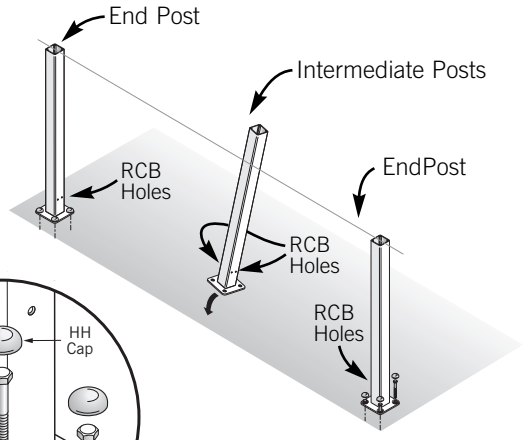
Picket Systems

dESIGN·RAIL by feeney®

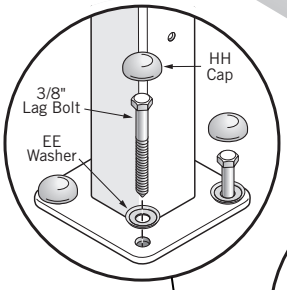
1) Check Contents Of Packages: Verify that all parts have arrived and that they match the packing list.

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

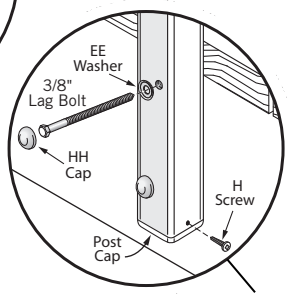
- End posts – *RCB* holes on one side only.
- Intermediate posts – *RCB* holes on opposite sides.
- Single corner posts – *RCB* holes on adjacent sides.



3) Anchor *Posts*: Position and fasten all *posts*. The sides of the posts with *RCB* holes should be facing the adjacent *post(s)*. Be sure that the posts are plumb, in-line with one another, and spaced a **maximum** of 5 feet apart. The lag bolts must have a minimum of 3" of thread penetration into solid wood for a proper, secure post attachment; use additional wood blocking and/or longer bolts if necessary. Expansion anchors can be supplied for concrete base.



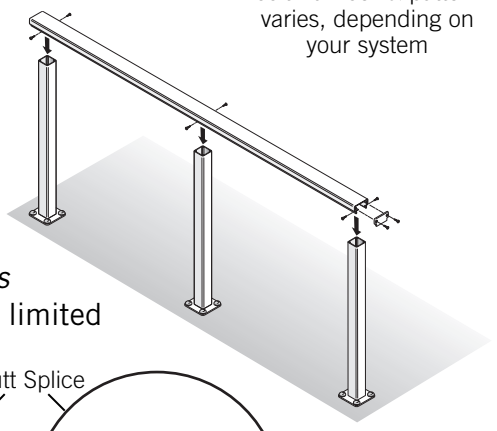
Surface Mounting



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

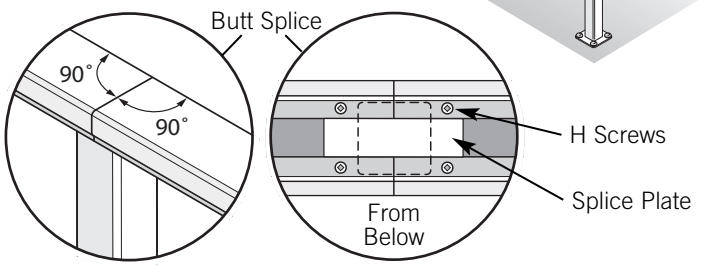
- *Surface mounting:* anchor each *post* using provided hardware (*see detailed sheet included in your order*) with *retaining washers* and *large plastic caps*.
- *Fascia mounting:* anchor each *post* using provided hardware with *retaining washers* and *large plastic caps*. Finish with an *internal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

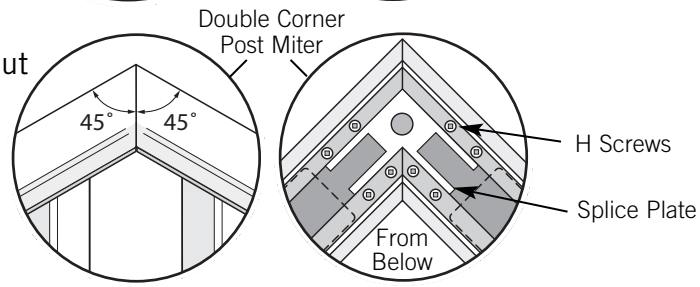
If you are mounting posts using the *stanchion mount* or *fascia bracket mount* methods, please call for additional installation details.



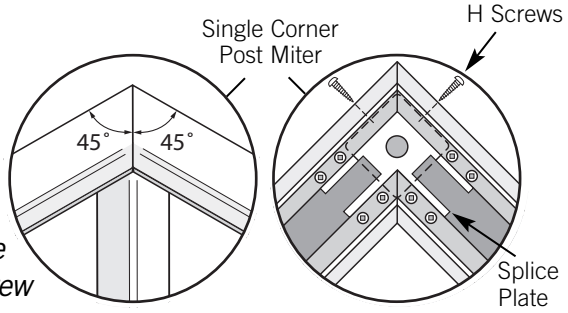
4) Cut & Attach *Cap Rails*: Cut the *cap rail* to length and then snap it into position on top of the *posts*. Be sure to attach *decorative end caps* (see step #6) to any ends that terminate against a wall face or that have limited access.

- *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 the joint.
- *Mitered corner 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*.

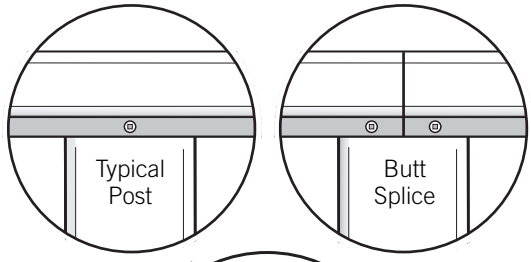




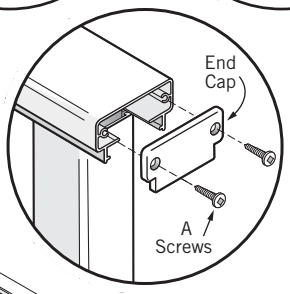
- *Mitered corner joints with single corner post:* cut each *cap rail* miter at 1/2 the total corner angle (i.e. if the corner angle is 90 degrees, cut each miter at 45 degrees) Center the joint over the corner *post*. Add one *splice plate* to connect and stabilize the miter joint. Insert the plate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



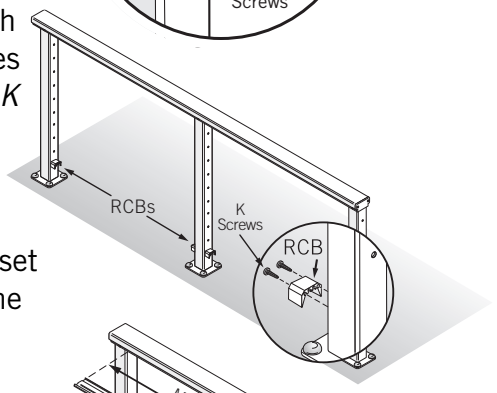
5) Fasten *Cap Rails*: Secure the *cap rail* to each *post* using two *H screws* (one each side); Butt splices require four screws (two each side). Screws should run through the *cap rail* flange and into the *post* face.



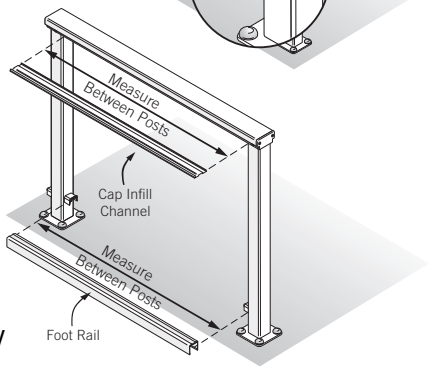
6) Attach *Decorative End Caps*: Attach the *decorative end caps* to all of the exposed *cap rail* ends using two *A screws.* This applies to 200, 300, and 350 Cap Rail options.



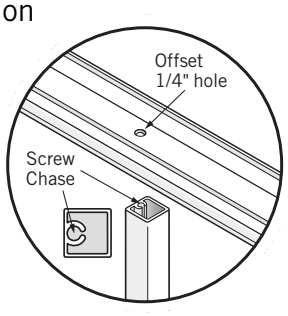
7) Attach *RCB*s: Locate the *rail connecting block (RCB)* holes on each *post* (these are pre-drilled except on stair rail *posts* where all the holes must be drilled in the field). Attach the *RCBs* to the posts using two *K screws*. The *RCBs* should be mounted wings down.



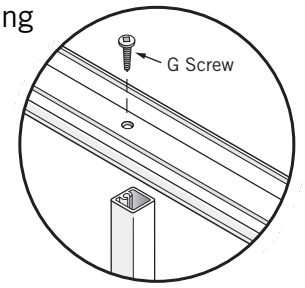
8) Measure *Foot Rails & Cap Infill Channels*: Measure between each set of *posts* just above the *RCBs* for the *foot rail* length and just below the *cap rail* for *cap infill channel* length. Record these measurements for each infill section.



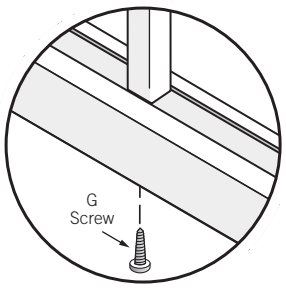
9) Cut *Foot Rails & Cap Infill Channels*: For aluminum picket systems the *foot rails* and *cap infill channels* come with picket screw holes pre-drilled. Note that it is neccesary to cut both the *foot rails* and *cap infill channels* so that when they are installed their **holes line up vertically** and the final array of *pickets* is **centered evenly between posts**. Additionally note that each *picket* has a built-in screw chase hole which is located on the inside edge of each *picket*, **not the center** of the *picket* (see diagram). Therefore, when installed, the *pickets* will not be centered over each hole but instead will be offset to one side by 1/4".
Be sure to allow for this offset when planning your *foot rail* and *cap infill channel* cuts. Remembering the above notes, cut the *cap infill channel* for each section no more than $^{1}/_{16}$" shorter than your corresponding measurements from step 8.



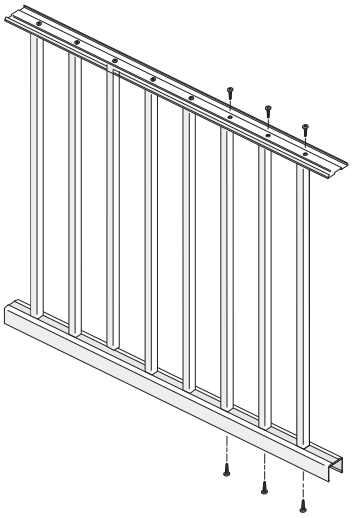
10) Assemble *Picket Panels*: Using the *G screws,* attach *pickets* to the *cap infill channel* and then to the *foot rail* to make up a *Picket Panel* for each infill section.



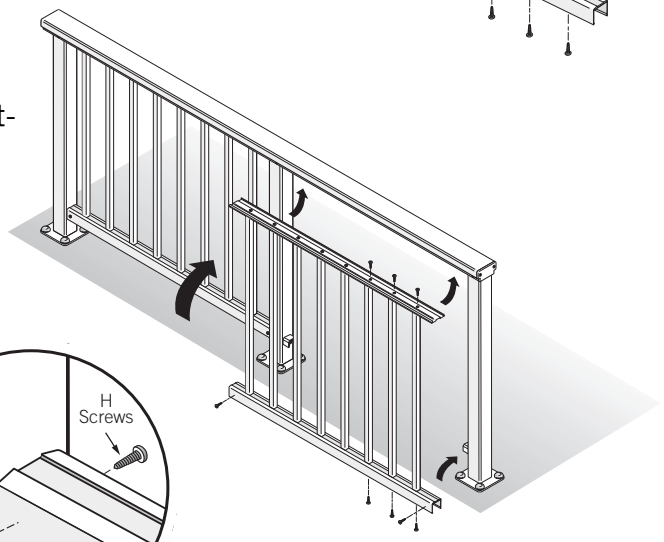
CAP INFILL CHANNEL ATTACHMENT

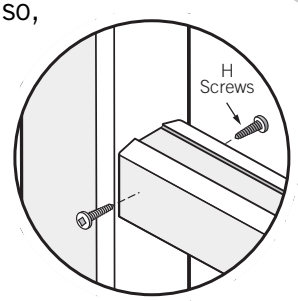


FOOT RAIL ATTACHMENT



11) Install Assembled *Picket Panels*: Lift the completed *picket panels* (assembled *cap infill channel, foot rail & pickets*) into position on the frame by first tilting-in the *foot rail* on top of the *RCBs* and then rotating the top of the *picket panel* inward. The top of the *panel* should just clear the bottom of the *cap rail*. At this point you should be able to lift the entire *panel* up by the *cap infill channel* and snap it 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 do not hit one another inside the *RCB*.





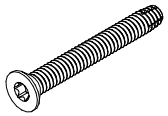
This will complete a *Picket System* assembly.

FLAT HEAD SCREWS

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

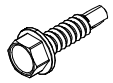
B. 7289: #10 x 3/4" SS SCREW, FLAT HEAD, SQUARE DRIVE

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

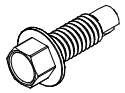


D. 7265: #14 x 2" SS MAGNA-COAT SCREW, TYPE F, FLAT HEAD, TORX DRIVE

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

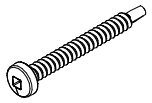
PAN HEAD SCREWS

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

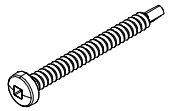
H. 7270: #8 x 3/4" SS SELF-TAPPING SCREW, PAN HEAD, SQUARE DRIVE

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

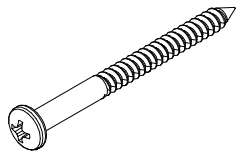
J. 7271: #10 x 1-1/2" SS SELF-TAPPING SCREW, PAN HEAD, SQUARE DRIVE



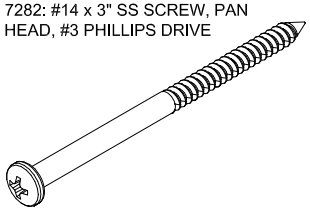
K. 7267: #10 x 1-3/4" SS SELF-TAPPING SCREW, PAN HEAD, SQUARE DRIVE



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

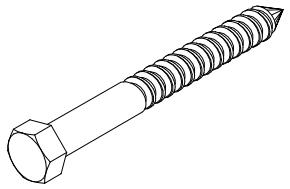


M. 7282: #14 x 3" SS SCREW, PAN HEAD, #3 PHILLIPS DRIVE



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

LAG SCREWS



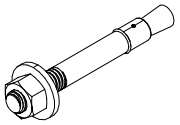
O. 7277: 3/8" x 3-1/2" LAG SCREW, HEX HEAD

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

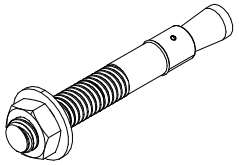
Q. 7280: 3/8" x 5" LAG SCREW, HEX HEAD

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

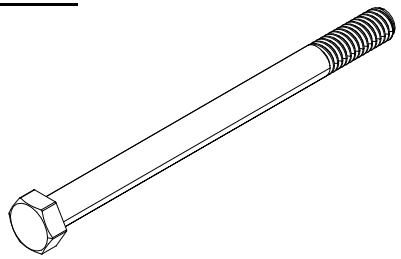
CC. 7070: 1/4" ID WASHER, FOR SMALL VINYL CAPS

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

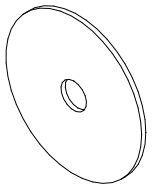
BOLTS



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

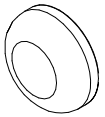


AA. 7224: 3/8" ID, 2" OD FENDER WASHER

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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