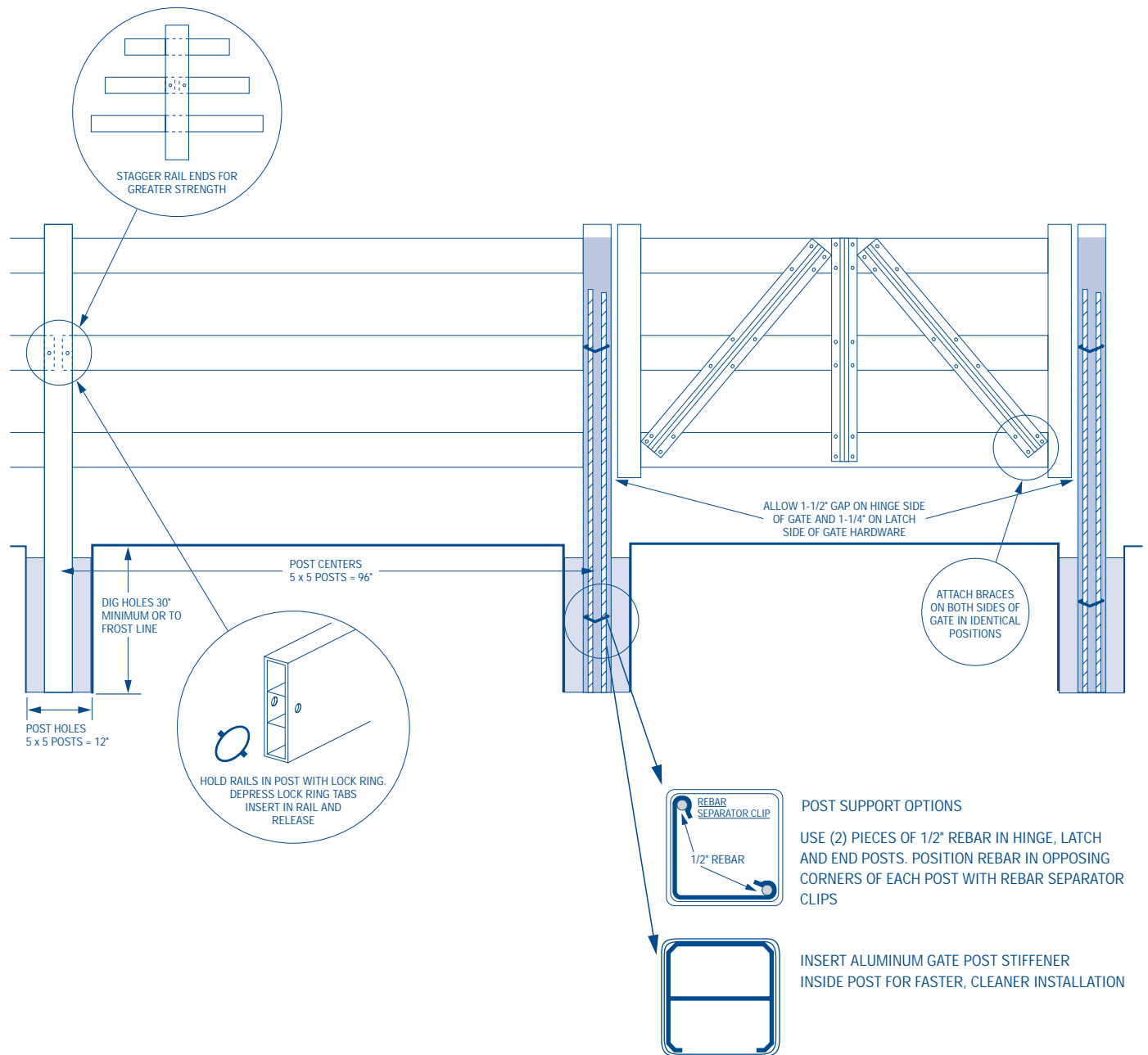


Post & Rail

Includes: Crossbuck, 2-Rail, 3-Rail and 4-Rail



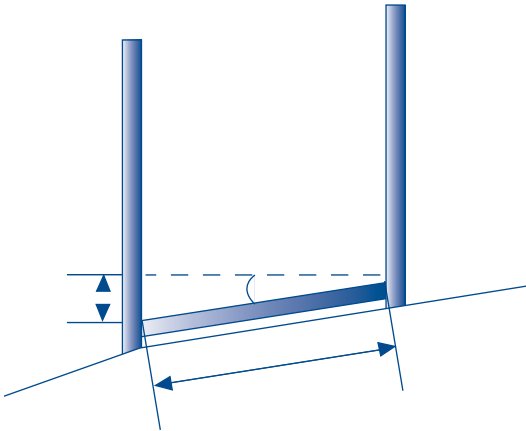
Variable Terrain Installation

Calculate Rise/Foot Angle

To determine the hole enlargement size, first calculate the slope rise/foot or the angle of the slope. Refer to the diagram and examples.

- Measure section length in inches
- Determine section rise by using line level and measuring vertical rise; measure rise in inches
- Divide rise by section length to get rise per inch
- Multiply by 12 to determine rise per foot

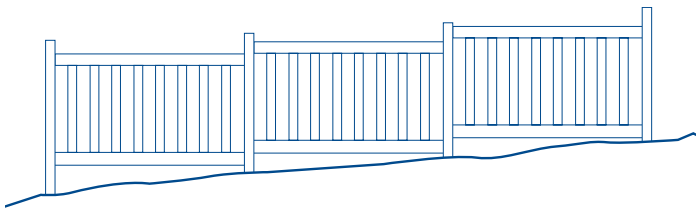
Example: 24" rise ÷ 96" length = .25 rise per inch = 3" rise per foot



- Two methods for installing a fence on variable sloping terrain exist - stepping and racking
- For either method, divide slope evenly into all sections

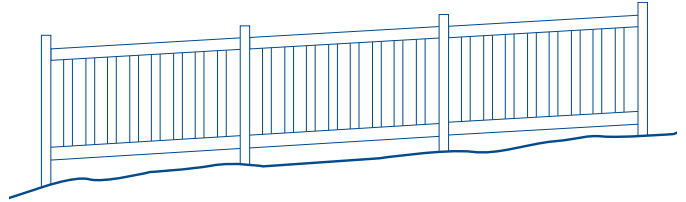
Stepping Method

With the stepping method, the rails remain horizontal and the posts are extended to accommodate the variance in terrain. Longer end posts should be used and holes for opposite side of post can be field fabricated with template kit and router or spiral saw to accept rails.



Racking Method - 10° or Less

With the racking method, the horizontal rails will follow the sloping terrain.



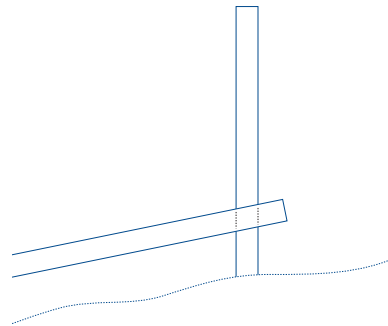
When installing multiple sections, it is advisable to use an End Post and field fabricate the opposite side of the post to avoid a jagged fence line.

Depending on severity of rack (and specific fence style), the following field fabrication may be necessary for proper installation.

1. Enlarge holes in post to accept rails
2. Enlarge holes in rail to accept pickets
3. Shorten picket length

NOTE: Depending on severity of rack, post centers may need to be decreased. Be sure to verify prior to setting posts.

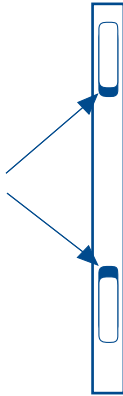
1. Enlarge holes in post to accept rails
 - Determine angle or slope
 - Place first post in hole and hold plumb
 - Place rail next to post (not in routed hole) at correct angle of grade



- Mark rail where post crosses it on angle
- Remove rail, measure the length of the drawn angle. Add 1/8" to this length to determine proper post hole size

- Enlarge post holes.

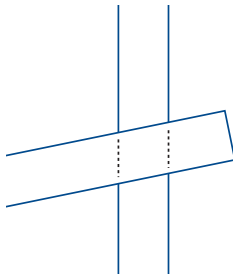
NOTE: Always open bottom of top hole and top of bottom hole to maintain proper fence height.



- Holes may be cut utilizing a template kit and router or spiral saw
- Determine location of holes on opposite side of line post by laying post across side of rail (align with routed hole) and marking exit position of rail on opposite side of post
- Cut holes with template kit and router or spiral saw as previous

2. Enlarge holes in rail to accept picket

- Position rail at desired angle
- Hold picket plumb against side of rail
- Mark picket where rail crosses it on angle



- Measure the length of the drawn angle and add 1/8" to this length to determine proper rail hole size
- Enlarge holes with a spiral saw

NOTE: Always cut the same side of each hole to maintain spacing

3. Shorten picket length

- For extreme racking situations, picket ends may need to be cut to accommodate rack
- Position top and bottom rails in routed post holes
- Position picket next to rails so it is plumb and aligned with bottom side of bottom rail
- Mark position where top of picket intersects with top of top rail; subtract 3/8" and cut picket to length

NOTE: For ribbed rails - top and bottom of picket will need to be aligned with internal rib.

Post Routing Template Kit

Routing template kit can be used to enlarge holes for racking as well as to create transitions for stepping, changing heights or styles.

Install 3/8" router blade and 5/8" bearing or router guide. Any substitutions may result in improper hole size or damage to the template kit.

NOTE: Template cutout size is designed to be 1/8" larger than the finished cut to allow bearing to follow the shape.

Select the appropriate template for the application.

Assemble the template as shown, configured for the desired post size (4" or 5").

NOTE: It is advisable to practice routing on a scrap piece before attempting actual cut.

Mark location of hole to be routed. Offset template cut by 1/8" to allow for bearing (i.e., if hole is to be located 3" from top of post, position edge of template 2-7/8" from top).

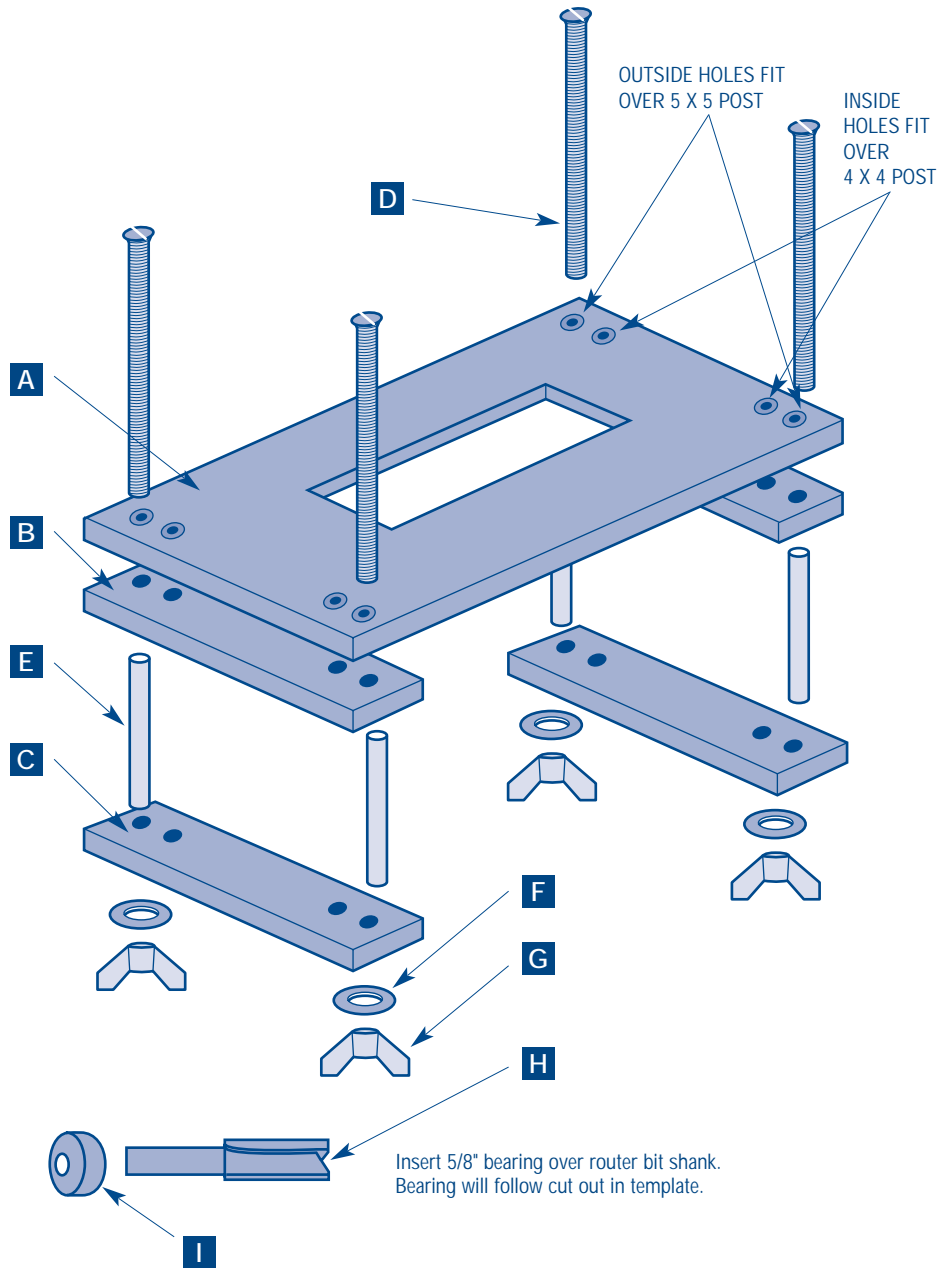
Tighten wing nuts. Place on a flat, firm surface to prevent tipping.

Route hole per manufacturer's recommendations.

ALWAYS WEAR SAFETY GLASSES.

Loosen wing nut and remove template.

For situations that require a larger hole to accommodate racking, route a standard hole, loosen wing nuts and slide template to new position to route excess material.



- A** ROUTING TEMPLATE
- B** 1-1/8" TEMPLATE SPACER PLATE
- C** 1-1/2" TEMPLATE SPACER PLATE
- D** 1/4" -20 X 6" BOLTS
- E** 3/8" OD PLEXI TUBE
- F** 1/4" FLAT WASHER
- G** 1/4" -20 WING NUT
- H** 3/8" ROUTER BIT W/ 1/4" SHANK
- I** 5/8" BEARING W/ 1/4" ID OPENING

Glossary

Accent Decorative addition to top of fence such as lattice.

Aluminum Channel Aluminum structural support used as a stiffener in rails.

Auger Hand or machine-operated tool with a screw-like shank for boring holes in soil.

Blocking Method for supporting horizontal members, such as fence rails or gates.

Brace Diagonal component of a gate, provides dimensional stability.

Bullet Clip Gravity clip that is used to hold rails in posts.

Caps Vinyl accessory placed on top of fence posts to provide a finished look and prevent water penetration.

Crimp Lock Method for fastening rails inside posts. The rail is notched (crimped) so that it stays within the post once inserted.

EZ Set Bracket Aluminum bracket system that fits over a steel post as an alternative installation method to secure and hold vinyl post in position.

Fence Layout Section-by-section diagram of the proposed fence line.

Frost Line Lowest level in soil that freezes. Frost line depth depends on winter temperatures, soil type, and vegetation cover, and varies from 0" in warm regions to 3' or more in cold-winter areas.

Gate Movable framework or solid structure that swings on hinges; controls entrance or exit through an opening in a fence.

Gate Post Stiffener Structural aluminum support used in gate hinge and latch posts to solidify as an alternative to traditional concrete and rebar method.

Gloss Describes amount of reflection or sheen on the surface of vinyl.

Good Neighbor Fence Fence that has the same look on both sides.

Lock Ring Circular-shaped fastener with tabs that insert into rails for holding into posts.

Opposite Gate Used in double-gate situations; complements the primary gate; diagonal brace is mounted in the opposite direction for a pleasing, symmetrical look.

On Center (O.C.) Measure from the center of one object (e.g., a post) to the center of the next post.

Picket Vertical member of fence between rails.

Post Vertical support member of fence system.

PVC Polyvinyl chloride, the plastic resin used to manufacture "vinyl" fence.

Rail Horizontal pieces between fence posts.

Racking Method of installing fence on sloped terrain. Fence posts and pickets are plumb, but the rails are mounted at an angle so they parallel the grade.

Rebar Reinforcing bar, placed in end and gate posts to vertically reinforce the fence; No. 4 rebar is 1/2" diameter.

Routing Template A guide used for field routing posts that require hole positions other than standard.

Scalloped Fence style in which the pickets follow a concave pattern high on both ends and low in the middle.

Slope Degree of incline of a hillside; measured in inches of rise per horizontal inches of run (degree of rack).

Snap Cap Decorative plastic cap and washer system used to cover the screw head.

Spacer Bar Wood or like material used to determine in fill area between sections or gates (post spacing).

Steel Channel Galvanized steel structural support used as a stiffener in vinyl rails.

Stepping Method of installing fence on sloped terrain. Fence rails remain horizontal, and posts are extended to accommodate the variance in the grade.

Tamp Method of releasing air pockets in concrete by the use of repeated light blows with a mallet on outside of post or piece of lumber in post hole.

Wall Mount Brackets Aluminum bracket system used as an alternative installation method to fasten fence rails directly to walls or other structural surface.

Weep Holes Openings drilled in bottom rails for drainage of water.



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