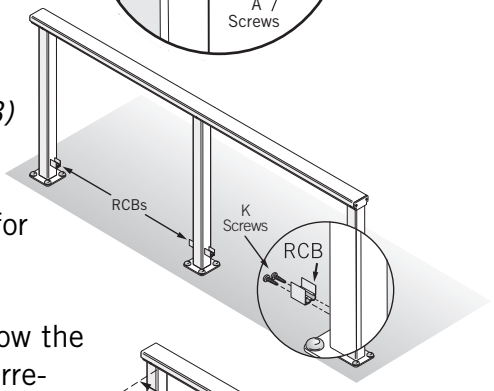


4) Fasten *Cap Rails*: Secure the *cap rail* to each *post* using two *H screws* (four screws for butt splices); screws should run through the *cap rail* flange and into the center of the *post* face. Attach screws to both the front and back of each post.

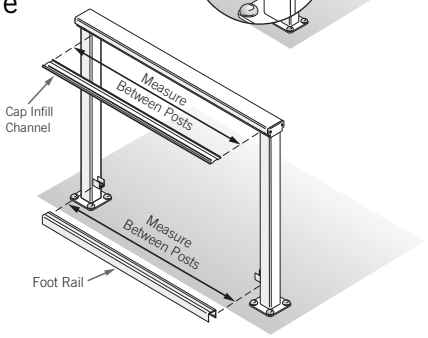


5) Attach *Decorative End Caps*: Attach the *decorative end caps* to all of the exposed *cap rail* ends using two *A screws.* This applies to 200, 300, and 350 Cap Rail options.

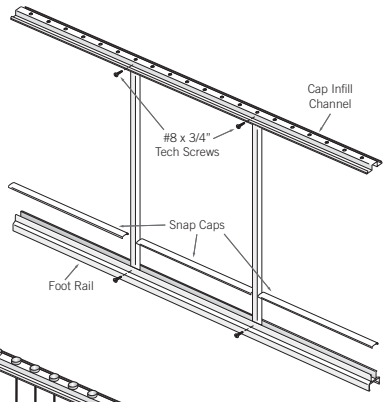
6) Attach *RCBs*: For the *foot rail*, locate the *rail connecting block (RCB)* holes on each *post* (these are pre-drilled) except on stair rail *posts* where all the holes must be drilled in the field). Attach the *RCBs* to the posts using two *K screws*. The *RCBs* should be mounted wings up for frames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



7) Cut *Cap Infill Channels*: Measure between each set of *posts* just below the *cap rail*. Cut the *cap infill channel* for each section to $-1/16$" of your corresponding measurement. Do not attach the *cap infill channels* to the *cap rail* at this time. The distance between *post* and *cable* holes should be between 1-1/2" and 3 inches and equal on both ends. Standard configurations have 6 cables between *posts* and *pickets*. Number of cables and pickets may vary due to panel size. Consult your layout sheet.

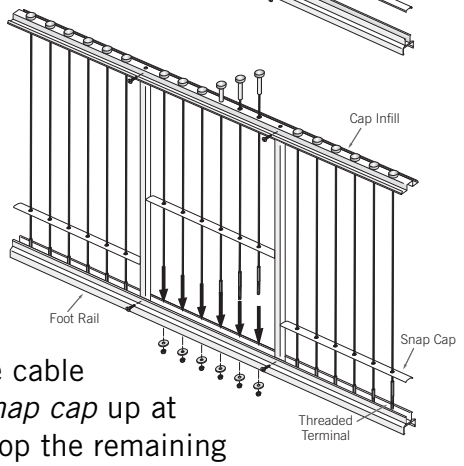


8) Cut *Foot Rails*: Measure between each set of *posts* just above the *RCBs*. Cut the *foot rail* for each section to $-1/16$" of your corresponding measurement. Make sure the holes in the foot rail are in similar placement to the *cap infill channel* so the cables run plumb vertically. Do not attach the *foot rails* to the frame at this time.



9) Cut *Snap Caps*: Measure distance between posts and pickets, cut *snap caps* to -1/16" length. Standard infill bays will have 20 1/4" length of *snap cap* to use between the two installed *pickets*. End *snap cap* sections will vary depending on size of bay.

10) Cut & Install *Pickets:* Pickets should come cut to length for level railing installations, if not, call for measurements for your particular installation (residential or commercial). Pickets slip in slots in *cap infill channel* and *foot rail* and are secured with *H screws* through <u>side</u> of channels (see illustration).



11) Assemble Panels: Thread center cables through center holes on the *cap infill channel*. The *threaded terminal* of the *cable* feeds through first, to eventually lace through the foot rail channel. Position the 20-1/4" section of *snap cap* over the *foot rail* in between the *two pickets*. Thread the cable through the *snap cap* and continue through the holes in the *footrail*. Hold *snap cap* up at this time. Attach *washers* and *nuts* on the protruding *threaded terminals*. Drop the remaining

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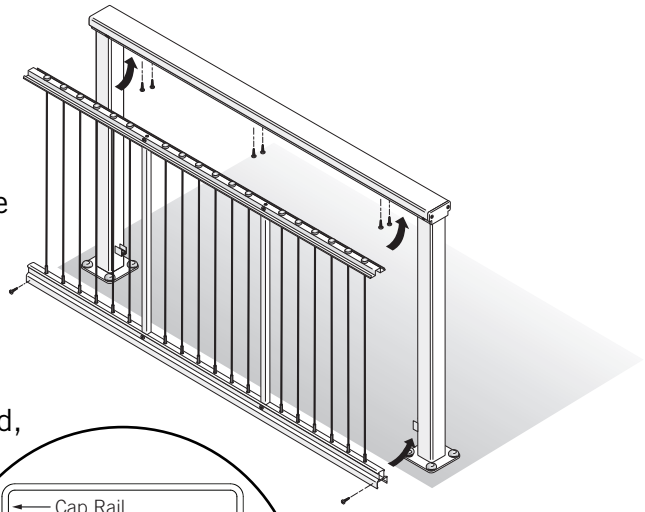
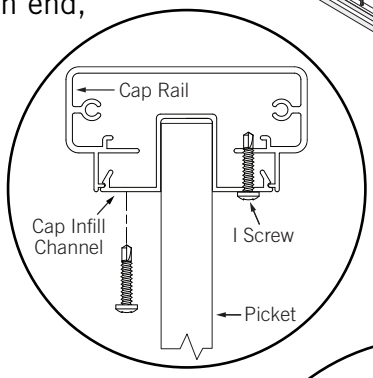
cable assemblies through the remaining holes in the *cap rail channel* and thread through *snap caps* and *foot rail*. Attach remaining *washers* and *nuts.*

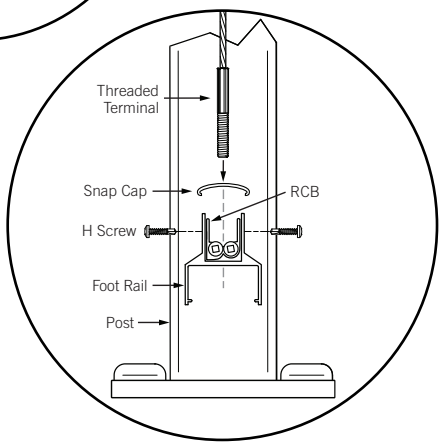


12) Install Panels: Place the assembled panel between *posts* and lift up into opening of the underside of the *cap rail.* Make sure the *RCBs* fit into the upper channel of the *foot rail* below the *snap cap*. Snap the *cap infill channel* into the *cap rail* once the infill is aligned.

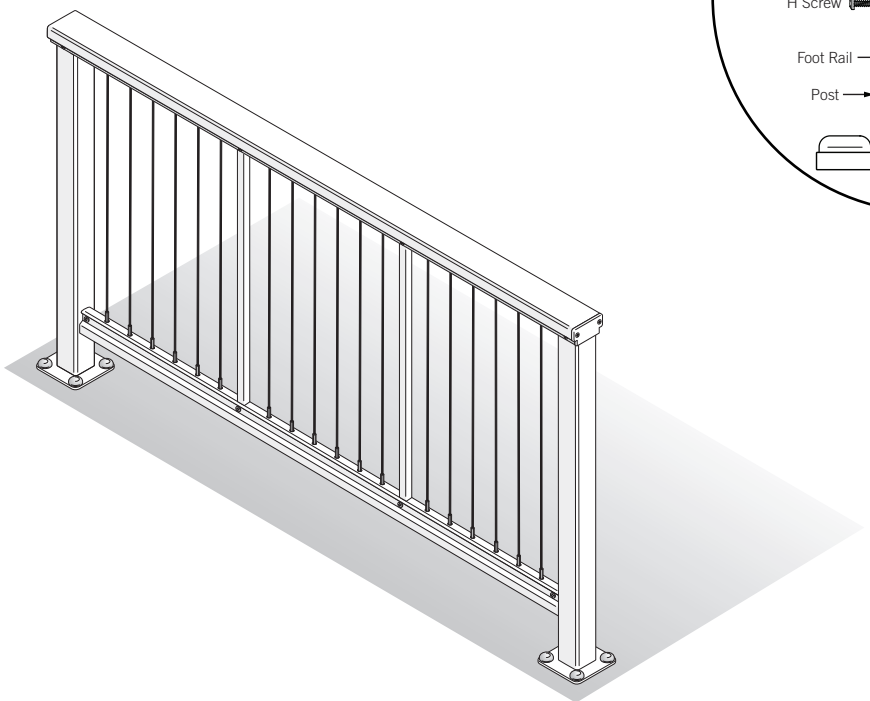
13) Secure Panels: Screw the *cap infill channel* into the *cap rail* from underneath with 6 "*I" screws* per panel. 2 on each end, 2 in center. Install *foot rails* to *RCBs* with *H screws*.



14) Tension Cables: Tension cables by spinning *nuts* concealed under *foot rail*. Hold the threaded terminal above the *foot rail* with vise-grip pliers while tightening the nut with a socket below. Tension evenly until taught.



15) Fasten *Snap Caps*: Fasten *snap caps* to top of *foot rail* after tensioning cables. Push down and snap into place.

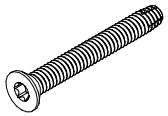


FLAT HEAD SCREWS

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

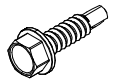
B. 7289: #10 x 3/4" SS SCREW, FLAT HEAD, SQUARE DRIVE

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

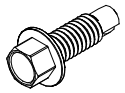


D. 7265: #14 x 2" SS MAGNA-COAT SCREW, TYPE F, FLAT HEAD, TORX DRIVE

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

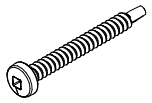
PAN HEAD SCREWS

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

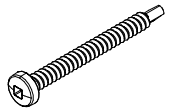
H. 7270: #8 x 3/4" SS SELF-TAPPING SCREW, PAN HEAD, SQUARE DRIVE

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

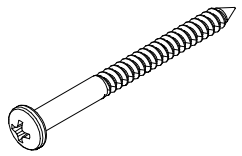
J. 7271: #10 x 1-1/2" SS SELF-TAPPING SCREW, PAN HEAD, SQUARE DRIVE



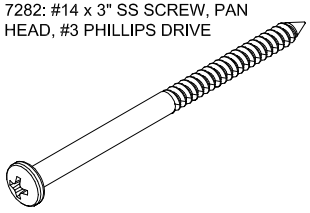
K. 7267: #10 x 1-3/4" SS SELF-TAPPING SCREW, PAN HEAD, SQUARE DRIVE



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

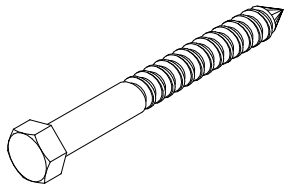


M. 7282: #14 x 3" SS SCREW, PAN HEAD, #3 PHILLIPS DRIVE



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

LAG SCREWS



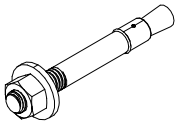
O. 7277: 3/8" x 3-1/2" LAG SCREW, HEX HEAD

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

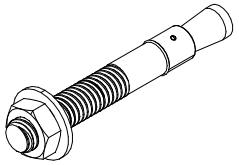
Q. 7280: 3/8" x 5" LAG SCREW, HEX HEAD

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

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

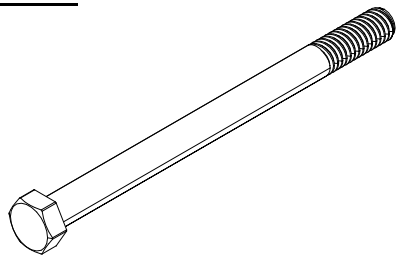
CC. 7070: 1/4" ID WASHER, FOR SMALL VINYL CAPS

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

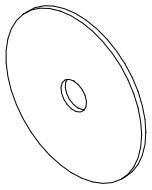
BOLTS



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

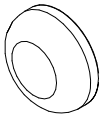


AA. 7224: 3/8" ID, 2" OD FENDER WASHER

BB. 7225: 3/8"-16, NYLON INSERT LOCKNUT, HEX HEAD

CAPS

GG. PART # VARIES: VINYL CAP (SMALL)



HH. PART # VARIES: VINYL CAP (LARGE)

DesignRail® Reference Drawing:

STANDARD ASSEMBLY HARDWARE

DATE:	03/20/12
PAGE:	1 of 1
REV:	
BY:	BWA
CHK:	

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