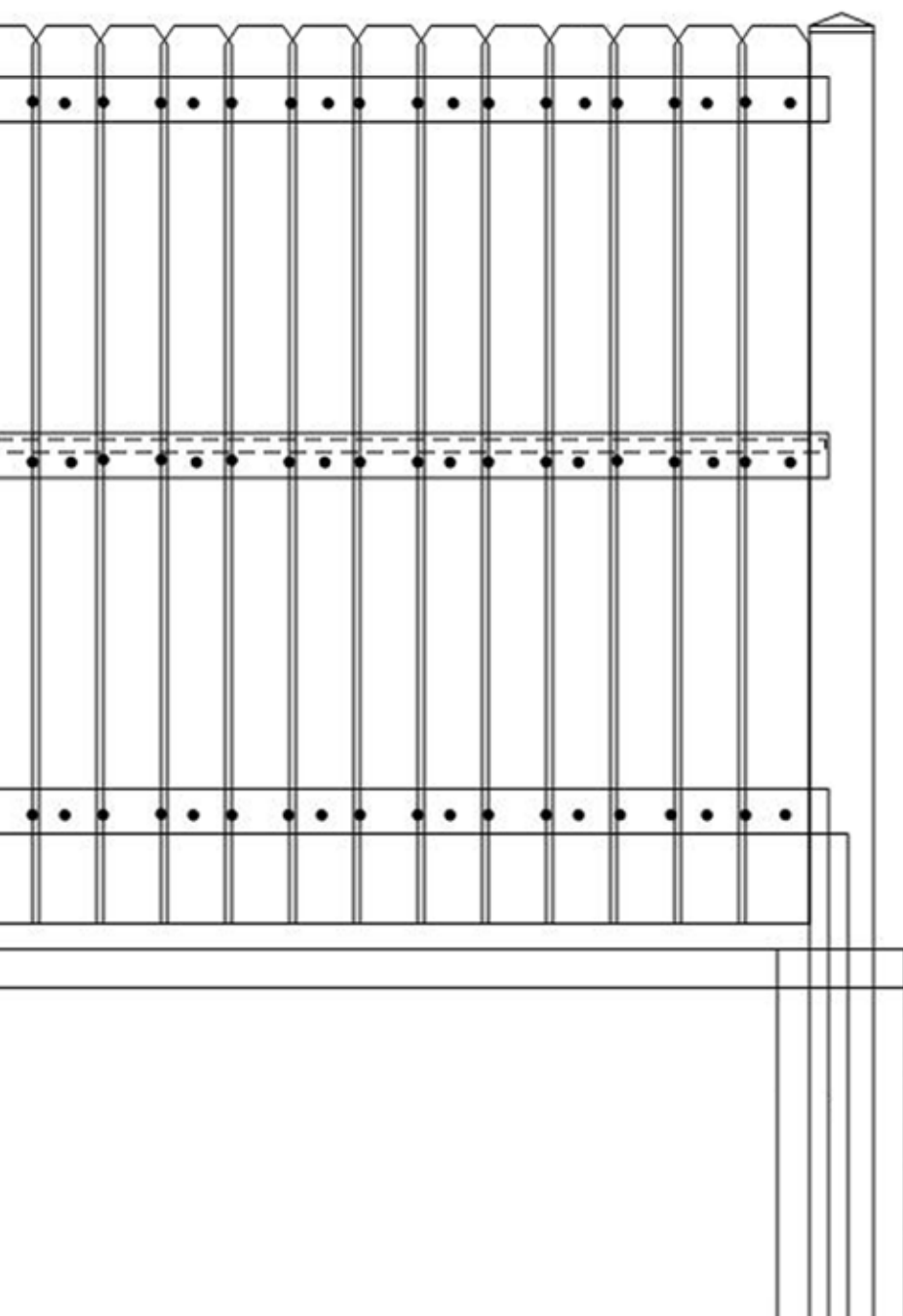




# Capped Cellular PVC Fencing Installation Guide



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### Installation Tips

**Read this instruction guide completely before starting any work.**

## STORAGE AND HANDLING

PVC can bow toward the sun on the sides exposed to sunlight, therefore if left uncovered and exposed on a sunny day, a bow in the rail or picket will develop. Expansion on the side exposed to the sun is natural so bowing is not unexpected and it can easily be reversed if it does occur. The rails and pickets should be straight before fastening, therefore, it is important to follow the storage and handling guidelines. Once the fence is properly installed, the fence system reinforces and stabilizes the rail & picket components minimizing bowing from exposure to sunlight. Only direct sunlight causes bowing on warm or cold days, not heat. Follow the procedures below for storing and handling the product before installation.



### Important Storage & Handling Guidelines

1. Keep the rails & pickets covered and protected from exposure to direct sunlight – Use bundle packaging to keep it covered - If no bundle packaging is available use other opaque packaging material to keep the product covered and protected from exposure to sunlight.
2. Do not store or place the rails & pickets on their sides or edges at any time before installation - They must be kept flat at all times prior to installation – This will help keep them assembly ready.
3. Keep the rails & pickets with the binding straps on and inside the shipping packaging they were delivered in until ready for installation. Do not to remove fence material from the packaging until it is ready to be installed.



### If a Rail or Picket appears Bowed, Follow These Procedures Before Installation:

1. Reverse the bowed rail or picket – lay it flat – with the bowed side away from the sun.
2. Exposure to direct sunlight will straighten the rail or picket out on its own very quickly.
3. The rail or picket can be installed once it has straightened out.
4. The rails must be completely straight before installing to the posts.
5. Make sure to follow Fence Picket Installation Instructions carefully to ensure the pickets are fastened straight and flat to the rails.

## TOOLS & MATERIALS NEEDED

Stakes	Drill & Drill Bits	Circular or chop saw - carbide blade, 100+ tooth
Post and gate span jig	Driver bits: Square #2, T2	Pneumatic nail gun (NailPro NPCN 565P)
Touch-up Paint	Straight level - for setting posts	Angle Iron (2.5" Lattice and California Styles)
Shovel	String line - for post leveling	Angle Iron (1.5" Privacy, Shadowbox, Board on Board Styles)
Post Hole Digger (or Auger)	Picket spacer tool	Funnel to fill posts with concrete
Hammer	Quick Clamps	Concrete & Garden Hose

## SECTION 2: PREPARE FENCE LAYOUT

**Important:** Refer to a specific fence style to determine proper post to post location and gate opening spacing.

Before you begin, there are a few precautions that need to be taken to ensure you do not run into any complications during your fence installation.

1. Before beginning installation, check to ensure that fence footings do not exceed legally established property lines, and that your fence will conform to local code specifications regarding frontage locations and allowable fence heights. Also, be sure to check with local utility companies including water, gas, electricity and sewage for the locations of underground cables or pipelines before digging. Precisely mark the fence layout. This is the critical first step on which a problem-free installation depends.
2. Measure the overall length of your planned fence and determine how many fence sections you will need, locating posts as laid out in the assembly diagram for the style selected. The precise spacing and location of each line and terminal post (terminal posts are corner, end, latch and gate posts) are specific to each style. To ensure the fence is evenly matched with the length of the layout, adjust shorter sections at the corners or near any gates or buildings.
3. Mark the location of each terminal post (Corner, End, and Gate Posts) with a stake. See Fig. A.
  - a. Mark the location of gates and use the gate information from the assembly diagram to assist you in marking the precise spacing and location of gate latch and gate posts.
  - b. Determine the size of each gate in the fence, the gate swing direction (swing-out or swing-in) and the location of the latch and handle on the gate (left or right handed swing).

**Note:** Endwood pickets and rails may be cut to accommodate shorter spans and terrain adjustments using a circular or chop saw with carbide blade (Minimum 100 teeth).

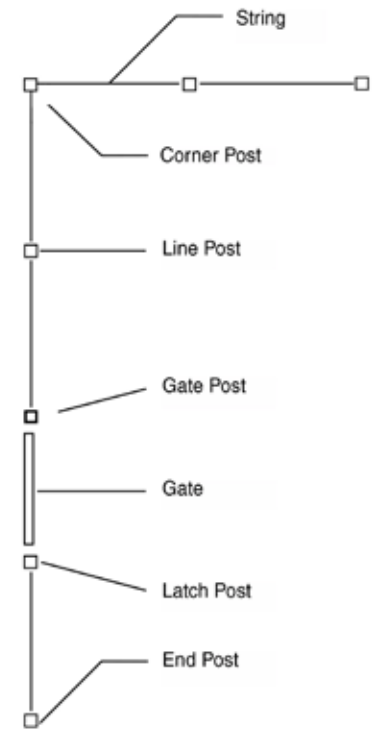


Fig. A

## SECTION 3: LOCATE AND SET POSTS

1. Dig terminal and line post holes below the frost line, typically 30" to 36" deep, with outward sloping sides larger at the bottom tapered upwards. The depth will be determined by local code requirements, local weather and soil conditions and post height requirements. See Fig. B.
2. Dig the post holes 6" deeper than the required post hole depth then fill the bottom of the hole with a 6" layer of stone to allow for drainage.
3. Position the terminal post in the hole. 5" x 5" posts will require 4 pre-routed holes to allow for concrete flow for the purpose of anchoring the posts into the ground. 4" x 4" posts will require a fastener to secure post sleeve to insert towards the bottom of the post to lock insert and post sleeve. Refer to post height set above ground based on the selected fence style. Center the post in the hole and ensure it is square with the fence line so the rails attached later will parallel the string line as in Fig. C. Also ensure the post is plumb and set at the correct height. Block and support as necessary to preserve post position as installation continues. Utilize a spacer to ensure posts are set at a specific inside post to inside post span to eliminate the need to rip pickets in the field. Surround post with wet set concrete in a continuous pour. Trowel finish around post and slope downward to direct water away.
4. When the terminal post footings have hardened enough to stabilize the posts, stretch a string line taut across the tops of the posts to mark the desired height of the line posts. See Fig. C. Set all line posts as described in the preceding steps reinforcing every third post with a steel reinforcement.

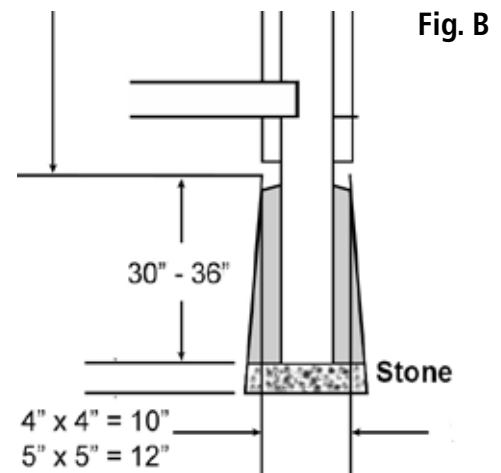


Fig. B

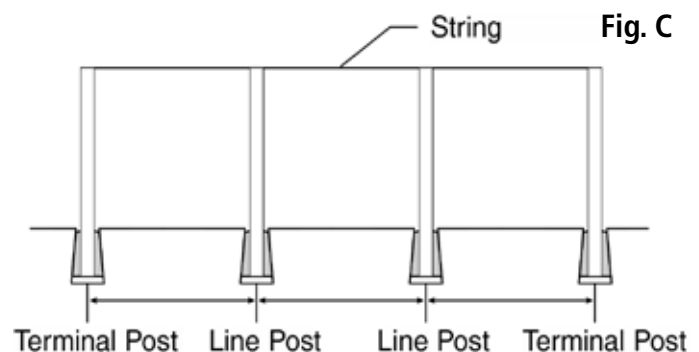


Fig. C

## Standard 6'H x 8'W Privacy Fence 4" x 4" Post Sleeve & Brackets Dog Ear or Straight-Edge Pickets 1.75" x 3.5" Rail

1. The following notes are applicable to the fence style as described above. This fence installation is a field built PVC post sleeve over a wood 4" x 4" post.
2. **POST SPACING** - Create a jig for post spacing by cutting an Endwood rail to 95.375" and placing a .0625" bracket on each end which will total the inside to inside post dimension of 95.5". Brackets may be secured to the posts - then use the cut rail as a jig to set post inside to post inside spacing. This span is recommended to maintain a consistent spacing between pickets, following the assembly drawings, and preventing the need to rip pickets.
3. Follow general guidelines covered in sections #2 & #3 for layout and post setting. Slide Endwood post sleeve over insert paying attention to ensure sides are in alignment with the fence line, and post sleeve and insert are flush at top. Fasten a screw at 2" below grade to secure post sleeve to insert thereby preventing the post sleeve from moving during wet set.
4. If you are using an optional post cap such as a New England style cap, the post must be raised 1.5" higher than noted in the assembling drawing. This adjustment of raising the post 1.5" will require assembly measurements to also be adjusted by 1.5" (see #6).
5. **ATTACH BRACKETS TO POST** - Post sleeves require brackets to attach the rails to the posts using the S.S. screws provided in the bracket kit. Locate brackets per assembly drawing and secure to the posts. Templates may be used to position the brackets quickly onto each post. Jigs may be crafted using pickets and #8 x .75" S.S. screws. Further directions are listed in the accessories and tools section #21 on page 43 (see bracket jig).
6. Using the distance provided (75" - 35.25" - 63") per the assembly drawing from the top of the post, measure and mark the placement of the bottom of each bracket. If using a decorative post cap such as a New England style cap, bracket placement should be lowered by 1.5".
7. It is recommended to use all screws provided in the bracket kit. The 1.5" screws are to attach the brackets to the posts and the .75" screws are for attaching the rails to the brackets.
8. Trim rails as required for specific post setting and make adjustments for grade. Install rails securely into brackets leaving a small .125" gap between the end of the rail and the back of the bracket. Screws are to be placed into the center of the slot within each bracket. Steel reinforced rails should be utilized in the middle rail per assembly drawing.

### TIP

## SECTION 4A1: ASSEMBLING PRIVACY FENCE PANELS



9. **INSTALL PICKETS** - Prior to attaching pickets, place picket leveler (2" x 6" x 10' wood board across the top of posts) on first, then the angle iron, and clamp to the top rail with quick clamps. This will keep the top rail straight while installing pickets, thereby preventing the installer from pulling and moving the rail during installation. Once pickets are installed, move clamps and angle iron to the next section - repeat.
10. We recommend nailing the pickets, starting from the top rail moving down towards the bottom rail. Place two (2) nails into the **center of each rail** as indicated in the assembly drawing. Use six (6) 4D x 1.5" or 1.75" ring shank nails per picket.
11. Use spacers to locate pickets properly thereby reducing the requirement to rip pickets. Picket spacing jigs are available with a .093" thick spacing. Assembly drawings assume a spacing of .093" between pickets. \*Double space the first picket adjacent to the post for spacing of .186".
12. Keep the spacer tight, plum and straight between the nailed picket and the adjacent pickets, remove spacer and repeat for each picket until all 17 pickets are installed. Once all pickets are installed remove clamps and move to next section - repeat.
13. All pickets are installed on the same side of the fence, generally with the rails on the inside of the fenced area.

**Note** from Storage and Handling section: Pickets or rails that have been directly exposed to the sun while working may begin to bow. Remember to turn them over and let them set in the sun for a few minutes to straighten prior to installing. For slight bow in picket, install pickets with bow away from midrail as shown in Fig. D.

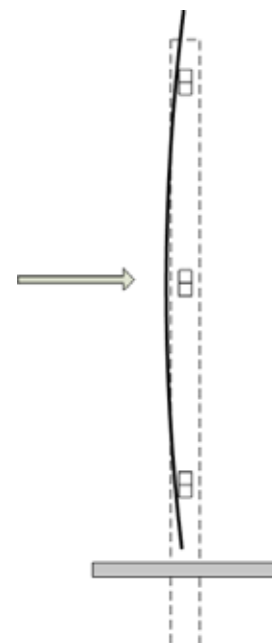
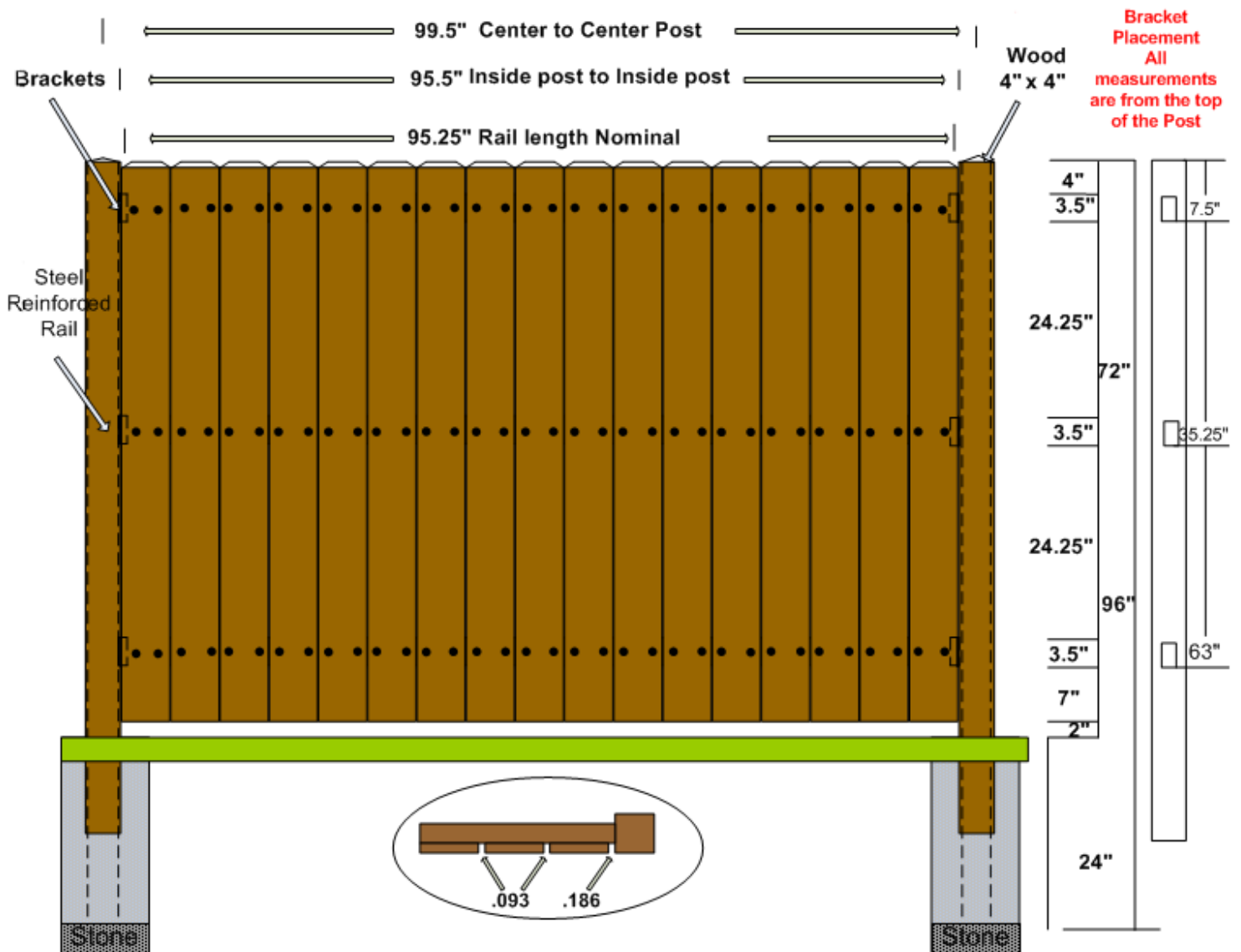


Fig. D

**Standard 6'H x 8'W Privacy Fence  
4" x 4" Post Sleeve & Brackets  
Dog Ear or Straight-Edge Pickets  
1.75" x 3.5" Rail**

**SECTION 4A2:  
ASSEMBLING PRIVACY FENCE PANELS**



Excessive sleeve length may be pushed into the wet set concrete.

If using an optional post cap such as a New England style cap, brackets must be placed 1.5" lower than noted in the assembly drawing.

**Important:**

- Under no circumstance should rail span exceed greater than 30" between rails.
- Top of picket should not exceed greater than 4" from the top of the top rail.
- Bottom of picket should not exceed greater than 7" from the bottom of the bottom rail.

Inside post to inside post spacing 95.5"  
Post hole diameter: 10"  
Post height set above ground: 72"  
Top Rail: Hollow  
Middle Rail: Steel Reinforced  
Lower Rail: Hollow  
Top Rail Spacing: 4" from top of rail to the top of picket  
Bottom Rail Spacing: 7" from bottom of rail to the bottom of picket  
\*Picket Spacing: Minimum spacing provides .093" gaps for first picket, use a double space, .186"

## Standard 6'H x 8'W Shadowbox 4" x 4" Post Sleeve & Brackets Dog Ear or Straight-Edge Pickets 1.75" x 3.5" Rail

1. The following notes are applicable to the fence style as described above. This fence installation is a field built PVC post sleeve over a wood 4" x 4" post.
2. **POST SPACING** - Create a jig for post spacing by cutting an Endwood rail to 95.375" and placing a .0625" bracket on each end which will total the inside to inside post dimension of 95.5". Brackets may be secured to the posts - then use the cut rail as a jig to set post inside to post inside spacing. This span is recommended to maintain a consistent spacing between pickets, following the assembly drawings, and preventing the need to rip pickets.
3. Follow general guidelines covered in sections 2 & 3 for layout and post setting. Slide Endwood post sleeve over insert paying attention to ensure sides are in alignment with the fence line, and post sleeve and insert are flush at top. Fasten a screw at 2" below grade to secure post sleeve to insert thereby preventing the post sleeve from moving during wet set.
4. If you are using an optional post cap such as a New England style cap, the post must be raised 1.5" higher than noted in the assembling drawing. This adjustment of raising the post 1.5" will require assembly measurements to also be adjusted by 1.5" (see #6).
5. **ATTACH BRACKETS TO POST** - Post sleeves require brackets to attach the rails to the posts using the S.S. screws provided in the bracket kit. Locate brackets per assembly drawing and secure to the posts. Templates may be used to position the brackets quickly onto each post. Jigs may be crafted using pickets and #8 x .75" S.S. screws. Further directions are listed in the accessories and tools section #21 on page 43 (see bracket jig).
6. Using the distance provided (75" - 35.25" - 63") per the assembly drawing from the top of the post, measure and mark the placement of the bottom of each bracket. If using a decorative post cap such as a New England style cap, bracket placement should be lowered by 1.5".
7. It is recommended to use all screws provided in the bracket kit. The 1.5" screws are to attach the brackets to the posts and the .75" screws are for attaching the rails to the brackets.
8. Trim rails as required for specific post setting and make adjustments for grade. Install rails securely into brackets leaving a small .125" gap between the end of the rail and the back of the bracket. Screws are to be placed into the center of the slot within each bracket. Steel reinforced rails should be utilized in the middle rail per assembly drawing.

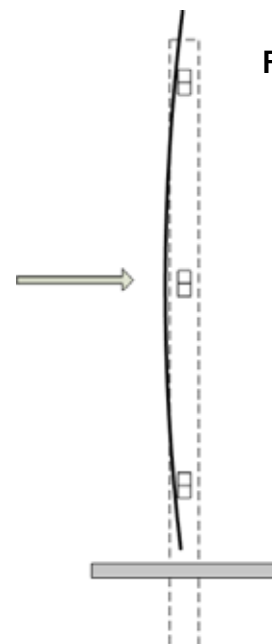
### TIP

## SECTION 5A1: ASSEMBLING SHADOWBOX FENCE PANELS



9. **INSTALL PICKETS** - Prior to attaching pickets, place picket leveler (2" x 6" x 10' wood board across the top of posts) on first, then the angle iron, and clamp to the top rail with quick clamps. This will keep the top rail straight while installing pickets, thereby preventing the installer from pulling and moving the rail during installation. Once pickets are installed, move clamps and angle iron to the next section - repeat.
10. We recommend nailing the pickets, starting from the top rail moving down towards the bottom rail. Place two (2) nails into the **center of each rail** as indicated in the assembly drawing. Use six (6) 4D x 1.5" or 1.75" ring shank nails per picket.
11. \*Behind the first picket on the front side, the back side first picket is spaced 5" from the post. After this, a space of 4.5" is used between the pickets for a total of 19 pickets in this style as illustrated in the assembly drawing.
12. Pickets are installed on opposing sides of the fence panel - front of rail and back of rail. Once all front pickets are installed remove clamps and angle, then install back pickets. Then move to the next section - repeat.
13. The last picket installed may be adjusted for spacing and preferred placement.

Fig. E

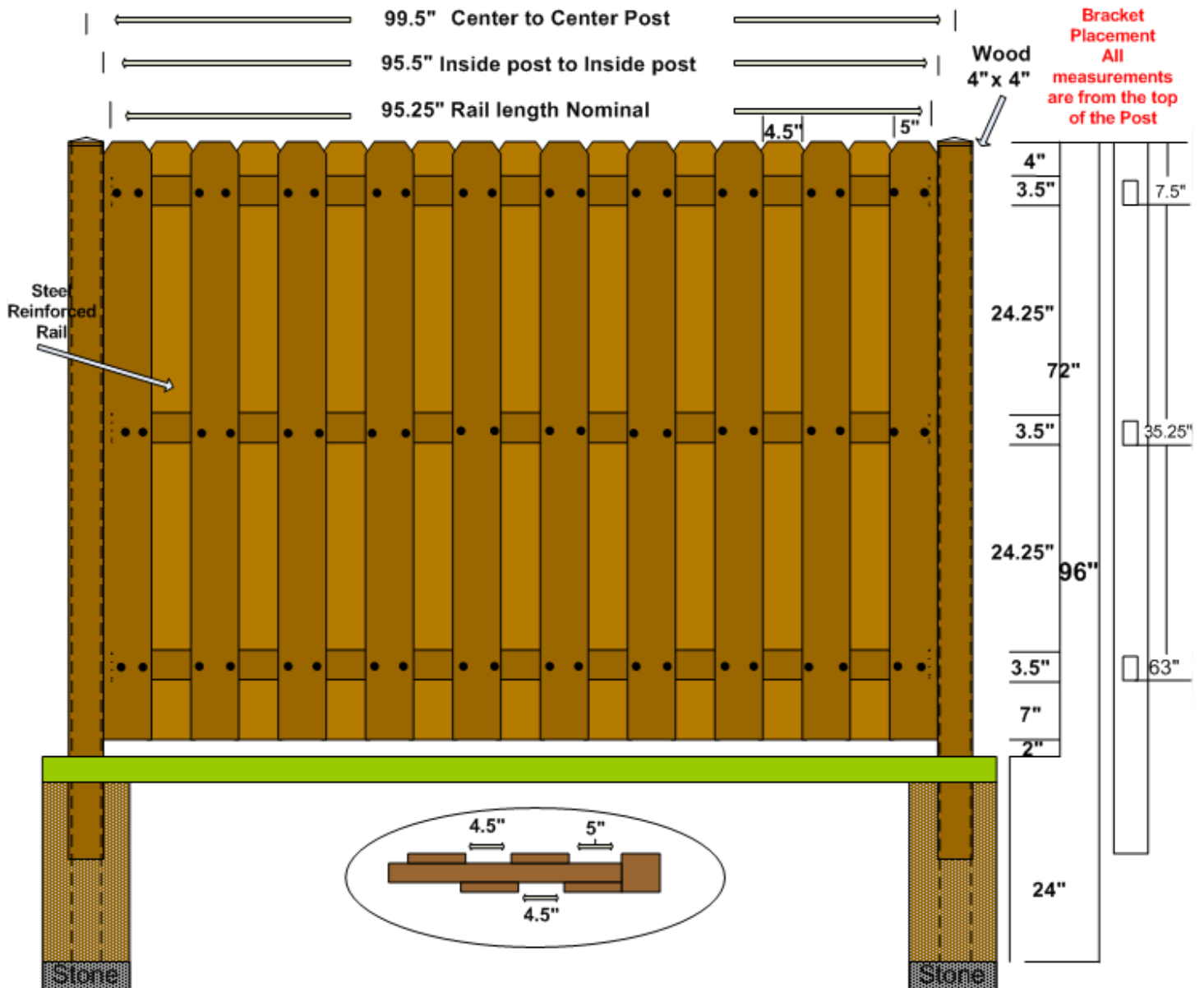


**Note** from Storage and Handling section: Pickets or rails that have been directly exposed to the sun while working may begin to bow. Remember to turn them over and let them set in the sun for a few minutes to straighten prior to installing. For slight bow in picket, install pickets with bow away from midrail as shown in Fig. E.



**Standard 6'H x 8'W Shadowbox  
4" x 4" Post Sleeve & Brackets  
Dog Ear or Straight-Edge Pickets  
1.75" x 3.5" Rail**

**SECTION 5A2:  
ASSEMBLING SHADOWBOX FENCE PANELS**



If using an optional post cap such as a New England style cap, brackets must be placed 1.5" lower than noted in the assembly drawing.

Excessive sleeve length may be pushed into the wet set concrete.

**Important:**

- Under no circumstance should rail span exceed greater than 30" between rails.
- Top of picket should not exceed greater than 4" from the top of the top rail.
- Bottom of picket should not exceed greater than 7" from the bottom of the bottom rail.

Inside post to inside post spacing 95.5"  
Post hole diameter: 10"  
Post height set above ground: 72"  
Top Rail: Hollow  
Middle Rail: Steel Reinforced  
Lower Rail: Hollow  
Top Rail Spacing: 4" from top of rail to the top of picket  
Bottom Rail Spacing: 7" from bottom of rail to the bottom of picket  
\*Picket Spacing: Spacing provides 4.5" gaps. For first picket, use a 5" spacing on the back side

## Standard 6'H x 8'W Board on Board 4" x 4" Post Sleeve & Brackets Dog Ear or Straight-Edge Pickets 1.75" x 3.5" Rail

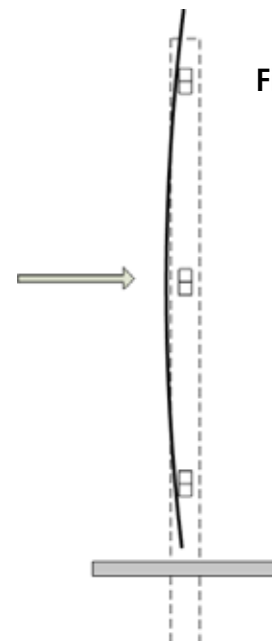
1. The following notes are applicable to the fence style as described above. This fence installation is a field built PVC post sleeve over a wood 4" x 4" post.
2. **POST SPACING** - Create a jig for post spacing by cutting an Endwood rail to 95.375" and placing a .0625" bracket on each end which will total the inside to inside post dimension of 95.5". Brackets may be secured to the posts - then use the cut rail as a jig to set post inside to post inside spacing. This span is recommended to maintain a consistent spacing between pickets, following the assembly drawings, and preventing the need to rip pickets.
3. Follow general guidelines covered in section #2 & #3 for layout and post setting. Slide Endwood post sleeve over insert paying attention to ensure sides are in alignment with the fence line, and post sleeve and insert are flush at top. Fasten a screw at 2" below grade to secure post to insert and prevent the post sleeve from moving during wet set.
4. If you are using an optional post cap such as a New England style cap, the post must be raised 1.5" higher than noted in the assembling drawing. This adjustment of raising the post 1.5" will require assembly measurements to also be adjusted by 1.5" (see #6).
5. **ATTACH BRACKETS TO POST** - Post sleeves require brackets to attach the rails to the posts using the S.S. screws provided in the bracket kit. Locate brackets per assembly drawing and secure to the posts. Templates may be used to position the brackets quickly onto each post. Jigs may be crafted using pickets and #8 x .75" S.S. screws. Further directions are listed in the accessories and tools section #21 on page 43 (see bracket jig).
6. Using the distance provided (75" - 35.25" - 63") per the assembly drawing from the top of the post, measure and mark the placement of the bottom of each bracket. If using a decorative post cap such as a New England style cap, bracket placement should be lowered by 1.5".
7. It is recommended to use all screws provided in the bracket kit. The 1.5" screws are to attach the brackets to the posts and the .75" screws are for attaching the rails to the brackets.
8. Trim rails as required for specific post setting and make adjustments for grade. Install rails securely into brackets leaving a small .125" gap between the end of the rail and the back of the bracket. Screws are to be placed into the center of the slot within each bracket. Steel reinforced rails should be utilized in the middle rail per assembly drawing.
9. **INSTALL PICKETS** - Prior to attaching pickets, place picket leveler (2" x 6" x 10' wood board across the top of posts) on first, then the angle iron, and clamp to the top rail with quick clamps. This will keep the top rail straight while installing pickets, thereby preventing the installer from pulling and moving the rail during installation. Once pickets are installed, move clamps and angle iron to the next section - repeat.

### TIP



10. Picket spacers may be cut down from pickets using a table saw. A 5" and 4.5" jig will be needed to space pickets. Fastening a small block to one side will allow the jig to hang on the top rail while installing pickets.
11. We recommend nailing the pickets, starting from the top rail moving down towards the bottom rail.
12. \*Begin with the first back row picket, start with picket flush to post. Drive one (1) nail (Use three (3) 4D x 1.5" or 1.75" ring shank nails per picket) through the center of the picket into the **center of each rail**. Continue to install pickets with a spacing of 4.5" between pickets.
13. \*For the front row of pickets, start with a 5" spacing between the first picket and post. Nail picket into place using six (6) 4D x 1.5" or 1.75" ring shank nails through the outer sides of the picket, through the back row of pickets, and into the **center of each rail**. Nails are driven in at an angle and should catch both front and back pickets plus each rail. Continue to install the remaining pickets with a spacing of 4.5" between pickets as shown in the assembly drawing. The nails should not be closer than .5" from the edge of the picket.
14. All pickets are installed on the same side of the fence, generally with the rails on the inside of the fenced area. Once all pickets are installed remove clamps and move to next section - repeat. The last picket may be adjusted for spacing and preferred placement.
15. The last picket installed within each panel may not have a picket on both sides for support. Therefore, it may be supported by cutting a small piece of picket material and fastening to the last picket adjacent to the post.

Fig. F

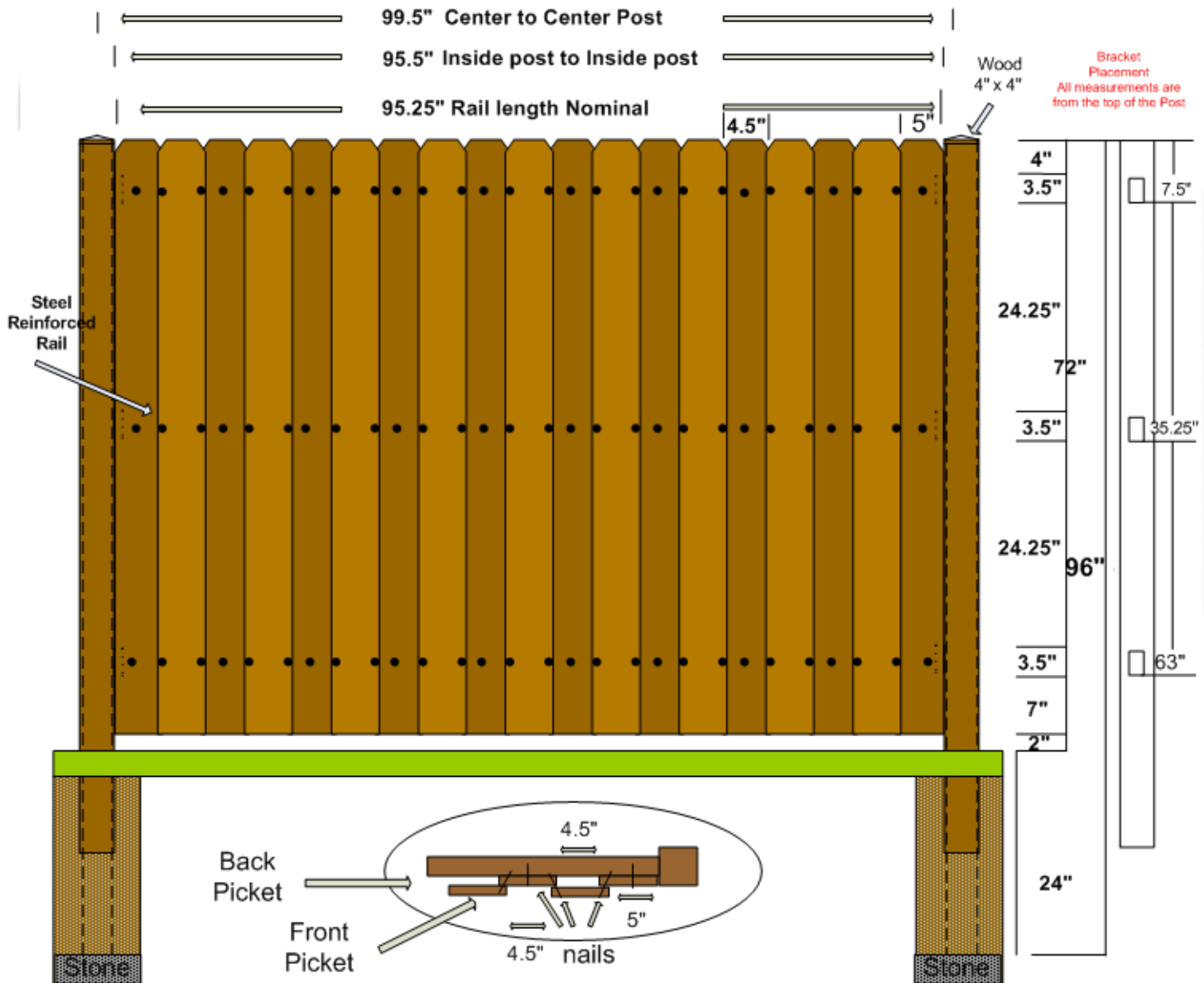


**Note from Storage and Handling section:** Pickets or rails that have been directly exposed to the sun while working may begin to bow. Remember to turn them over and let them set in the sun for a few minutes to straighten prior to installing. For slight bow in picket, install pickets with bow away from midrail as shown in Fig. F.



**Standard 6'H x 8'W Board on Board  
4" x 4" Post Sleeve & Brackets  
Dog Ear or Straight-Edge Pickets  
1.75" x 3.5" Rail**

**SECTION 6A2:  
ASSEMBLING BOARD ON BOARD FENCE PANELS**



Excessive sleeve length may be pushed into the wet set concrete.

If using an optional post cap such as a New England style cap, brackets must be placed 1.5" lower than noted in the assembly drawing.

**Important:**

- Under no circumstance should rail span exceed greater than 30" between rails.
- Top of picket should not exceed greater than 4" from the top of the top rail.
- Bottom of picket should not exceed greater than 7" from the bottom of the bottom rail.

Inside post to inside post spacing 95.5"  
Post hole diameter: 10"  
Post height set above ground: 72"  
Top Rail: Hollow  
Middle Rail: Steel Reinforced  
Lower Rail: Hollow  
Top Rail Spacing: 4" from top of rail to the top of picket  
Bottom Rail Spacing: 7" from bottom of rail to the bottom of picket  
\*Picket Spacing: Spacing provides 4.5" gaps except for the first picket in the front row which uses a 5" spacing

## Standard 6'H x 8'W California 4" x 4" Post Sleeve & Brackets Straight-Edge Pickets 1.75" x 3.5" Rail

- The following notes are applicable to the fence style as described above. This fence installation is a field built PVC post sleeve over a wood 4" x 4" post.
- POST SPACING** - Create a jig for post spacing by cutting an Endwood rail to 95.375" and placing a .0625" bracket on each end which will total the inside to inside post dimension of 95.5". Brackets may be secured to the posts - then use the cut rail as a jig to set post inside to post inside spacing. This span is recommended to maintain a consistent spacing between pickets, following the assembly drawings, and preventing the need to rip pickets.
- Follow general guidelines covered in sections #2 & #3 for layout and post setting. Slide Endwood post sleeve over insert paying attention to ensure sides are in alignment with the fence line, and post sleeve and insert are flush at top. Fasten a screw at 2" below grade to secure post sleeve to insert thereby preventing the post sleeve from moving during wet set.
- If you are using an optional post cap such as a New England style cap, the post must be raised 1.5" higher than noted in the assembling drawing. This adjustment of raising the post 1.5" will require assembly measurements to also be adjusted by 1.5" (see #6).
- ATTACH BRACKETS TO POST** - Post sleeves require brackets to attach the rails to the posts using the S.S. screws provided in the bracket kit. Locate brackets per assembly drawing and secure to the posts. Templates may be used to position the brackets quickly onto each post. Jigs may be crafted using pickets and #8 x .75" S.S. screws. Further directions are listed in the accessories and tools section #21 on page 43 (see bracket jig).
- Using the distance provided (3.5" - 36.75" - 70") per the assembly drawing from the top of the post, measure and mark the placement of the bottom of each bracket. If using a decorative post cap such as a New England style cap, bracket placement should be lowered by 1.5".
- It is recommended to use all screws provided in the bracket kit. The 1.5" screws are to attach the brackets to the posts and the .75" screws are for attaching the rails to the brackets.
- Trim rails as required for specific post setting and make adjustments for grade. Install rails securely into brackets leaving a small .125" gap between the end of the rail and the back of the bracket. Screws are to be placed into the center of the slot within each bracket. Steel reinforced rails should be utilized in the middle rail per assembly drawing.
- INSTALL PICKETS** - Prior to attaching pickets, place 2.5" x 2.5" angle iron, and clamp to the top rail with quick clamps. This will keep the top rail straight and offer a picket guide while installing pickets, thereby preventing the installer from pulling and moving the rail during installation. Once pickets are installed, move clamps and angle iron to the next section - repeat.
- We recommend nailing the pickets, starting from the top rail moving down towards the bottom rail. Place two (2) nails into the **center of each rail** as indicated in the assembly drawing. Use six (6) 4D x 1.5" or 1.75" ring shank nails per picket.
- Use spacers to locate pickets properly thereby reducing the requirement to rip pickets. Picket spacing jigs are available with a .093" thick spacing. Assembly drawings assume a spacing of .093" between pickets. "Double

**TIP**

## SECTION 7A1: ASSEMBLING CALIFORNIA FENCE PANELS

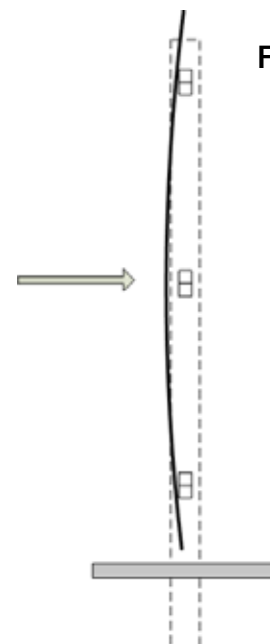


space the first picket adjacent to the post for spacing of .186".

- Keep the spacer tight, plum and straight between the nailed picket and the adjacent pickets, remove spacer and repeat for each picket until all 17 pickets are installed. Once all pickets are installed remove clamps and move to next section - repeat.
- All pickets are installed onto the same side of the fence, generally with the rails on the inside of the fenced area.
- FENCE TOP CAP** - When 16 ft. of fence is installed (two fence panels), cut the deck board ends at 45 degrees so the boards will overlap each other. Place the deck boards on top of fence panel. The top steel reinforced rail will need to be pre-drilled, then secure the top board and screw down, fastening at every 16". Overlap joints should not be placed over the posts.
- Once pickets and top cap are installed, take (1) 96" picket and cut down the center to create the trim. Place each half of picket on the front of fence section flush to top and bottom. We recommend placing top section with cut edge facing up, and on bottom section, placing cut edge facing down. You can now nail the trim at the top and bottom using the same 4D x 1.5" or 1.75" ring shank nails.
- The assembly drawing reflects a maximum of 72" top above the ground, which leaves a 1" space below the fence. This may be adjusted per local code fence height regulations.

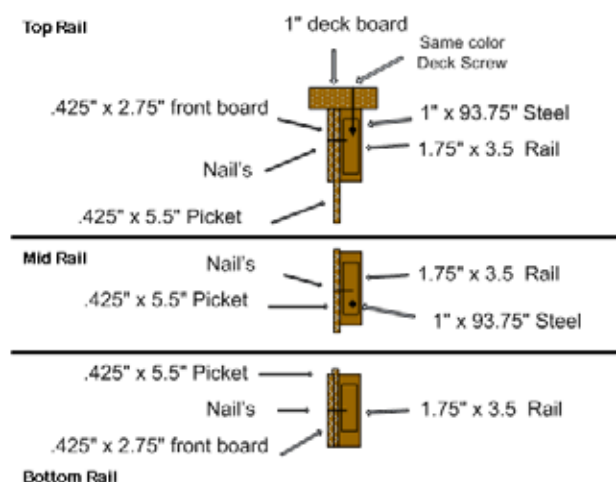
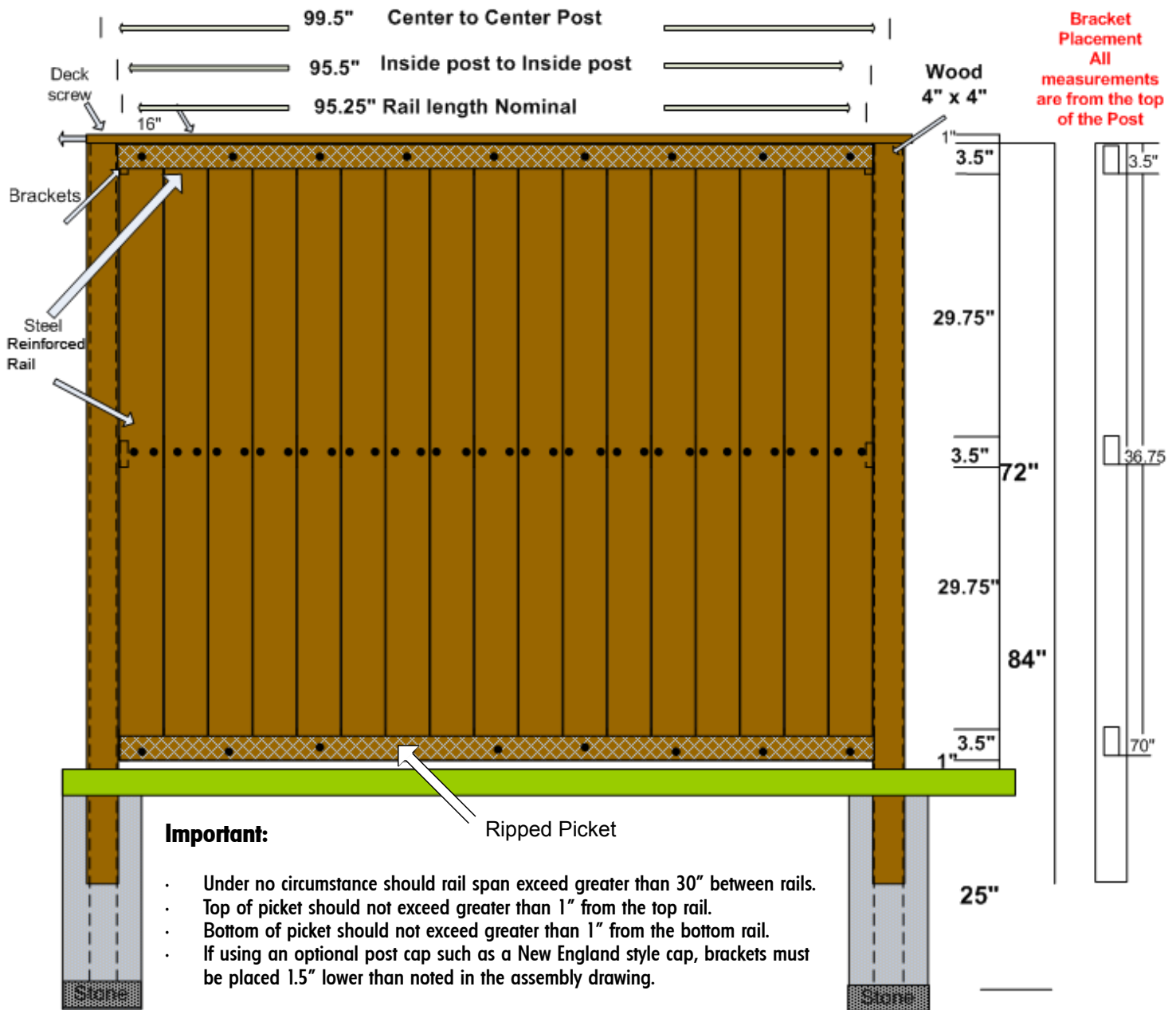
**Note** from Storage and Handling section: Pickets or rails that have been directly exposed to the sun while working may begin to bow. Remember to turn them over and let them set in the sun for a few minutes to straighten prior to installing. For slight bow in picket, install pickets with bow away from midrail as shown in Fig. G.

**Fig. G**



# Standard 6'H x 8'W California 4" x 4" Post Sleeve & Brackets Straight-Edge Pickets 1.75" x 3.5" Rail

## SECTION 7A2: ASSEMBLING CALIFORNIA FENCE PANELS



Excessive sleeve length may be pushed into the wet set concrete.

Inside post to inside post spacing 95.5"  
Post hole diameter: 10"  
Post height set above ground: 72"  
Top Rail: Steel Reinforced  
Middle Rail: Steel Reinforced  
Lower Rail: Hollow  
Top Rail Spacing: 1" from top of picket  
Bottom Rail Spacing: 1" from Bottom of picket  
\*Picket Spacing: Minimum spacing provides .093" gaps.  
For first picket, use a double space, .186"

## Standard 6'H x 8'W Privacy & Lattice 4" x 4" Post Sleeve & Brackets Straight-Edge Pickets 1.75" x 3.5" Rail

- The following notes are applicable to the fence style as described above. This fence installation is a field built PVC post sleeve over a wood 4" x 4" post. Post sleeves must be routed for use in lattice fence styles.  
**Post Sleeves routed for lattice are provided as a special order item only.**
- POST SPACING** - Create a jig for post spacing by cutting an Endwood rail to 89.875" and placing a .0625" bracket on each end which will total the inside to inside post dimension of 90". Brackets may be secured to the posts - then use the cut rail as a jig to set post inside to post inside spacing. This span is recommended to maintain a consistent spacing between pickets, following the assembly drawings, and preventing the need to rip pickets.
- Follow general guidelines covered in section #2 & #3 for layout and post setting. Slide Endwood post sleeve over insert paying attention to ensure sides are in alignment with the fence line. Post insert should be inserted up to the bottom of the routed slot for lattice - approximately 20" from the top of the post and be at 64.5" above grade with 24" to 36" in the ground. Post insert must not rise above bottom of slotted section of post to ensure lattice may be inserted without obstruction. Fasten a screw at 2" below grade to secure post sleeve to insert thereby preventing the post sleeve from moving during wet set.
- If you are using an optional post cap such as a New England style cap, the post must be raised 1.5" higher than noted in the assembling drawing. This adjustment of raising the post 1.5" will require assembly measurements to also be adjusted by 1.5" (see #6).
- ATTACH BRACKETS TO POST** - Post sleeves require brackets to attach the rails to the posts using S.S. screws provided in the bracket kit. Locate brackets per assembly drawing and secure to the posts. Templates may be used to position the brackets quickly onto each post. If you are a contractor and want to make a jig using pickets and # 8 x .75" S.S. screws, further directions can be reviewed by checking out our accessories and tools section #21 on page 43 (see bracket jig).
- Using the distance provided (4.5" - 21.5" - 42.75" - 64") per the assembly drawing from the top of the post, measure and mark the placement of the bottom of each bracket. If using a decorative post cap such as a New England style cap, bracket placement should be lowered by 1.5".
- It is recommended to use all screws provided in the bracket kit. The 1.5" screws are to attach the brackets to the posts and the .75" screws are for attaching the rails to the brackets.
- Trim rails as required for specific post setting and make adjustments for grade. Install rails securely into brackets leaving a small .125" gap between the end of the rail and the back of the bracket. Screws are to be placed into the center of the slot within each bracket. Steel reinforced rails should be utilized in the middle rail per assembly drawing.
- INSTALL PICKETS** - Prior to attaching pickets, place a 2.5" x 2.5" angle iron, and clamp to the top rail with quick clamps. This will keep the top rail straight and offer a picket guide while installing pickets, thereby preventing the installer from pulling and moving the rail during installation. Once pickets are installed, move clamps and angle iron to the next section - repeat.

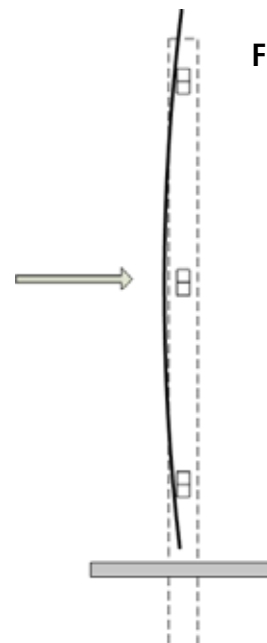
### TIP

## SECTION 8A1: ASSEMBLING PRIVACY & LATTICE FENCE PANELS



- We recommend nailing the pickets, starting from the top rail moving down towards the bottom rail. When nailing the top of the pickets into the the upper mid rail, place nails into the bottom half of the rail to allow sufficient space for the lattice to be placed into the rail. Place two (2) nails per into the center of rail as indicated in the assembly drawing. Use six (6) 4D x 1.5" or 1.75" ring shank nails per picket.
- Use spacers to locate pickets properly thereby reducing the requirement to rip pickets. Picket spacing jigs are available with a .093" thick spacing. Assembly drawings assume a spacing of .093" between pickets. \*Double space the first picket adjacent to the post for spacing of .186".
- Keep the spacer tight, plum and straight between the nailed picket and the adjacent pickets, remove spacer and repeat for each picket until all 16 pickets are installed. Once all pickets are installed remove clamps and move to next section - repeat.
- All pickets are installed on the same side of the fence, generally with the rails on the inside of the fenced area.
- INSTALL LATTICE** - There is a 13.5" x .25" rip in the center side of the post for the lattice to slide into (see Fig. A). The lattice must be modified by hand notching, using aviation or similar snips, a 1.25" x 1.25" notch at each corner to fit past brackets and into the posts (see Fig. B). The bottom of the lattice must rest on top of the upper middle rail spine (see Fig. C).
- Once the lattice is placed into the upper middle rail and the top rail is placed over the lattice - a 4" x 4" x 3.5" wooden block must be inserted into the top of the post which will anchor the screws used in the top brackets (see Fig. C).
- After the lattice and top rail are in place, the final finishing L-channel trim is placed onto the top of the pickets and fastened into place against the lattice using 5 - # 8 squire drive SS 2" pan head self-cutting screws.

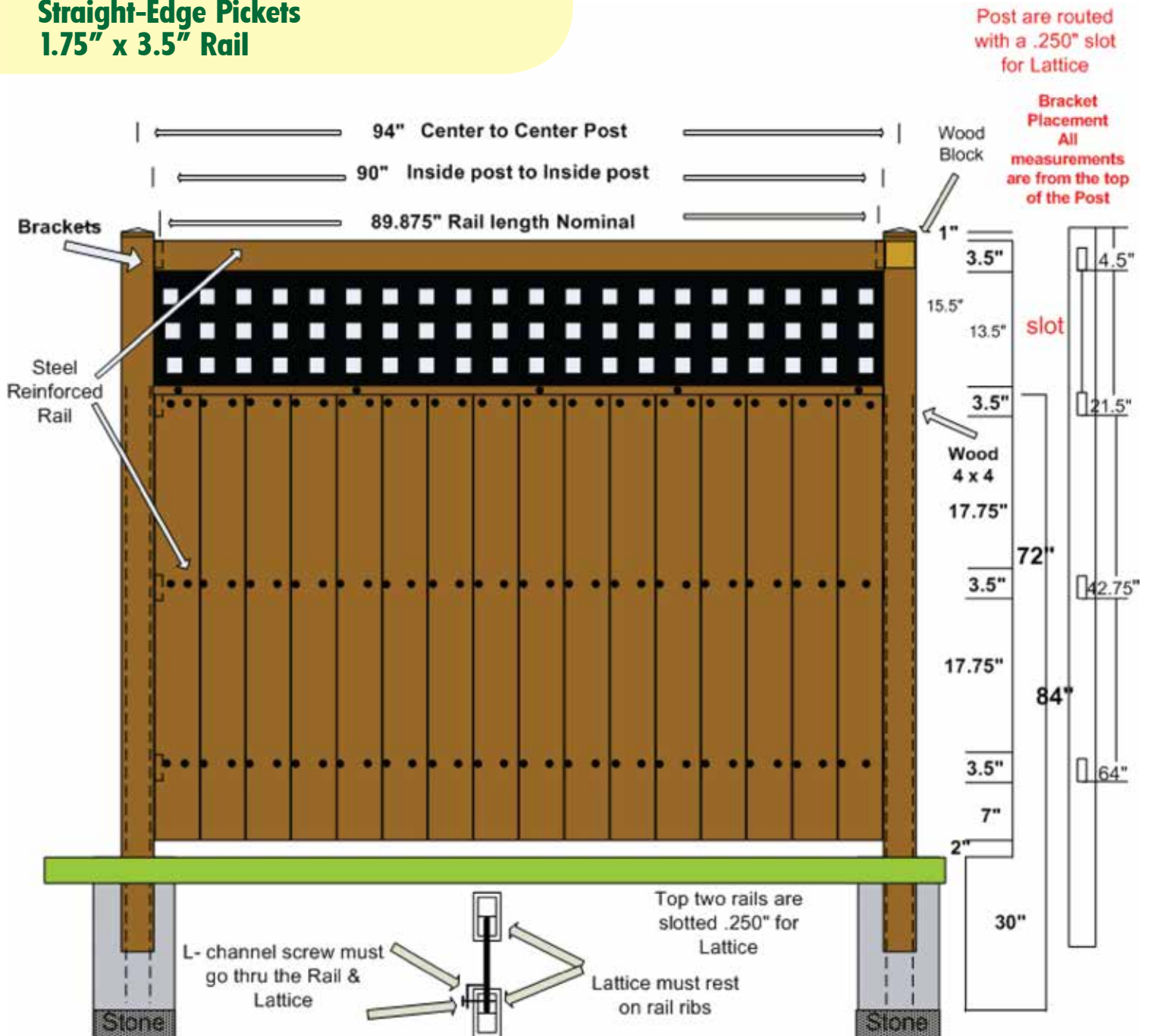
Fig. H



**Note** from Storage and Handling section: Pickets or rails that have been directly exposed to the sun while working may begin to bow. Remember to turn them over and let them set in the sun for a few minutes to straighten prior to installing. For slight bow in picket, install pickets with bow away from midrail as shown in Fig. H.

**Standard 6'H x 8'W Privacy & Lattice  
4" x 4" Post Sleeve & Brackets  
Straight-Edge Pickets  
1.75" x 3.5" Rail**

**SECTION 8A2:  
ASSEMBLING PRIVACY & LATTICE FENCE PANELS**



Excessive sleeve length may be pushed into the wet set concrete.

If using an optional post cap such as a New England style cap, brackets must be placed 1.5" lower than noted in the assembly drawing.

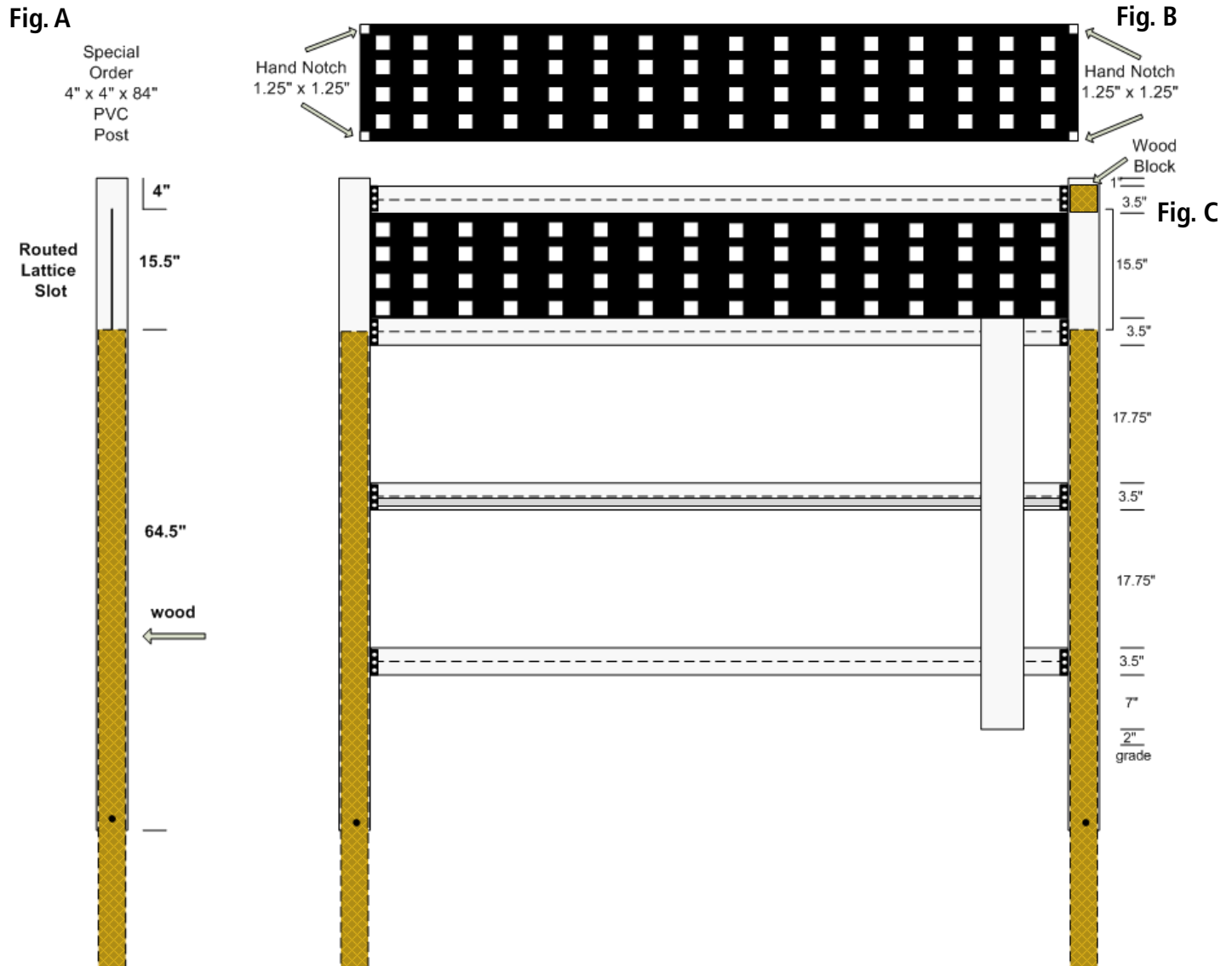
**Important:**

- Under no circumstance should rail span exceed greater than 30" between rails.
- Bottom of picket should not exceed greater than 7" from the bottom the bottom rail.

Inside post to inside post spacing 90"  
Post hole diameter: 10"  
Post height set above ground: 72"  
Top Rail: Steel Reinforced  
Upper Middle Rail: Hollow  
Lower Middle Rail: Steel Reinforced  
Lower Rail: Hollow  
Top Rail Spacing: 1" from top of post  
Bottom Rail Spacing: 7" from bottom of rail to the bottom of picket  
\*Picket Spacing: Minimum spacing provides .093" gaps. For first picket, use a double space, .186"

## SECTION 8A2: ASSEMBLING PRIVACY & LATTICE FENCE PANELS

## ADDITIONAL DETAILS REGARDING LATTICE INSTALLATION





## Standard 6'H x 8'W Privacy Fence 5" x 5" Routed Posts Dog Ear or Straight-Edge Pickets 1.75" x 3.5" Rail

- The following notes are applicable to the fence style as described above. This fence installation is a field built PVC 5" x 5" routed post system where the rails slide into the posts through the routed holes. Routing position is based upon style and height of fence.
- Follow general guidelines covered in section #2 for layout.
- POST SPACING** - We recommend using two (2) Endwood rails cut to (93") which may be utilized as jigs for post inside to post inside spacing. Measuring in from each end by 1.5", cut a .1875" wide slot half-way through the rail (See Fig. J). To double check for accuracy, the measurement from inside the cut to inside the cut should be 90" which equals inside post to inside post spacing. Insert jigs into top routed hole(s) and bottom hole(s) to maintain a consistent spacing between pickets per assembly drawings. This will help prevent the need to rip pickets. Once posts have been set, move jigs to the next section, and repeat.
- The 5" x 5" posts are 108" long. 72" will be above grade and 36" below grade (Do NOT cut the bottom of the posts). 5" x 5" posts will require 4 pre-routed holes (6" and 9" from bottom - See Fig. I) to allow for wet set concrete to flow for the purpose of anchoring the posts into the ground. See assembly drawing for details. Stone is required in the bottom of the post hole to drain off any water running down the post. A 48" Z-shape metal insert is recommended in every third post to add stiffness to the entire fence line. The wet set concrete will also help hold the metal insert in securely.
- If you are using an optional post cap such as a New England style cap, custom posts are required with routed holes 1.5" lower than noted in the assembling drawing.
- INSERT RAILS INTO POSTS** - Secure the top rail inside the 5" x 5" posts using rail ties, a metal or vinyl plate inserted into the top of a post, attached to the ends of both top rails, securing rails in place, additional details are shown in section 21, page 44. Measure the middle and bottom rails a minimum 1.5" in from outer edges and mark as indicated in Fig. K.
- Install rails securely into routed holes to the mark. Steel reinforced rails should be utilized in the middle rail per assembly drawing.
- Trim rails as required for specific post setting and make adjustments for grade if needed.
- INSTALL PICKETS** - Prior to attaching pickets, place picket leveler (2" x 6" x 10' wood board across the top of posts) on first, then the angle iron, and clamp to the top rail with quick clamps. This will keep the top rail straight while installing pickets, thereby preventing the installer from pulling and moving the rail during installation. Once pickets are installed, move clamps and angle iron to the next section - repeat.

**TIP**

- We recommend nailing the pickets, starting from the top rail moving down towards the bottom rail. Place two (2) nails **into the center of each rail** as indicated in the assembly drawing. Use six (6) 4D x 1.5" or 1.75" ring shank nails per picket.
- \*Use spacers to locate pickets properly thereby reducing the requirement to rip pickets. Picket spacing jigs are available with a .093" thick spacing. Assembly drawings assume a spacing of .093" between pickets. Double space the first picket adjacent to the post for spacing of .186".
- Keep the spacer tight, plum and straight between the nailed picket and the adjacent pickets, remove spacer and repeat for each picket until all 16 pickets are installed.
- The color matching nails are normally driven with a pneumatic nail gun with 65 to 80 psi air pressure at the gun or nails can be driven by hand (for air guns see tool list for model #).
- All pickets are installed on the same side of the fence, generally with the rails on the inside of the fenced area.



Fig. I

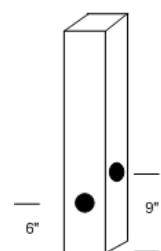


Fig. J

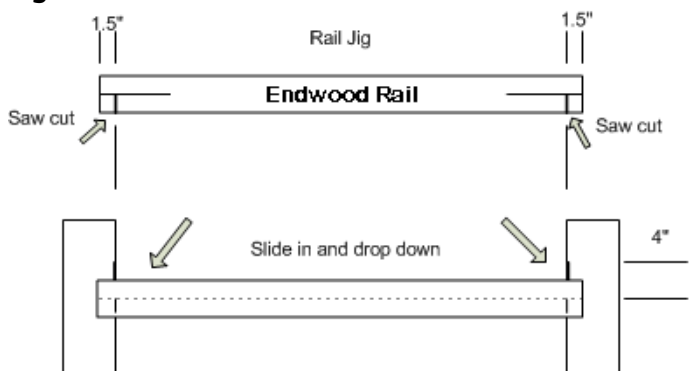
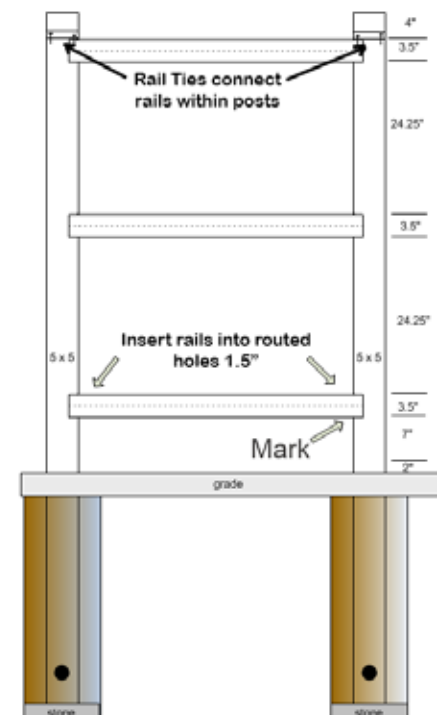
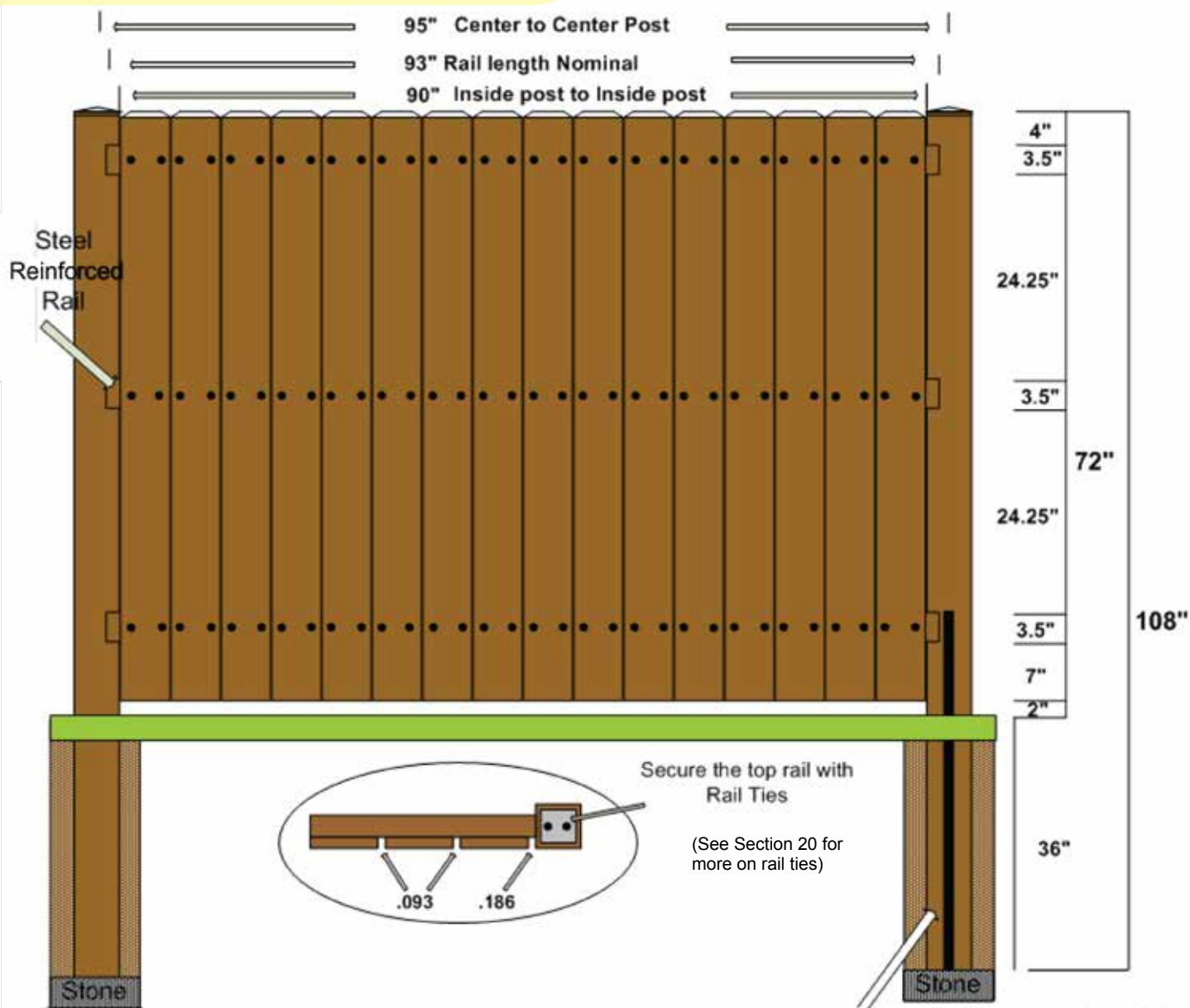


Fig. K



**Standard 6'H x 8'W Privacy Fence**  
**5" x 5" Routed Posts**  
**Dog Ear or Straight-Edge Pickets**  
**1.75" x 3.5" Rail**

**SECTION 9A2:**  
**ASSEMBLING PRIVACY FENCE PANELS**

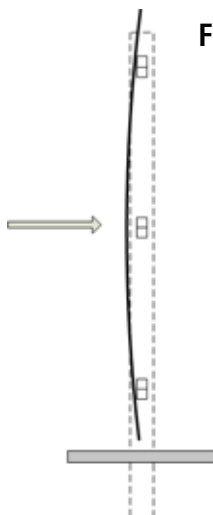


If using an optional post cap such as a New England style cap, custom posts are required with routed holes 1.5" lower than noted in the assembly drawing.

A 4' Z bar galvanized steel insert should be used inside of posts, rebar and concrete can be used up to the bottom of the first rail in every third post for greater stability.

**Fig. L**

**Note** from Storage and Handling section: Pickets or rails that have been directly exposed to the sun while working may begin to bow. Remember to turn them over and let them set in the sun for a few minutes to straighten prior to installing. For slight bow in picket, install pickets with bow away from midrail as shown in Fig. L.



Inside post to inside post spacing: 90"  
 Post hole diameter: 12"  
 Post height set above ground: 72"  
 Top Rail: Hollow  
 Middle Rail: Steel Reinforced  
 Lower Rail: Hollow  
 Top Rail Spacing: 4" from top of rail to the top of picket  
 Bottom Rail Spacing: 7" from bottom of rail to the bottom of picket  
 \*Picket Spacing: Minimum spacing provides .093" gaps. For first picket, use a double space, .186"

## Standard 6'H x 8'W Shadowbox 5" x 5" Routed Posts Dog Ear or Straight-Edge Pickets 1.75" x 3.5" Rail

- The following notes are applicable to the fence style as described above. This fence installation is a field built PVC 5" x 5" routed post system where the rails slide into the posts through the routed holes. Routing position is based upon style and height of fence.
- Follow general guidelines covered in section #2 for layout.
- POST SPACING** - We recommend using two (2) Endwood rails cut to (93.5") which may be utilized as jigs for post inside to post inside spacing. Measuring in from each end by 1.5", cut a .1875" slot half-way through the rail. See Fig. N. To double check for accuracy, the measurement from inside the cut to inside the cut should be 90.5" which equals inside post to inside post spacing. Insert jigs into top routed hole(s) and bottom hole(s) to maintain a consistent spacing between pickets per assembly drawings. This will help prevent the need to rip pickets. Once posts have been set, move jigs to the next section, and repeat.
- The 5" x 5" posts are 108" long. 72" will be above grade and 36" below grade (Do NOT cut the bottom of the posts). 5" x 5" posts will require 4 pre-routed holes (6" and 9" from bottom - See Fig. M) to allow for wet set concrete to flow for the purpose of anchoring the posts into the ground. See assembly drawing for details. Stone is required in the bottom of the post hole to drain off any water running down the post. A 48" Z-shape metal insert is recommended in every third post to add stiffness to the entire fence line. The wet set concrete will also help hold the metal insert in securely.
- If you are using an optional post cap such as a New England style cap, custom posts are required with routed holes 1.5" lower than noted in the assembling drawing.
- INSERT RAILS INTO POSTS** - Secure the top rail inside the 5" x 5" posts using rail ties, a metal or vinyl plate inserted into the top of a post, attached to the ends of both top rails, securing rails in place, additional details are shown in section 21, page 44. Measure the middle and bottom rails a minimum 1.5" in from outer edges and mark as indicated in Fig. O.
- Install rails securely into routed holes to the mark. Steel reinforced rails should be utilized in the middle rail per assembly drawing.
- Trim rails as required for specific post setting and make adjustments for grade if needed.
- INSTALL PICKETS** - Prior to attaching pickets, place picket leveler (2" x 6" x 10' wood board across the top of posts) on first, then the angle iron, and clamp to the top rail with quick clamps. This will keep the top rail straight while installing pickets, thereby preventing the installer from pulling and moving the rail during installation. Once pickets are installed, move clamps and angle iron to the next section - repeat.

**TIP**

## SECTION 10A1: ASSEMBLING SHADOWBOX FENCE PANELS



- Picket spacers may be cut down from pickets using a table saw. A 5" and 4.5" jig will be needed to space pickets. Fastening a small block to one side will allow the jig to hang on the top rail while installing pickets.
- We recommend nailing the pickets, starting from the top rail moving down towards the bottom rail. Place two (2) nails into the center of each rail as indicated in the assembly drawing. Use six (6) 4D x 1.5" or 1.75" ring shank nails per picket.
- \*Behind the first picket on the front side, the back side first picket is spaced 5" from the post. After this, a space of 4.5" is used between the pickets for a total of 18 pickets in this style as illustrated in the assembly drawing.
- Pickets are installed in two layers (front of rail and back of rail) on opposing sides of the fence panel.
- The last picket installed may be adjusted for spacing and preferred placement.

Fig. M

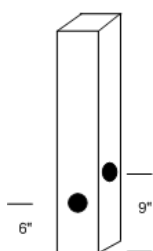


Fig. N

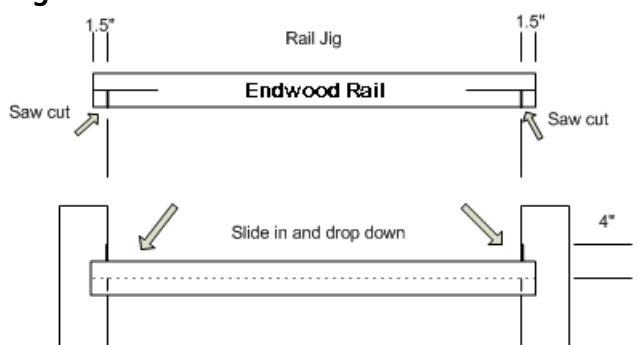
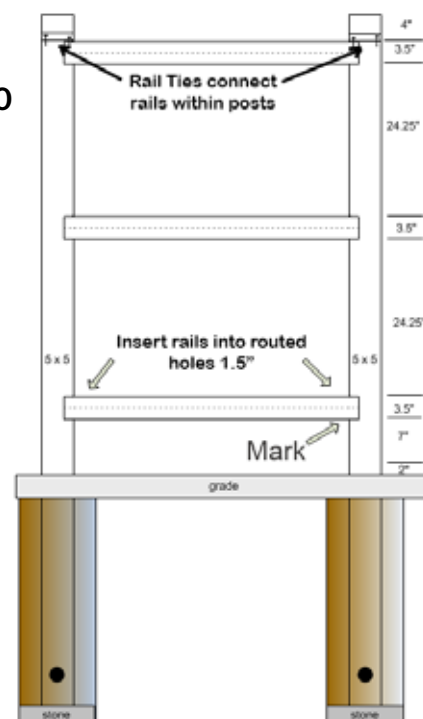
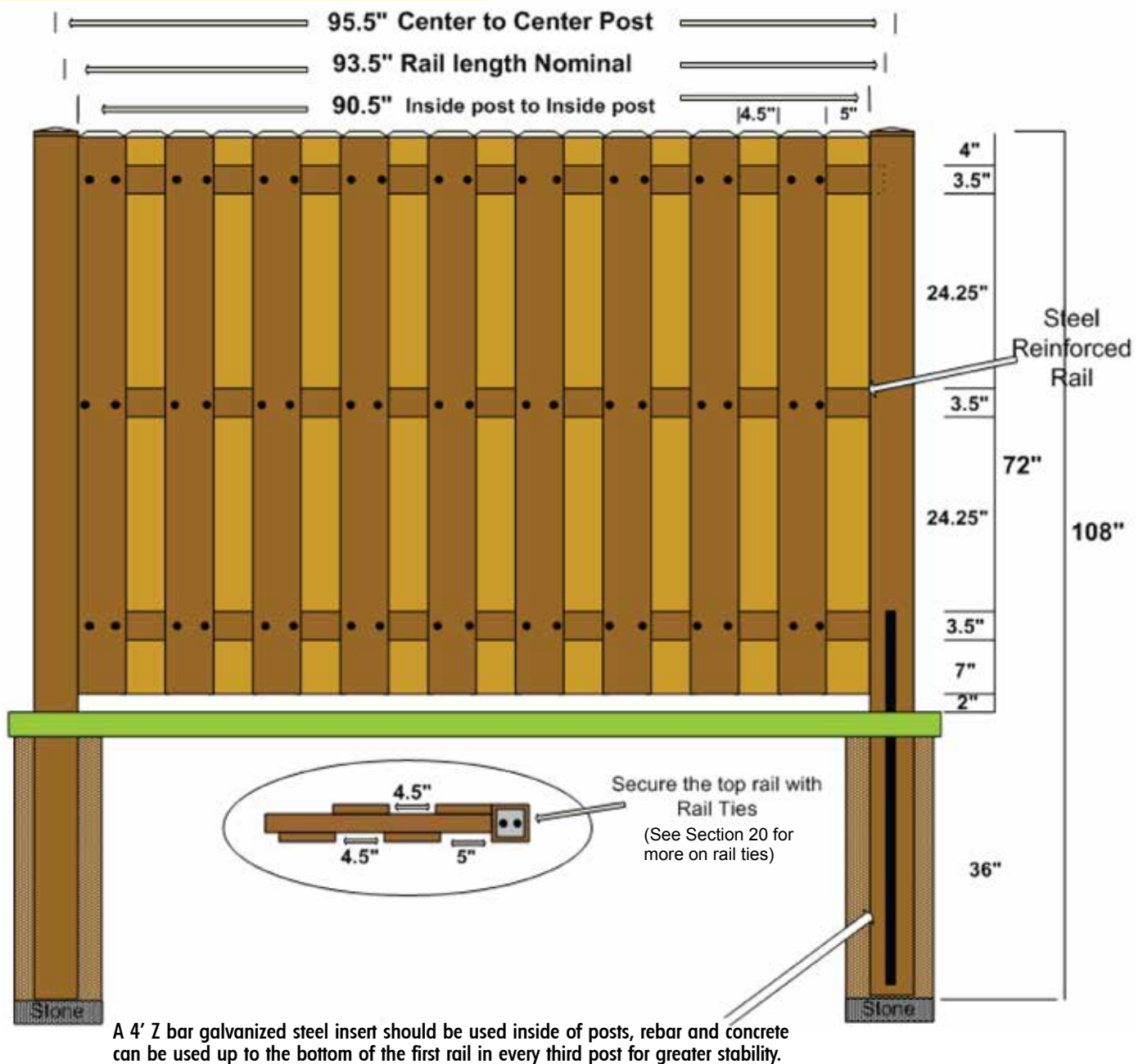


Fig. O



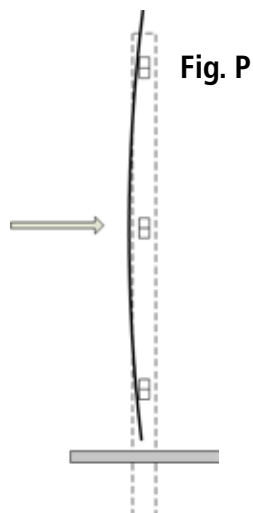
**Standard 6'H x 8'W Shadowbox  
5" x 5" Routed Posts  
Dog Ear or Straight-Edge Pickets  
1.75" x 3.5" Rail**

**SECTION 10A2:  
ASSEMBLING SHADOWBOX FENCE PANELS**



If using an optional post cap such as a New England style cap, custom posts are required with routed holes 1.5" lower than noted in the assembly drawing.

**Note** from Storage and Handling section: Pickets or rails that have been directly exposed to the sun while working may begin to bow. Remember to turn them over and let them set in the sun for a few minutes to straighten prior to installing. For slight bow in picket, install pickets with bow away from midrail as shown in Fig. P.



Inside post to inside post spacing: 90.5"  
Post hole diameter: 12"  
Post height set above ground: 72"  
Top Rail: Hollow  
Middle Rail: Steel Reinforced  
Lower Rail: Hollow  
Top Rail Spacing: 4" from top of rail to the top of picket  
Bottom Rail Spacing: 7" from bottom of rail to the bottom of picket  
\*Picket Spacing: Spacing provides 4.5" gaps. For first picket, use a 5" spacing on the back side

## Standard 6'H x 8'W Board on Board 5" x 5" Routed Posts Dog Ear or Straight-Edge Pickets 1.75" x 3.5" Rail

- The following notes are applicable to the fence style as described above. This fence installation is a field built PVC 5" x 5" routed post system where the rails slide into the posts through the routed holes. Routing position is based upon style and height of fence.
- Follow general guidelines covered in section #2 for layout.
- POST SPACING** - We recommend using two (2) Endwood rails cut to (93.5") which may be utilized as jigs for post inside to post inside spacing. Measuring in from each end by 1.5", cut a .1875" wide slot half-way through the rail. See Fig. R. To double check for accuracy, the measurement from inside the cut to inside the cut should be 90.5" which equals inside post to inside post spacing. Insert jigs into top routed hole(s) and bottom hole(s) to maintain a consistent spacing between pickets per assembly drawings. This will help prevent the need to rip pickets. Once posts have been set, move jigs to the next section, and repeat.
- The 5" x 5" posts are 108" long. 72" will be above grade and 36" below grade (Do NOT cut the bottom of the posts). 5" x 5" posts will require 4 pre-routed holes (6" and 9" from bottom - See Fig.Q) to allow for wet set concrete to flow for the purpose of anchoring the posts into the ground. See assembly drawing for details. Stone is required in the bottom of the post hole to drain off any water running down the post. A 48" Z-shape metal insert is recommended in every third post to add stiffness to the entire fence line. The wet set concrete will also help hold the metal insert in securely.
- If you are using an optional post cap such as a New England style cap, custom posts are required with routed holes 1.5" lower than noted in the assembling drawing.
- INSERT RAILS INTO POSTS** - Secure the top rail inside the 5" x 5" posts using rail ties, a metal or vinyl plate inserted into the top of a post, attached to the ends of both top rails, securing rails in place, additional details are shown in section 21, page 44. Measure the middle and bottom rails a minimum 1.5" in from outer edges and mark as indicated in Fig. S.
- Install rails securely into routed holes to the mark. Steel reinforced rails should be utilized in the middle rail per assembly drawing.
- Trim rails as required for specific post setting and make adjustments for grade if needed.
- INSTALL PICKETS** - Prior to attaching pickets, place picket leveler (2" x 6" x 10' wood board across the top of posts) on first, then the angle iron, and clamp to the top rail with quick clamps. This will keep the top rail straight while installing pickets, thereby preventing the installer from pulling and moving the rail during installation. Once pickets are installed, move clamps and angle iron to the next section - repeat.

**TIP**

## SECTION 11A1: ASSEMBLING BOARD ON BOARD FENCE PANELS



- Picket spacers may be cut down from pickets using a table saw. A 5" and 4.5" jig will be needed to space pickets. Fastening a small block to one side will allow the jig to hang on the top rail while installing pickets.
- We recommend nailing the pickets, starting from the top rail moving down towards the bottom rail:
- \*Begin with the first back row picket, start with picket flush to post. Drive one (1) nail (Use three (3) 4D x 1.5" or 1.75" ring shank nails per picket) through the center of the picket into the center of each rail. Continue to install pickets with a spacing of 4.5" between pickets.
- \*For the front row of pickets, start with a 5" spacing between the first picket and post. Nail picket into place using six (6) 4D x 1.5" or 1.75" ring shank nails through the outer sides of the picket, through the back row of pickets, and into the center of each rail. Nails are driven in at an angle and should catch both front and back pickets plus each rail. Continue to install the remaining pickets with a spacing of 4.5" between pickets as shown in the assembly drawing. The nails should not be closer than .5" from the edge of the picket.
- All pickets are installed on the same side of the fence, generally with the rails on the inside of the fenced area. The last picket installed may be adjusted for spacing and preferred placement.
- The last picket installed within each panel will not have a picket on both sides for support. Therefore, it may be supported by cutting a small piece of picket material and fastening to the last picket adjacent to the post.

Fig. Q

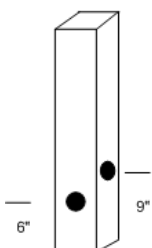


Fig. R

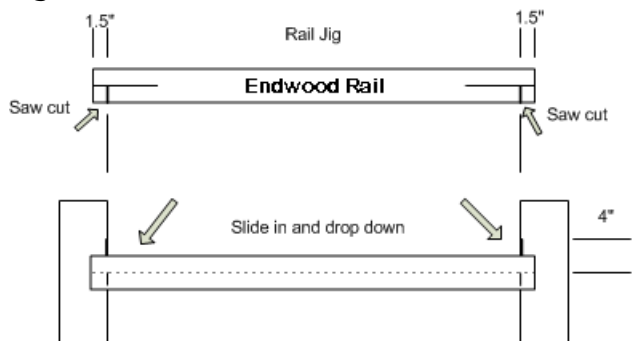
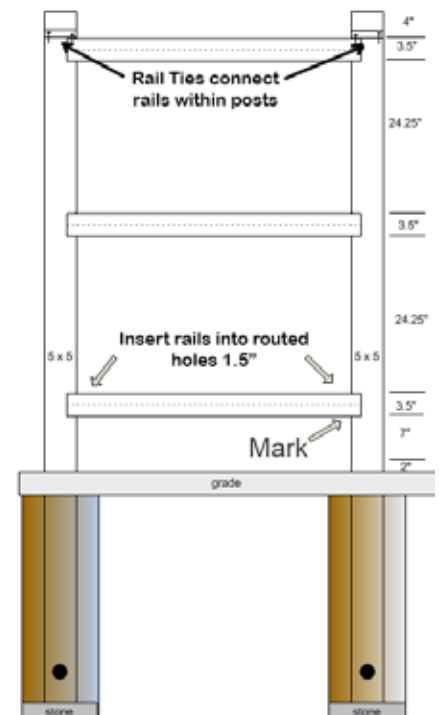


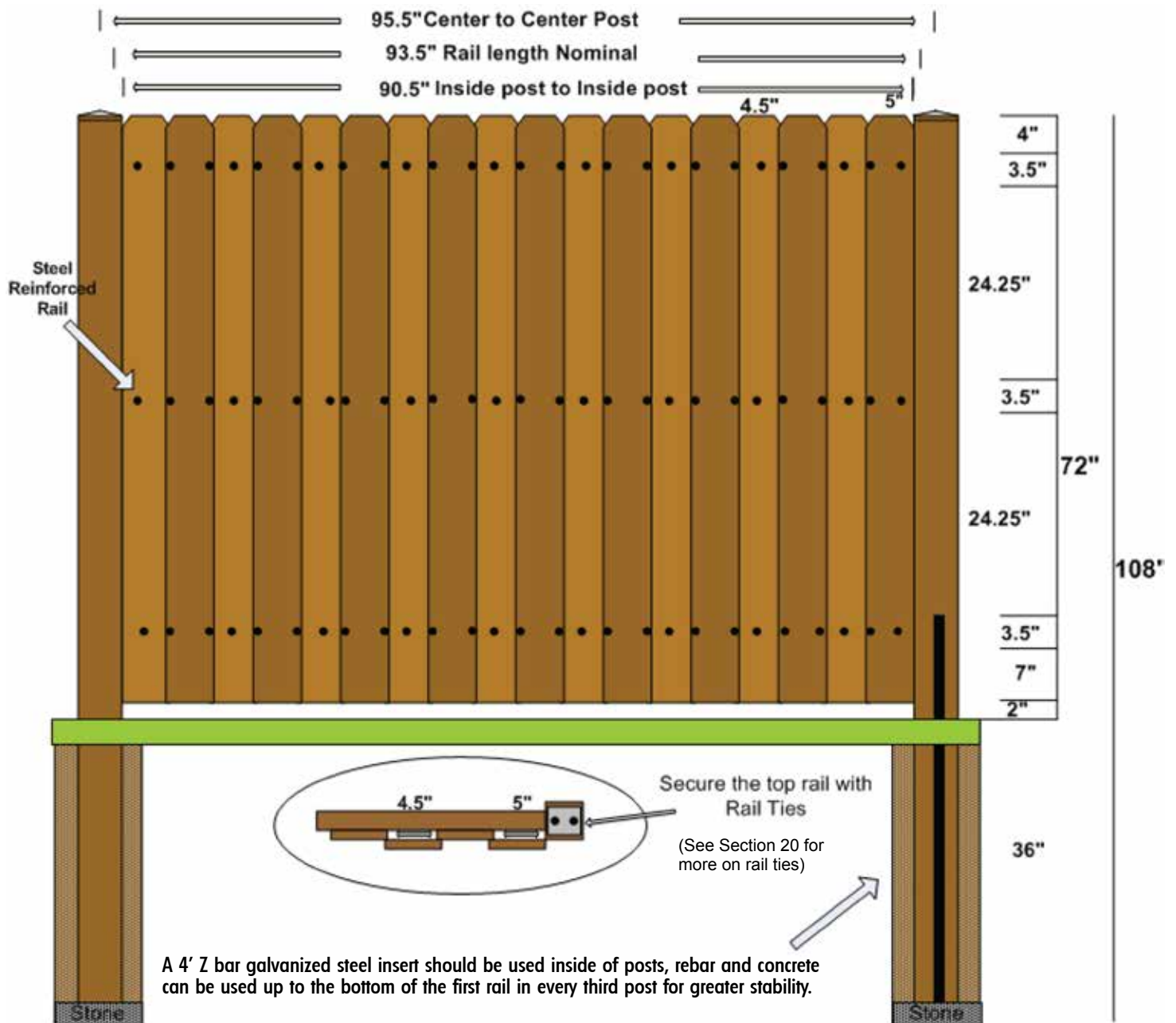
Fig. S





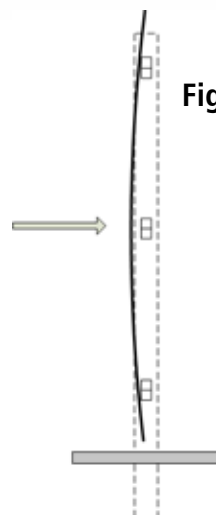
**Standard 6'H x 8'W Board on Board  
5" x 5" Routed Posts  
Dog Ear or Straight-Edge Pickets  
1.75" x 3.5" Rail**

**SECTION 11A2:  
ASSEMBLING BOARD ON BOARD FENCE PANELS**



If using an optional post cap such as a New England style cap, custom posts are required with routed holes 1.5" lower than noted in the assembly drawing.

**Note** from Storage and Handling section: Pickets or rails that have been directly exposed to the sun while working may begin to bow. Remember to turn them over and let them set in the sun for a few minutes to straighten prior to installing. For slight bow in picket, install pickets with bow away from midrail as shown in Fig. T.



**Fig. T**

Inside post to inside post spacing: 90.5"  
Post hole diameter: 12"  
Post height set above ground: 72"  
Top Rail: Hollow  
Middle Rail: Steel Reinforced  
Lower Rail: Hollow  
Top Rail Spacing: 4" from top of rail to the top of picket  
Bottom Rail Spacing: 7" from bottom of rail to the bottom of picket  
\*Picket Spacing: Spacing provides 4.5" gaps except for the first picket in the front row which uses a 5" spacing



## Standard 6'H x 8'W California 5" x 5" Routed Posts Straight-Edge Pickets 1.75" x 3.5" Rail

- The following notes are applicable to the fence style as described above. This fence installation is a field built PVC 5" x 5" routed post system where the rails slide into the posts through the routed holes. Routing position is based upon style and height of fence.
- Follow general guidelines covered in section #2 for layout.
- POST SPACING** - We recommend using two (2) Endwood rails cut to (93") which may be utilized as jigs for post inside to post inside spacing. Measuring in from each end by 1.5", cut a .1875" wide slot half-way through the rail. See Fig. V. To double check for accuracy, the measurement from inside the cut to inside the cut should be 90" which equals inside post to inside post spacing. Insert jigs into top routed hole(s) and bottom hole(s) to maintain a consistent spacing between pickets per assembly drawings. This will help prevent the need to rip pickets. Once posts have been set, move jigs to the next section, and repeat.
- The 5" x 5" posts are 108" long. 72" will be above grade and 36" below grade (Do NOT cut the bottom of the posts). 5" x 5" posts will require 4 pre-routed holes (6" and 9" from bottom - See Fig. U) to allow for wet set concrete to flow for the purpose of anchoring the posts into the ground. See assembly drawing for details. Stone is required in the bottom of the post hole to drain off any water running down the post. A 48" Z-shape metal insert is recommended in every third post to add stiffness to the entire fence line. The wet set concrete will also help hold the metal insert in securely.
- If you are using an optional post cap such as a New England style cap, custom posts are required with routed holes 1.5" lower than noted in the assembling drawing.
- INSERT RAILS INTO POSTS** - Secure the top rail inside the 5" x 5" posts using rail ties, a metal or vinyl plate inserted into the top of a post, attached to the ends of both top rails, securing rails in place, additional details are shown in section 21, page 44. Measure the middle and bottom rails a minimum 1.5" in from outer edges and mark as indicated in Fig. W.
- Install rails securely into routed holes to the mark. Steel reinforced rails should be utilized in the middle and top rail per assembly drawing.
- Trim rails as required for specific post setting and make adjustments for grade if needed.
- INSTALL PICKETS** - Prior to attaching pickets, place a picket leveler (2.5" x 89.5" wood board), then the 2.5" x 2.5" angle iron, and clamp to the top rail with quick clamps. This will keep the top rail straight and offer a picket guide while installing pickets, thereby preventing the installer from pulling and moving the rail during installation. Once pickets are installed, move clamps and angle iron to the next section - repeat.
- We recommend nailing the pickets, starting from the top rail moving down towards the bottom rail. Place two (2) nails into the **center of each rail** as indicated in the assembly drawing. Use six (6) 4D x 1.5" or 1.75" ring shank nails per picket.

**TIP**

## SECTION 12A1: ASSEMBLING CALIFORNIA FENCE PANELS



- \*Use spacers to locate pickets properly thereby reducing the requirement to rip pickets. Picket spacing jigs are available with a .093" thick spacing. Assembly drawings assume a spacing of .093" between pickets.
- Keep the spacer tight, plum and straight between the nailed picket and the adjacent pickets, remove spacer and repeat for each picket until all 16 pickets are installed.
- All pickets are installed onto the same side of the fence, generally with the rails on the inside of the fenced area.
- FENCE TOP CAP** - When 16 ft. of fence is installed (two fence panels), cut the deck board ends at 45 degrees so the boards will overlap each other. Place the deck boards on top of fence panel. The top steel reinforced rail will need to be pre-drilled, then secure the top board and screw down, fastening at every 16".
- Once pickets and top cap are installed, take 1 96" picket and cut down the center to create the trim. Place each half of picket on the front of fence section flush to top and bottom. We recommend placing top section with cut edge facing up, and on bottom section, placing cut edge facing down. You can now nail the trim at the top and bottom using the same 4D x 1.5" or 1.75" ring shank nails. Overlap joints should not be placed over the posts.
- The assembly drawing reflects a maximum of 72" top above the ground, which leaves a 1" space below the fence. This may be adjusted per local code fence height regulations.

Fig. U

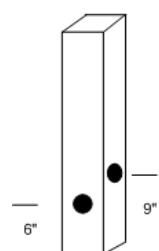


Fig. V

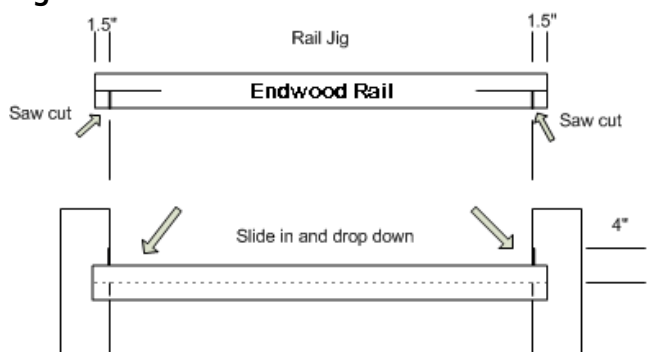
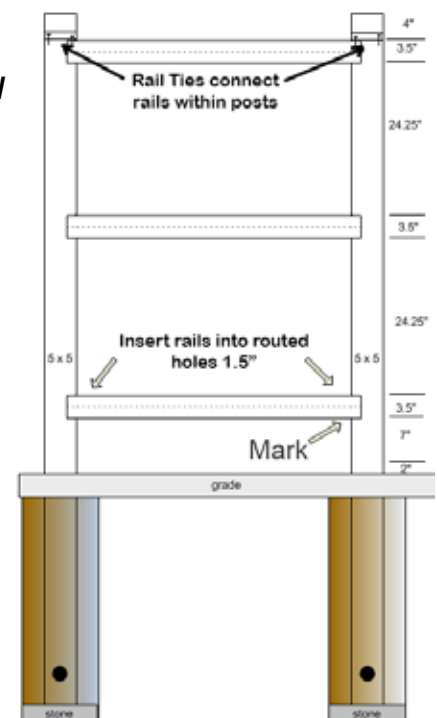
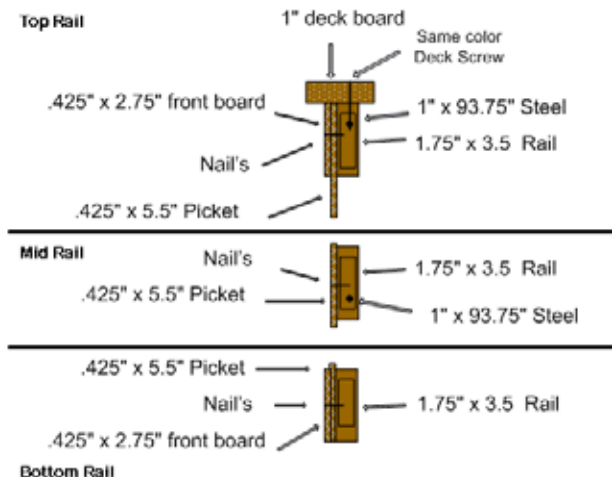
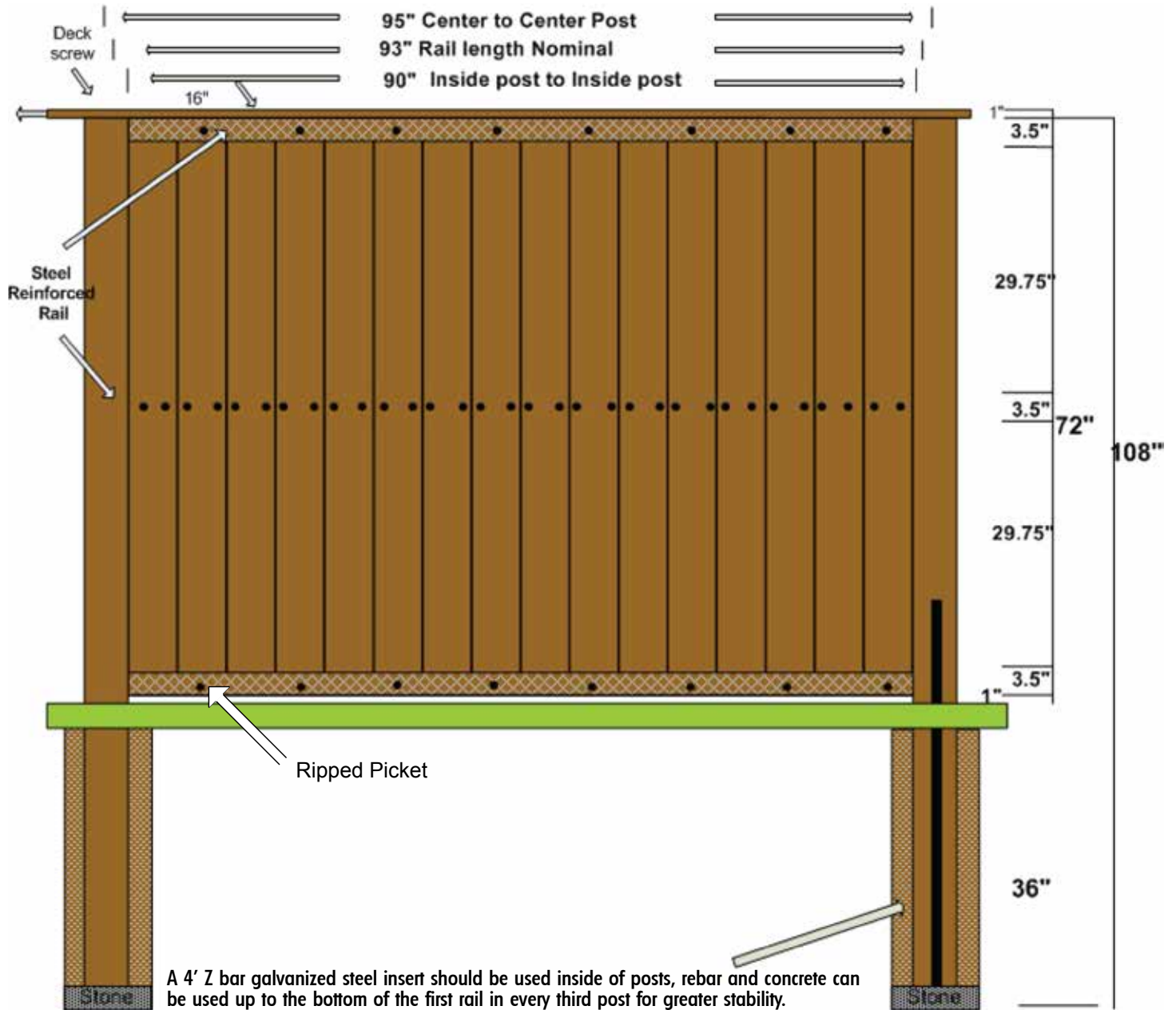


Fig. W



**Standard 6'H x 8'W California  
5" x 5" Routed Posts  
Straight-Edge Pickets  
1.75" x 3.5" Rail**

**SECTION 12A2:  
ASSEMBLING CALIFORNIA FENCE PANELS**



Inside post to inside post spacing: 90"  
Post hole diameter: 12"  
Post height set above ground: 72"  
Top Rail: Steel Reinforced  
Middle Rail: Steel Reinforced  
Lower Rail: Hollow  
Top Rail Spacing: 1" from Top of picket  
Bottom Rail Spacing 1" from Bottom of picket  
Picket Spacing: Minimum spacing provides .093" gaps For first picket, use a double space, .186"

## Standard 6'H x 8'W Privacy & Lattice 5" x 5" Routed Posts Straight-Edge Pickets 1.75" x 3.5" Rail

- The following notes are applicable to the fence style as described above. This fence installation is a field built PVC 5" x 5" routed post system where the rails slide into the posts through the routed holes. Routing position is based upon style and height of fence.
- Follow general guidelines covered in section #2 for layout.
- POST SPACING** - We recommend using two (2) Endwood rails cut to (93.5") which may be utilized as jigs for post inside to post inside spacing. Measuring in from each end by 1.5", cut a .1875" slot half-way through the rail. See Fig. Y. To double check for accuracy, the measurement from inside the cut to inside the cut should be 90" which equals inside post to inside post spacing. Insert jigs into top routed hole(s) and bottom hole(s) to maintain a consistent spacing between pickets per assembly drawings. This will help prevent the need to rip pickets. Once posts have been set, move jigs to the next section, and repeat.
- The 5" x 5" posts are 108" long. 72" will be above grade and 36" below grade (Do NOT cut the bottom of the posts). 5" x 5" posts will require 4 pre-routed holes (6" and 9" from bottom - See Fig. X) to allow for wet set concrete to flow for the purpose of anchoring the posts into the ground. See assembly drawing for details. Stone is required in the bottom of the post hole to drain off any water running down the post. A 48" Z-shape metal insert is recommended in every third post to add stiffness to the entire fence line. The wet set concrete will also help hold the metal insert in securely.
- If you are using an optional post cap such as a New England style cap, custom posts are required with routed holes 1.5" lower than noted in the assembling drawing.
- INSERT RAILS INTO POSTS** - Secure the top rail inside the 5" x 5" posts using rail ties, a metal or vinyl plate inserted into the top of a post, attached to the ends of both top rails, securing rails in place, additional details are shown in section 21, page 44. Measure the middle and bottom rails a minimum 1.5" in from outer edges and mark as indicated in Fig. Z.
- Install rails securely into routed holes to the mark. Steel reinforced rails should be utilized in the lower middle and top rail per assembly drawing.
- Trim rails as required for specific post setting and make adjustments for grade if needed.
- INSTALL PICKETS** - Prior to attaching pickets, place a 2.5" x 2.5" x 89.5" angle iron, and clamp to the top mid rail with quick clamps. This will keep the top rail straight and offer a picket guide while installing pickets, thereby preventing the installer from pulling and moving the rail during installation. Once pickets are installed, move clamps and angle iron to the

**TIP**

## SECTION 13A1: ASSEMBLING PRIVACY & LATTICE FENCE PANELS



next section - repeat.

- We recommend nailing the pickets, starting from the top rail moving down towards the bottom rail. When nailing the top of the pickets into the the upper mid rail, place nails into the bottom half of the rail to allow sufficient space for the lattice to be placed into the rail. Place two (2) nails per into the center of rail as indicated in the assembly drawing. Use six (6) 4D x 1.5" or 1.75" ring shank nails per picket.
- \*Use spacers to locate pickets properly thereby reducing the requirement to rip pickets. Picket spacing jigs are available with a .093" thick spacing. Assembly drawings assume a spacing of .093" between pickets.
- Keep the spacer tight, plum and straight between the nailed picket and the adjacent pickets, remove spacer and repeat for each picket until all 16 pickets are installed. Once all pickets are installed, remove clamps and move to next section - repeat.
- All pickets are installed onto the same side of the fence, generally with the rails on the inside of the fenced area.
- INSTALL LATTICE** - There is a 13.5" x .25" rip in the center side of the post for the lattice to slide into. The bottom of the lattice must rest on top of the upper middle rail spine.
- Once the lattice is placed into the upper middle rail and the top rail is placed over the lattice, the final finishing L-channel trim is placed onto the top of the pickets and fastened into place against the lattice using 5 - # 8 squire drive SS 2" pan head self-cutting screws.

Fig. X

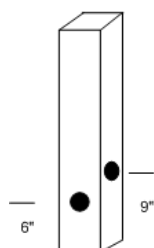


Fig. Y

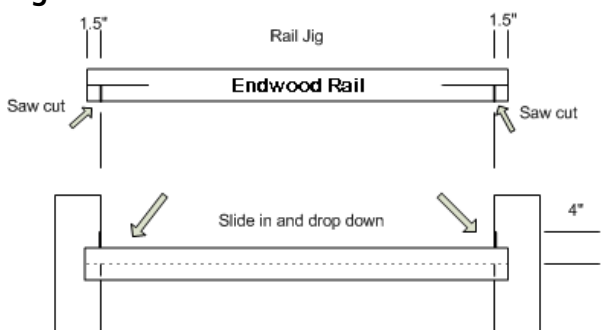
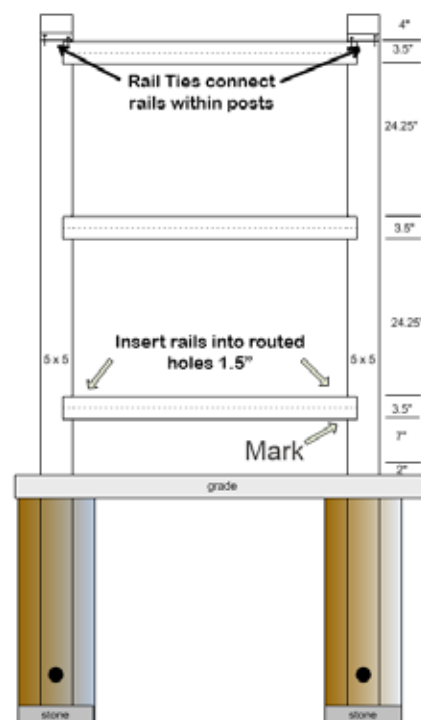
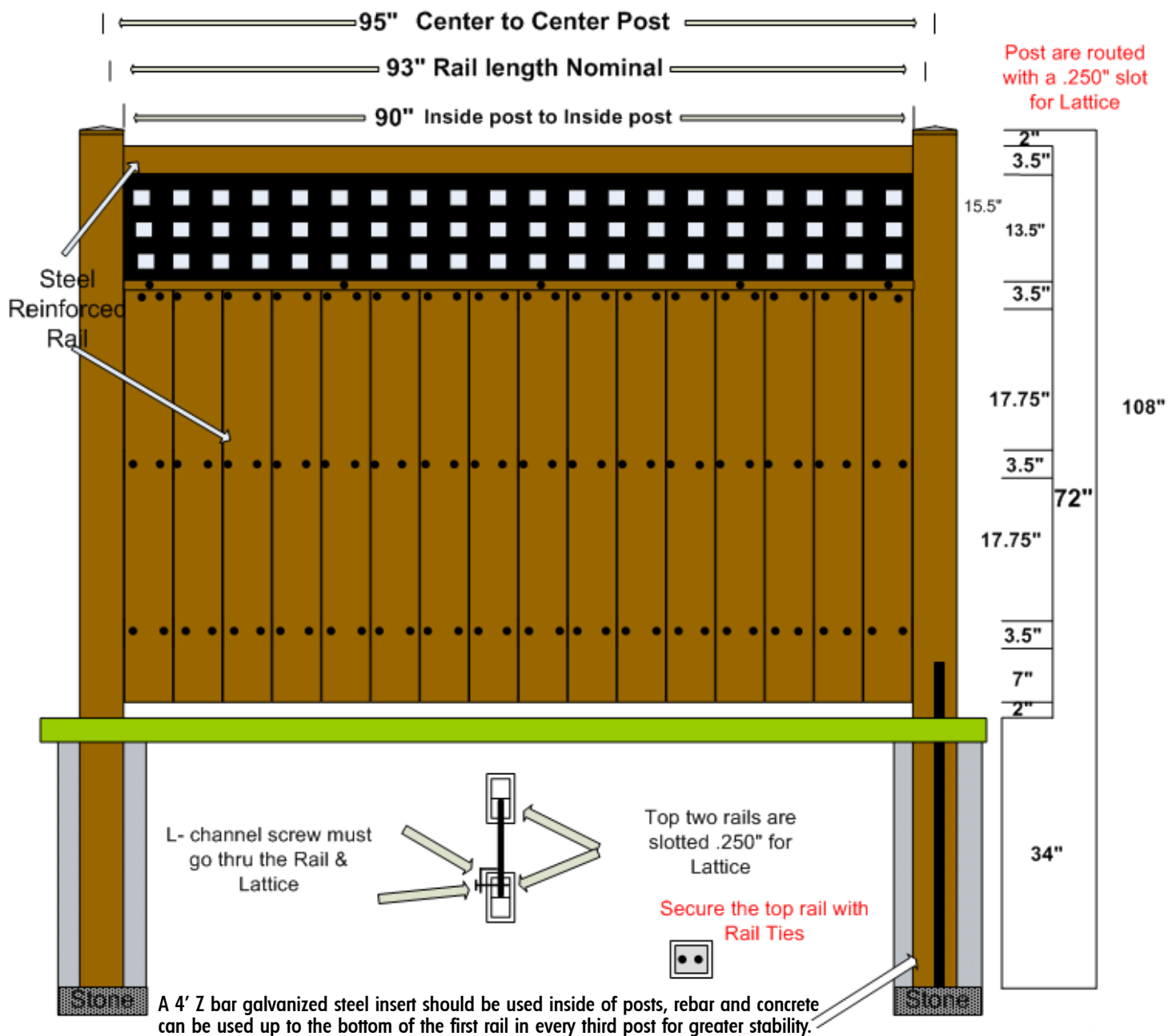


Fig. Z



**Standard 6'H x 8'W Privacy & Lattice**  
**5" x 5" Routed Posts**  
**Straight-Edge Pickets**  
**1.75" x 3.5" Rail**

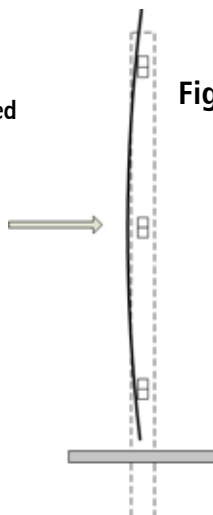
**SECTION 13A2:**  
**ASSEMBLING PRIVACY & LATTICE FENCE PANELS**



If using an optional post cap such as a New England style cap, custom posts are required with routed holes 1.5" lower than noted in the assembly drawing.

**Note** from Storage and Handling section: Pickets or rails that have been directly exposed to the sun while working may begin to bow. Remember to turn them over and let them set in the sun for a few minutes to straighten prior to installing. For slight bow in picket, install pickets with bow away from midrail as shown in Fig. AA.

**Fig. AA**



Inside post to inside post spacing: 90"  
 Post hole diameter: 12"  
 Post height set above ground: 72"  
 Top Rail: Steel Reinforced  
 Upper Middle Rail: Hollow  
 Lower Middle Rail: Steel Reinforced  
 Lower Rail: Hollow  
 Top Rail Spacing: 2" from top of post  
 Bottom Rail Spacing 7" from bottom of picket  
 \*Picket Spacing: Minimum spacing provides .093" gaps. For first picket, use a double space, .186"

# Standard 6'H x 8'W Privacy Fence 5" x 5" Routed Posts Dog Ear or Straight-Edge Pickets 1.625" x 2.75" Rail

## SECTION 14B1: ASSEMBLING PRIVACY FENCE PANELS

1. The following notes are applicable to the fence style as described above. This fence installation is a field built PVC 5" x 5" routed post system where the rails slide into the posts through the routed holes. Routing position is based upon style and height of fence.
2. Follow general guidelines covered in section #2 for layout.
3. **POST SPACING** - We recommend using two (2) Endwood rails cut to (93") which may be utilized as jigs for post inside to post inside spacing. Measuring in from each end by 1.5", cut a .1875" wide slot half-way through the rail. See Fig. AC. To double check for accuracy, the measurement from inside the cut to inside the cut should be 90" which equals inside post to inside post spacing. Insert jigs into top routed hole(s) and bottom hole(s) to maintain a consistent spacing between pickets per assembly drawings. This will help prevent the need to rip pickets. Once posts have been set, move jigs to the next section, and repeat.
4. The 5" x 5" posts are 108" long. 72" will be above grade and 36" below grade (Do NOT cut the bottom of the posts). 5" x 5" posts will require 4 pre-routed holes (6" and 9" from bottom - See Fig. AB) to allow for wet set concrete to flow for the purpose of anchoring the posts into the ground. See assembly drawing for details. Stone is required in the bottom of the post hole to drain off any water running down the post. A 48" Z-shape metal insert is recommended in every third post to add stiffness to the entire fence line. The concrete will also help hold the metal insert in securely.
5. If you are using an optional post cap such as a New England style cap, custom posts are required with routed holes 1.5" lower than noted in the assembling drawing.
6. **INSERT RAILS INTO POSTS** - Secure the top rail inside the 5" x 5" posts using rail ties, a metal or vinyl plate inserted into the top of a post, attached to the ends of both top rails, securing rails in place, additional details are shown in section 21, page 44. Measure the middle and bottom rails a minimum 1.5" in from outer edges and mark as indicated in Fig. AD.
7. Install rails securely into routed holes to the mark. Steel reinforced rails should be utilized in the middle and top rail per assembly drawing.
8. Trim rails as required for specific post setting and make adjustments for grade if needed.
9. **INSTALL PICKETS** - Prior to attaching pickets, place picket leveler (2" x 6" x 10' wood board across the top of posts) on first, then the angle iron, and clamp to the top rail with quick clamps. This will keep the top rail straight while installing pickets, thereby preventing the installer from pulling and moving the rail during installation. Once pickets are installed, move clamps and angle iron to the next section - repeat.

**TIP**



10. We recommend nailing the pickets, starting from the top rail moving down towards the bottom rail. Place two (2) nails per rail, into the center of the rail, as indicated in the assembly drawing. Use six (6) 4D x 1.5" or 1.75" ring shank nails per picket.
11. Use spacers to locate pickets properly thereby reducing the requirement to rip pickets. Picket spacing jigs are available with a .093" thick spacing. Assembly drawings assume a spacing of .093" between pickets. "Double space the first picket adjacent to the post for spacing of .186".
12. Keep the spacer tight, plum and straight between the nailed picket and the adjacent pickets, remove spacer and repeat for each picket until all 16 pickets are installed.
13. The color matching nails are normally driven with a pneumatic nail gun with 65 to 80 psi air pressure at the gun or nails can be driven by hand (for air guns see tool list for model #)
14. All pickets are installed on the same side of the fence, generally with the rails on the inside of the fenced area.

Fig. AB

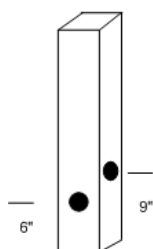


Fig. AC

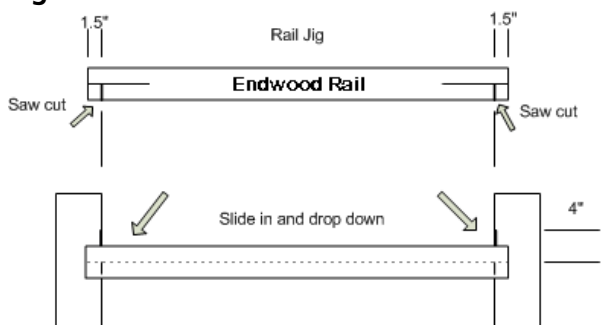
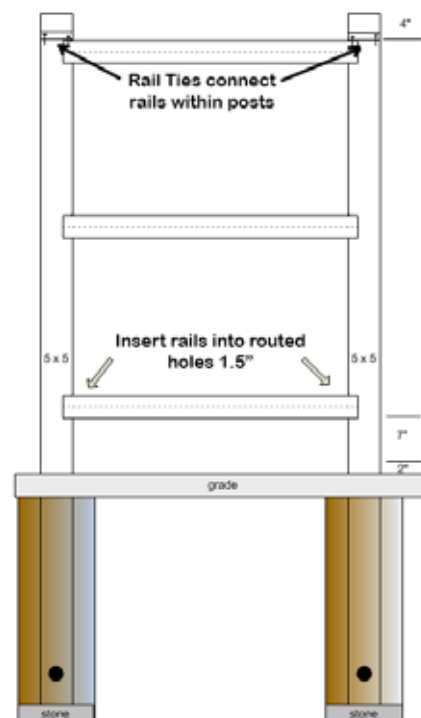


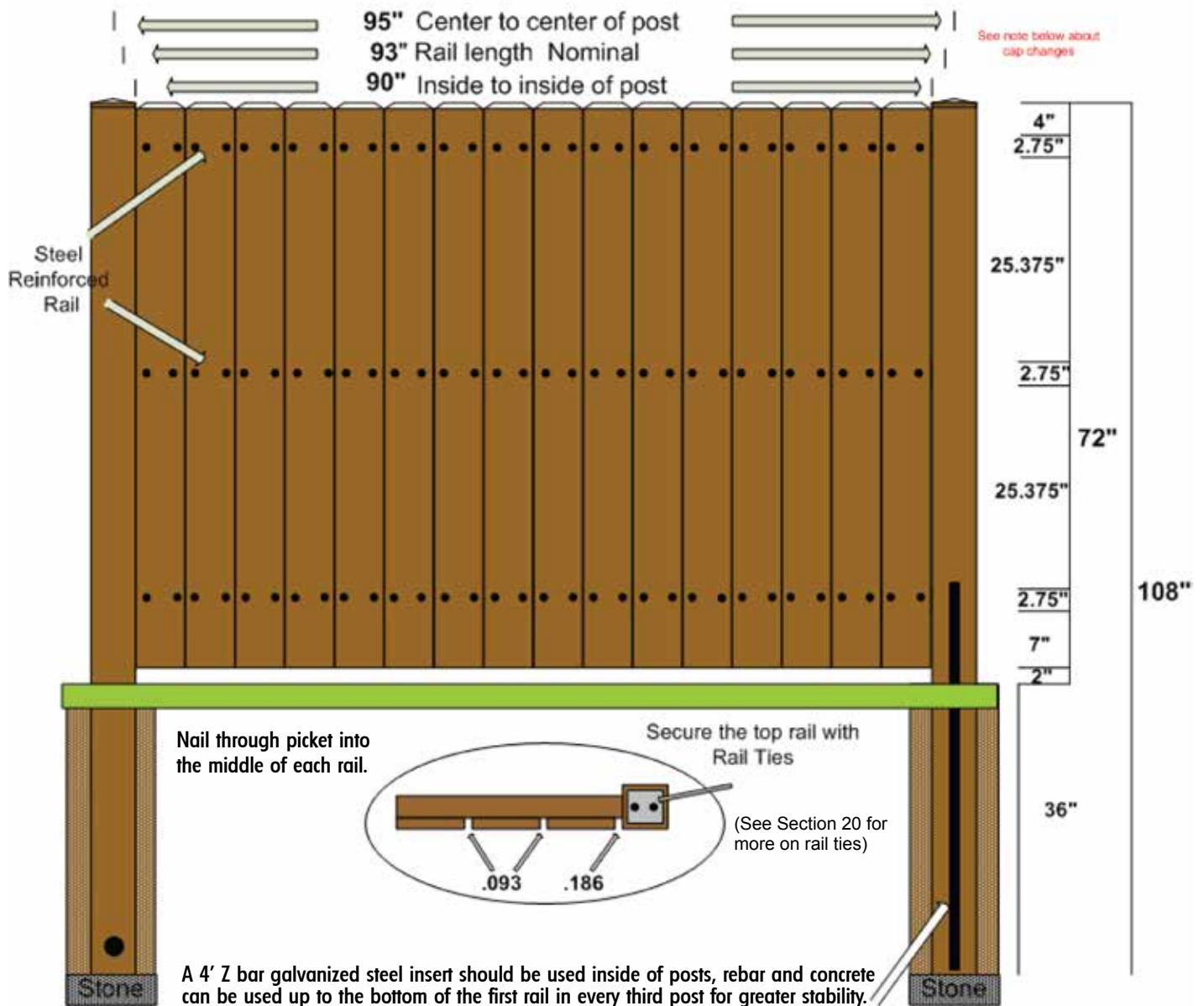
Fig. AD





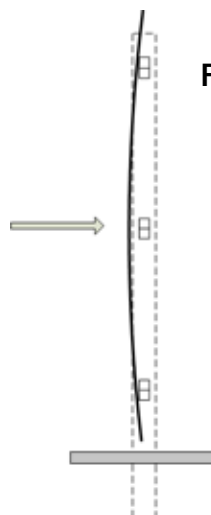
**Standard 6'H x 8'W Privacy Fence**  
**5" x 5" Routed Posts**  
**Dog Ear or Straight-Edge Pickets**  
**1.625" x 2.75" Rail**

**SECTION 14B2:**  
**ASSEMBLING PRIVACY FENCE PANELS**



If using an optional post cap such as a New England style cap, custom posts are required with routed holes 1.5" lower than noted in the assembly drawing.

**Note** from Storage and Handling section: Pickets or rails that have been directly exposed to the sun while working may begin to bow. Remember to turn them over and let them set in the sun for a few minutes to straighten prior to installing. For slight bow in picket, install pickets with bow away from midrail as shown in Fig. AE.



**Fig. AE**

Inside post to inside post spacing: 90"  
 Post hole diameter: 12"  
 Post height set above ground: 72"  
 Top Rail: Steel Reinforced  
 Middle Rail: Steel Reinforced  
 Lower Rail: Hollow  
 Top Rail Spacing: 4" from top of rail to the top of picket  
 Bottom Rail Spacing: 7" from bottom of rail to the bottom of picket  
 Picket Spacing: Minimum spacing provides .093" gaps  
 For first picket, use a double space, .186"



## Standard 6'H x 8'W Shadowbox 5" x 5" Routed Posts Dog Ear or Straight-Edge Pickets 1.625" x 2.75" Rail

- The following notes are applicable to the fence style as described above. This fence installation is a field built PVC 5" x 5" routed post system where the rails slide into the posts through the routed holes. Routing position is based upon style and height of fence.
- Follow general guidelines covered in section #2 for layout.
- POST SPACING** - We recommend using two (2) Endwood rails cut to (93.5") which may be utilized as jigs for post inside to post inside spacing. Measuring in from each end by 1.5", cut a .1875" slot half-way through the rail. See Fig. AG. To double check for accuracy, the measurement from inside the cut to inside the cut should be 90.5" which equals inside post to inside post spacing. Insert jigs into top routed hole(s) and bottom hole(s) to maintain a consistent spacing between pickets per assembly drawings. This will help prevent the need to rip pickets. Once posts have been set, move jigs to the next section, and repeat.
- The 5" x 5" posts are 108" long. 72" will be above grade and 36" below grade (Do NOT cut the bottom of the posts). 5" x 5" posts will require 4 pre-routed holes (6" and 9" from bottom - See Fig. AF) to allow for wet set concrete to flow for the purpose of anchoring the posts into the ground. See assembly drawing for details. Stone is required in the bottom of the post hole to drain off any water running down the post. A 48" Z-shape metal insert is recommended in every third post to add stiffness to the entire fence line. The wet set concrete will also help hold the metal insert in securely.
- If you are using an optional post cap such as a New England style cap, custom posts are required with routed holes 1.5" lower than noted in the assembling drawing.
- INSERT RAILS INTO POSTS** - Secure the top rail inside the 5" x 5" posts using rail ties, a metal or vinyl plate inserted into the top of a post, attached to the ends of both top rails, securing rails in place, additional details are shown in section 21, page 44. Measure the middle and bottom rails a minimum 1.5" in from outer edges and mark as indicated in Fig. AH.
- Install rails securely into routed holes to the mark. Steel reinforced rails should be utilized in the middle and top rail per assembly drawing.
- Trim rails as required for specific post setting and make adjustments for grade if needed.
- INSTALL PICKETS** - Prior to attaching pickets, place picket leveler (2" x 6" x 10' wood board across the top of posts) on first, then the angle iron, and clamp to the top rail with quick clamps. This will keep the top rail straight while installing pickets, thereby preventing the installer from pulling and moving the rail during installation. Once pickets are installed, move clamps and angle iron to the next section - repeat.

**TIP**

## SECTION 15B1: ASSEMBLING SHADOWBOX FENCE PANELS



- We recommend nailing the pickets, starting from the top rail moving down towards the bottom rail. Place two (2) nails into the **center of each rail** as indicated in the assembly drawing. Use six (6) 4D x 1.5" or 1.75" ring shank nails per picket.
- \*Space the first picket on the front side adjacent to the post for spacing of .186". Behind the first picket on the front side, the back side first picket is spaced 5" from the post. After this, a space of 4.5" is used between the pickets for a total of 18 pickets in this style as illustrated in the assembly drawing.
- Pickets are installed in two layers (front of rail and back of rail) on opposing sides of the fence panel.
- The last picket installed may be adjusted for spacing and preferred placement.

Fig. AH

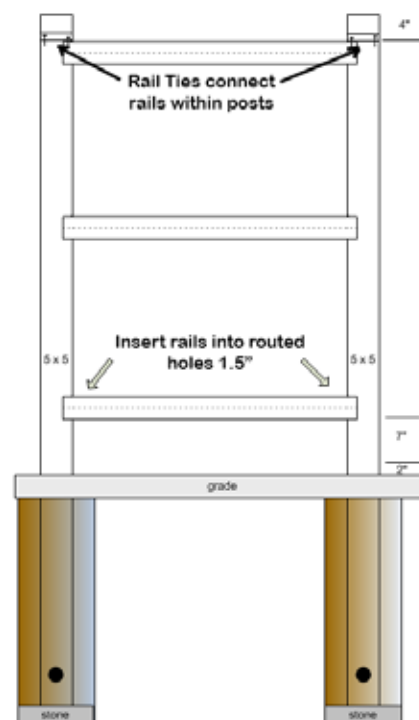


Fig. AF

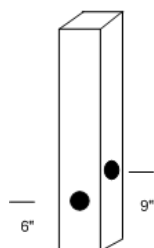
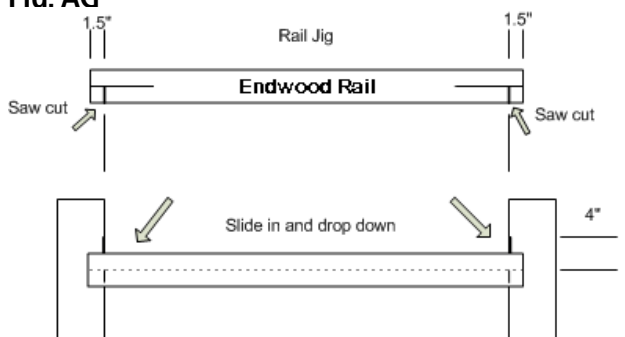
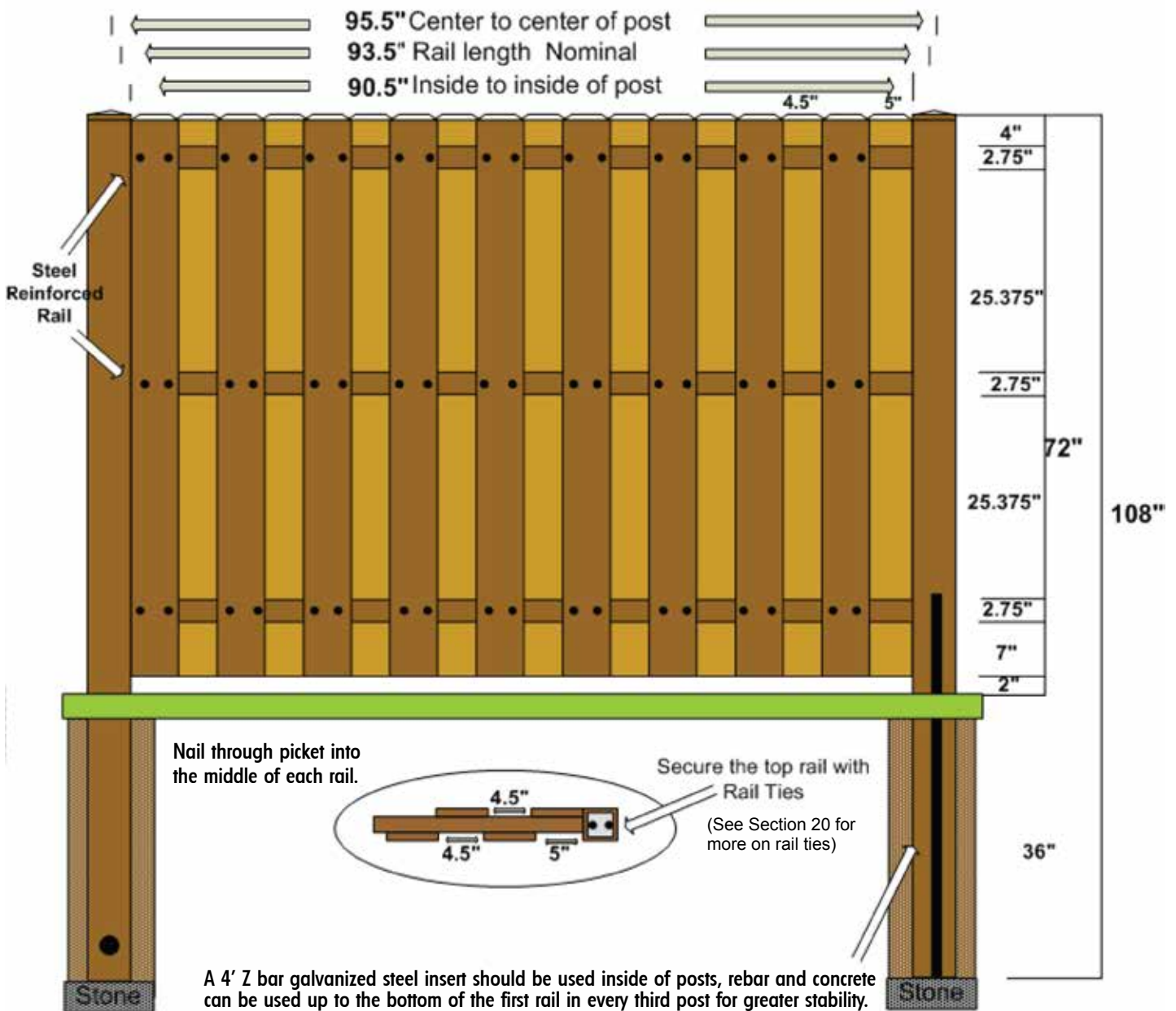


Fig. AG



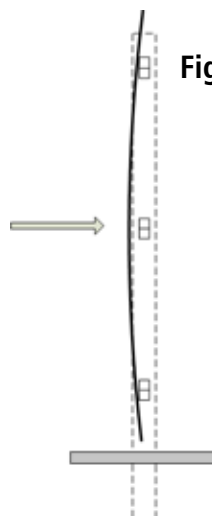
**Standard 6'H x 8'W Shadowbox  
5" x 5" Routed Posts  
Dog Ear or Straight-Edge Pickets  
1.625" x 2.75" Rail**

**SECTION 15B2:  
ASSEMBLING SHADOWBOX FENCE PANELS**



If using an optional post cap such as a New England style cap, custom posts are required with routed holes 1.5" lower than noted in the assembly drawing.

**Note** from Storage and Handling section: Pickets or rails that have been directly exposed to the sun while working may begin to bow. Remember to turn them over and let them set in the sun for a few minutes to straighten prior to installing. For slight bow in picket, install pickets with bow away from midrail as shown in Fig. A1.



**Fig. A1**

Inside post to inside post spacing: 90"  
Post hole diameter: 12"  
Post height set above ground: 72"  
Top Rail: Steel Reinforced  
Middle Rail: Steel Reinforced  
Lower Rail: Hollow  
Top Rail Spacing: 4" from top of rail to the top of picket  
Bottom Rail Spacing: 7" from bottom of rail to the bottom of picket  
\*Picket Spacing: Spacing provides 4.5" gaps. For first picket, use a 5" spacing on the back side and a .186" spacing for the front side.

## Standard 6'H x 8'W Board on Board 5" x 5" Routed Posts Dog Ear or Straight-Edge Pickets 1.625" x 2.75" Rail

- The following notes are applicable to the fence style as described above. This fence installation is a field built PVC 5" x 5" routed post system where the rails slide into the posts through the routed holes. Routing position is based upon style and height of fence.
- Follow general guidelines covered in section #2 for layout.
- POST SPACING** - We recommend using two (2) Endwood rails cut to (93.5") which may be utilized as jigs for post inside to post inside spacing. Measuring in from each end by 1.5", cut a .1875" wide slot half-way through the rail. See Fig. AK. To double check for accuracy, the measurement from inside the cut to inside the cut should be 90.5" which equals inside post to inside post spacing. Insert jigs into top routed hole(s) and bottom hole(s) to maintain a consistent spacing between pickets per assembly drawings. This will help prevent the need to rip pickets. Once posts have been set, move jigs to the next section, and repeat.
- The 5" x 5" posts are 108" long. 72" will be above grade and 36" below grade (Do NOT cut the bottom of the posts). 5" x 5" posts will require 4 pre-routed holes (6" and 9" from bottom - See Fig. AJ) to allow for wet set concrete to flow for the purpose of anchoring the posts into the ground. See assembly drawing for details. Stone is required in the bottom of the post hole to drain off any water running down the post. A 48" Z-shape metal insert is recommended in every third post to add stiffness to the entire fence line. The wet set concrete will also help hold the metal insert in securely.
- If you are using an optional post cap such as a New England style cap, custom posts are required with routed holes 1.5" lower than noted in the assembling drawing.
- INSERT RAILS INTO POSTS** - Secure the top rail inside the 5" x 5" posts using rail ties, a metal or vinyl plate inserted into the top of a post, attached to the ends of both top rails, securing rails in place, additional details are shown in section 21, page 44. Measure the middle and bottom rails a minimum 1.5" in from outer edges and mark as indicated in Fig. AL.
- Install rails securely into routed holes to the mark. Steel reinforced rails should be utilized in the middle and top rail per assembly drawing.
- Trim rails as required for specific post setting and make adjustments for grade if needed.
- INSTALL PICKETS** - Prior to attaching pickets, place picket leveler (2" x 6" x 10' wood board across the top of posts) on first, then the angle iron, and clamp to the top rail with quick clamps. This will keep the top rail straight while installing pickets, thereby preventing the installer from pulling and moving the rail during installation. Once pickets are installed, move clamps and angle iron to the next section - repeat.
- Picket spacers may be cut down from pickets using a table saw. A 5" and 4.5" jig will be needed to space pickets. Fastening a small block to one side will allow the jig to hang on the top rail while installing pickets.

**TIP**

## SECTION 16B1: ASSEMBLING BOARD ON BOARD FENCE PANELS



- We recommend nailing the pickets, starting from the top rail moving down towards the bottom rail.
- \*Begin with the first back row picket, start with picket flush to post. Drive one (1) nail (Use three (3) 4D x 1.5" or 1.75" ring shank nails per picket) through the center of the picket into the **center of each rail**. Continue to install pickets with a spacing of 4.5" between pickets.
- \*For the front row of pickets, start with a 5" spacing between the first picket and post. Nail picket into place using six (6) 4D x 1.5" or 1.75" ring shank nails through the outer sides of the picket, through the back row of pickets, and into the **center of each rail**. Nails are driven in at an angle and should catch both front and back pickets plus each rail. Continue to install the remaining pickets with a spacing of 4.5" between pickets as shown in the assembly drawing. The nails should not be closer than .5" from the edge of the picket.
- All pickets are installed on the same side of the fence, generally with the rails on the inside of the fenced area. The last picket may be adjusted for placement.
- The last picket installed within each panel will not have a picket on both sides for support. Therefore, it may be supported by cutting a small piece of picket material and fastening to the last picket adjacent to the post.

Fig. AJ

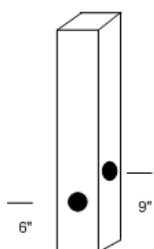


Fig. AK

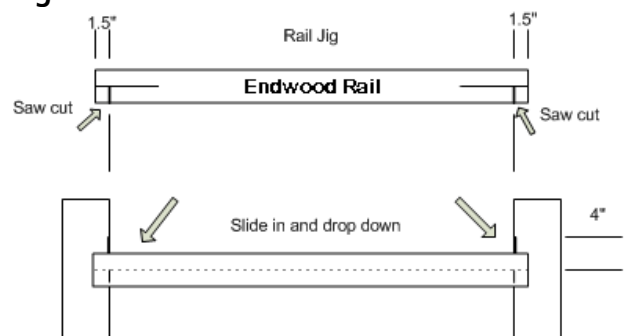
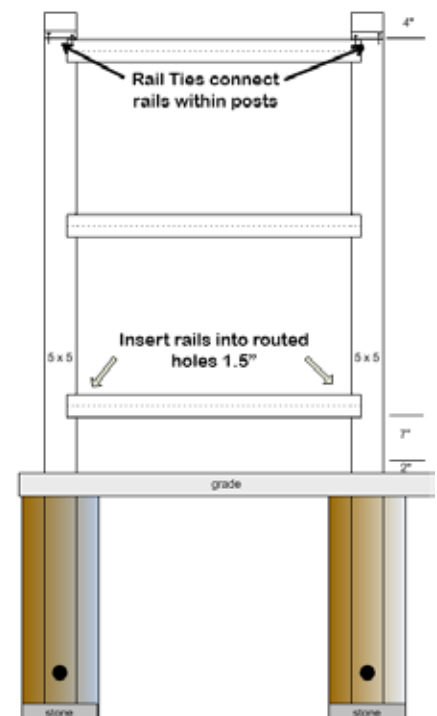
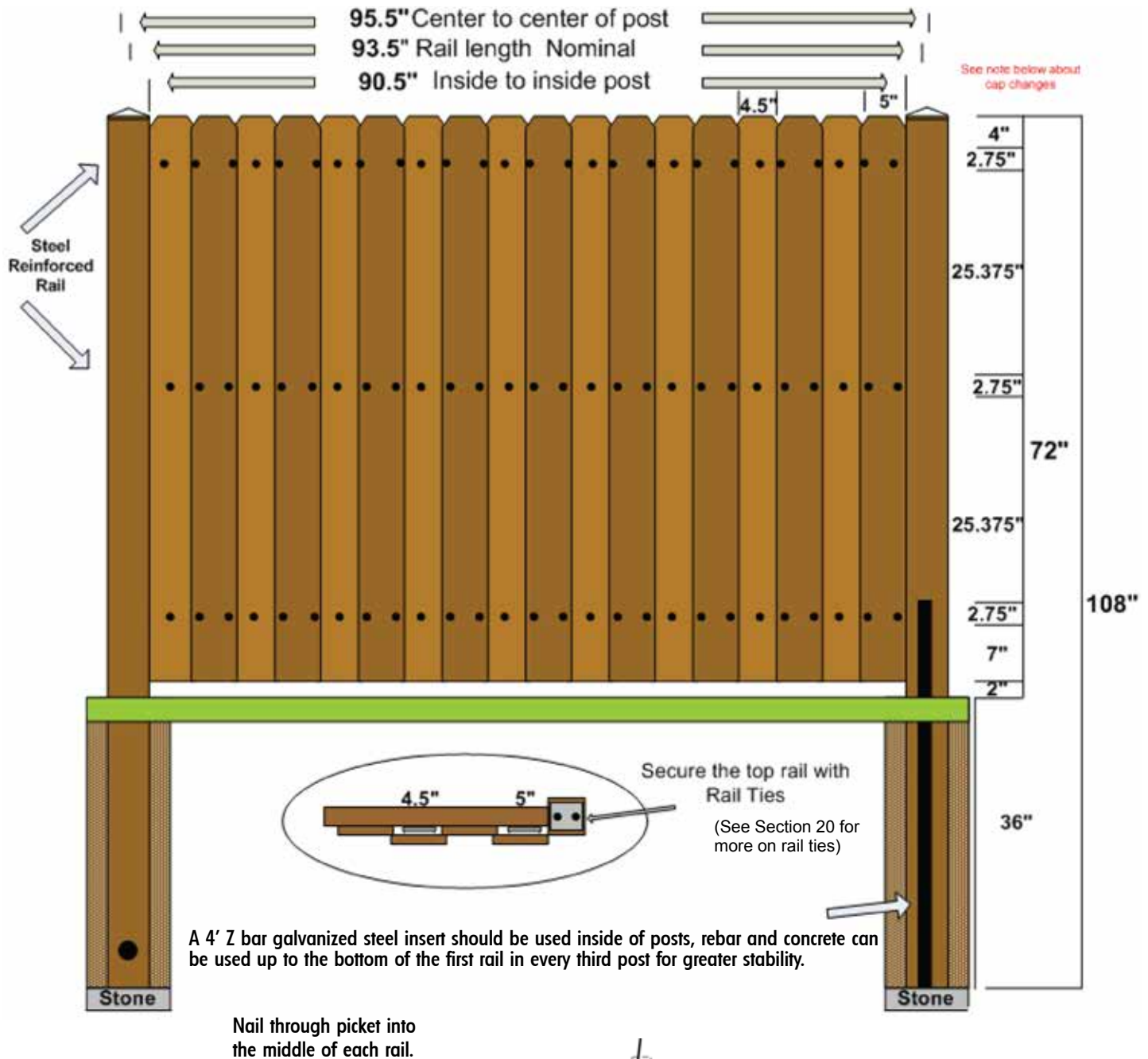


Fig. AL



**Standard 6'H x 8'W Board on Board  
5" x 5" Routed Posts  
Dog Ear or Straight-Edge Pickets  
1.625" x 2.75" Rail**

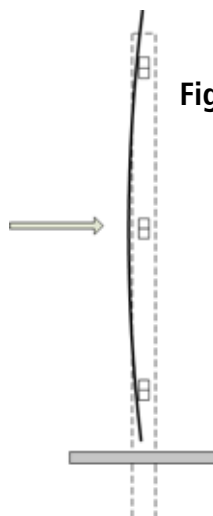
**SECTION 16B2:  
ASSEMBLING BOARD ON BOARD FENCE PANELS**



If using an optional post cap such as a New England style cap, custom posts are required with routed holes 1.5" lower than noted in the assembly drawing.

**Note** from Storage and Handling section: Pickets or rails that have been directly exposed to the sun while working may begin to bow. Remember to turn them over and let them set in the sun for a few minutes to straighten prior to installing. For slight bow in picket, install pickets with bow away from midrail as shown in Fig. A1.

**Fig. AM**



Inside post to inside post spacing: 90"  
Post hole diameter: 12"  
Post height set above ground: 72"  
Top Rail: Steel Reinforced  
Middle Rail: Steel Reinforced  
Lower Rail: Hollow  
Top Rail Spacing: 4" from top of rail to the top of picket  
Bottom Rail Spacing: 7" from bottom of rail to the bottom of picket  
\*Picket Spacing: Spacing provides 4.5" gaps. For first picket, on the back row place picket flush against post, and a 5" spacing for the front row.

## Standard 6'H x 8'W California 5" x 5" Routed Posts Straight-Edge Pickets 1.625" x 2.75" Rail

- The following notes are applicable to the fence style as described above. This fence installation is a field built PVC 5" x 5" routed post system where the rails slide into the posts through the routed holes. Routing position is based upon style and height of fence.
- Follow general guidelines covered in section #2 for layout.
- POST SPACING** - We recommend using two (2) Endwood rails cut to (93") which may be utilized as jigs for post inside to post inside spacing. Measuring in from each end by 1.5", cut a .1875" wide slot half-way through the rail. See Fig. AO. To double check for accuracy, the measurement from inside the cut to inside the post should be 90" which equals inside post to inside post spacing. Insert jigs into top routed hole(s) and bottom hole(s) to maintain a consistent spacing between pickets per assembly drawings. This will help prevent the need to rip pickets. Once posts have been set, move jigs to the next section, and repeat.
- The 5" x 5" posts are 108" long. 72" will be above grade and 36" below grade (Do NOT cut the bottom of the posts). 5" x 5" posts will require 4 pre-routed holes (6" and 9" from bottom - See Fig. AN) to allow for wet set concrete to flow for the purpose of anchoring the posts into the ground. See assembly drawing for details. Stone is required in the bottom of the post hole to drain off any water running down the post. A 48" Z-shape metal insert is recommended in every third post to add stiffness to the entire fence line. The wet set concrete will also help hold the metal insert in securely.
- If you are using an optional post cap such as a New England style cap, custom posts are required with routed holes 1.5" lower than noted in the assembling drawing.
- INSERT RAILS INTO POSTS** - Secure the top rail inside the 5" x 5" posts using rail ties, a metal or vinyl plate inserted into the top of a post, attached to the ends of both top rails, securing rails in place, additional details are shown in section 21, page 44. Measure the middle and bottom rails a minimum 1.5" in from outer edges and mark as indicated in Fig. AP.
- Install rails securely into routed holes to the mark. Steel reinforced rails should be utilized in the middle and top rail per assembly drawing.
- Trim rails as required for specific post setting and make adjustments for grade if needed.
- INSTALL PICKETS** - Prior to attaching pickets, place a picket leveler (2.5" x 89.5" wood board), then the 2.5" x 2.5" angle iron, and clamp to the top rail with quick clamps. This will keep the top rail straight and offer a picket guide while installing pickets, thereby preventing the installer from pulling and moving the rail during installation. Once pickets are installed, move clamps and angle iron to the next section - repeat.
- We recommend nailing the pickets, starting from the top rail moving down towards the bottom rail. Place two (2) nails into the **center of each rail** as indicated in the assembly drawing. Use six (6) 4D x 1.5" or 1.75" ring shank nails per picket.

**TIP**

## SECTION 17B1: ASSEMBLING CALIFORNIA FENCE PANELS



- \*Use spacers to locate pickets properly thereby reducing the requirement to rip pickets. Picket spacing jigs are available with a .093" thick spacing. Assembly drawings assume a spacing of .093" between pickets. Double space the first picket adjacent to the post for spacing of .186".
- Keep the spacer tight, plum and straight between the nailed picket and the adjacent pickets, remove spacer and repeat for each picket until all 16 pickets are installed.
- All pickets are installed on the same side of the fence, generally with the rails on the inside of the fenced area.
- FENCE TOP CAP** - Once more than 16ft. of fence installed (two fence panels), cut the deck board ends at 45 degrees so the boards will overlap each other. Place the deck boards on top of fence panel and screw down, fastening at every 16".
- Once pickets and top cap are installed, take 1-96" picket and cut down the center to create the trim. Place each half of picket on the front of fence section flush to top and bottom. We recommend placing top section with cut edge facing up, and on bottom section, placing cut edge facing down. You can now nail the trim at the top and bottom using the same 4D x 1.5" or 1.75" ring shank nails every other picket.
- The assembly drawing reflects a maximum of 72" top above the ground, which leaves a 1" space below the fence. This may be adjusted per local code fence height regulations.

Fig. AP

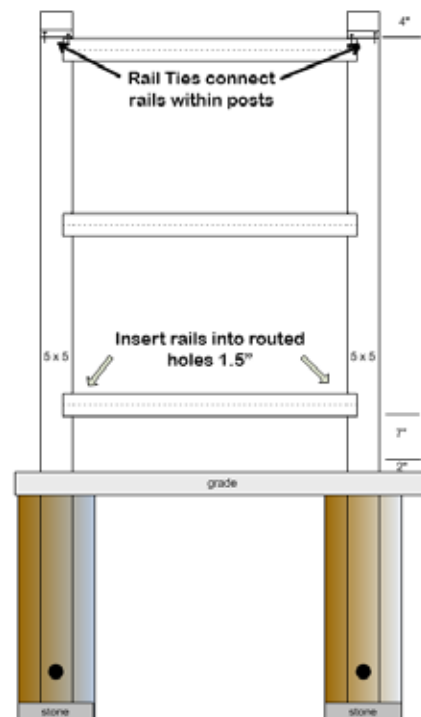


Fig. AN

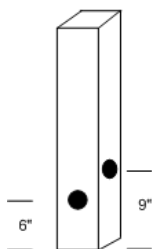
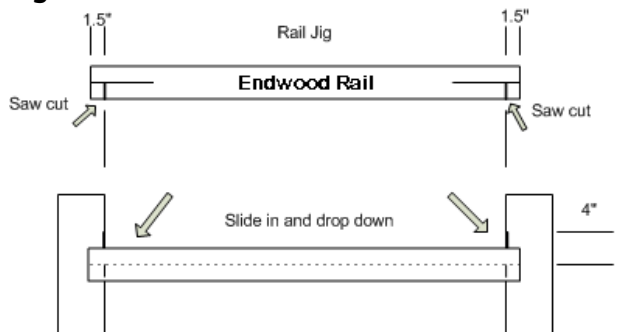


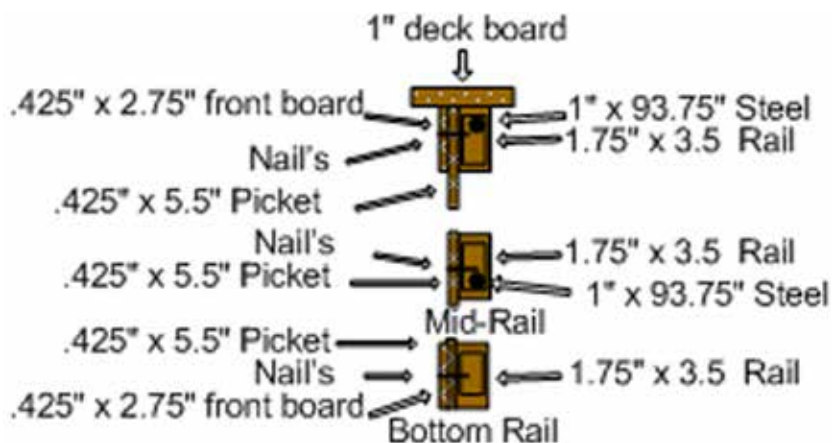
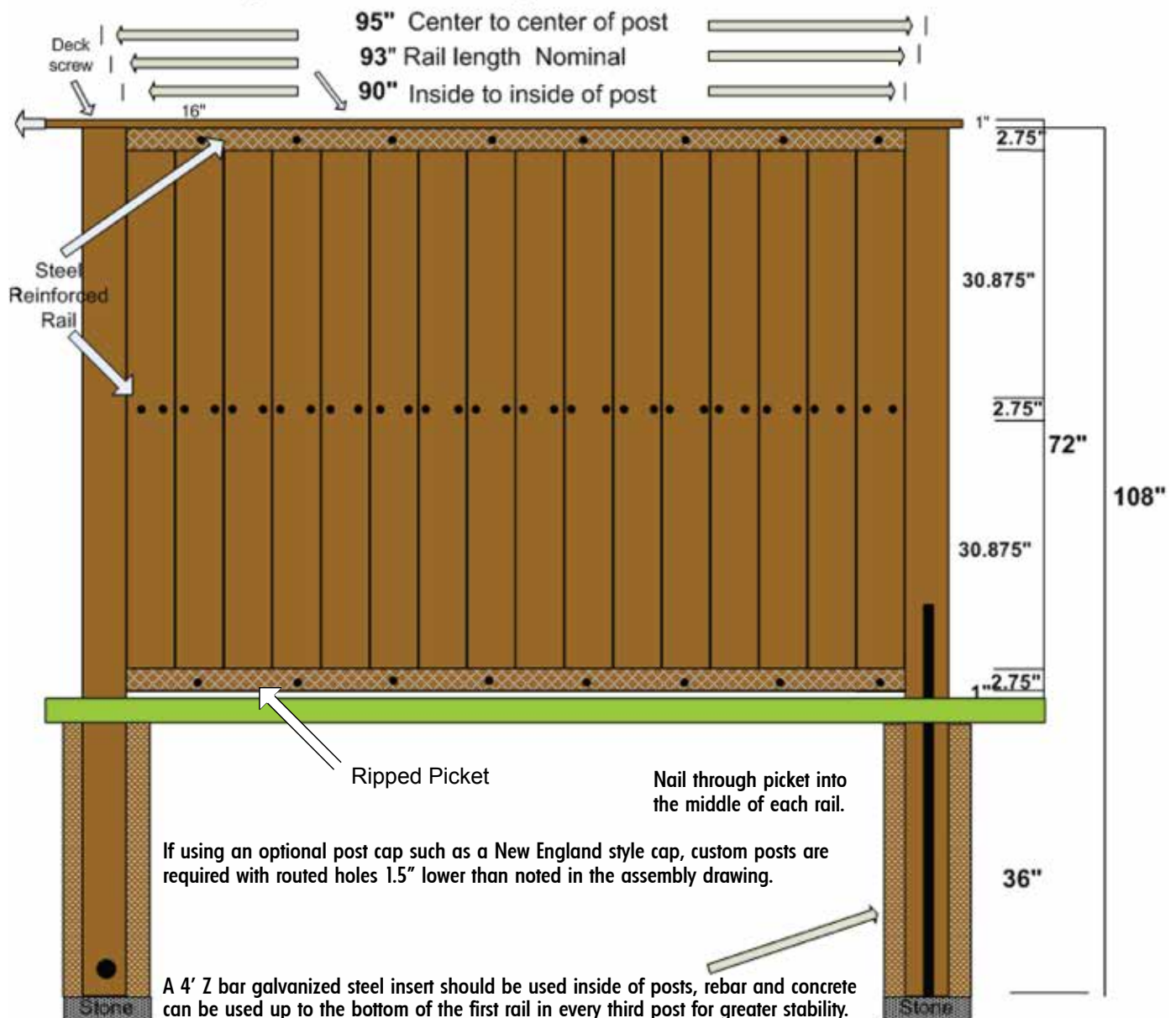
Fig. AO





**Standard 6'H x 8'W California  
5" x 5" Routed Posts  
Straight-Edge Pickets  
1.625" x 2.75" Rail**

**SECTION 17B2:  
ASSEMBLING CALIFORNIA FENCE PANELS**



Inside post to inside post spacing: 90"  
Post hole diameter: 12"  
Post height set above ground: 72"  
Top Rail: Steel Reinforced  
Middle Rail: Steel Reinforced  
Lower Rail: Hollow  
Top Rail Spacing: Even with picket  
Bottom Rail Spacing: Even with picket  
\*Picket Spacing: Minimum spacing provides .093" gaps. For first picket, use a double space, .186"

## SECTION 18A1: ASSEMBLING PRIVACY & LATTICE FENCE PANELS

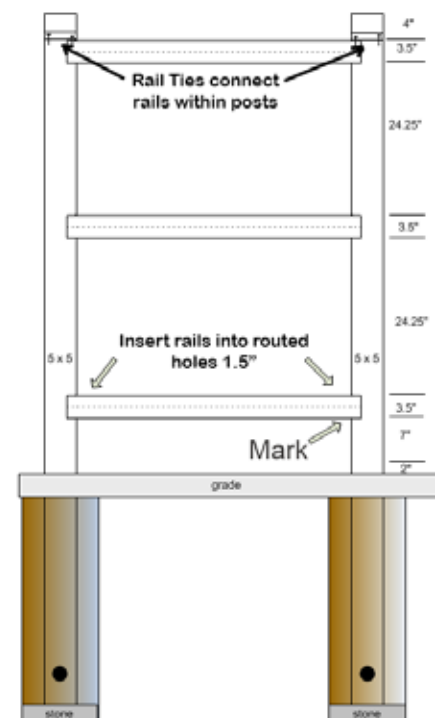
1. The following notes are applicable to the fence style as described above. This fence installation is a field built PVC 5" x 5" routed post system where the rails slide into the posts through the routed holes. Routing position is based upon style and height of fence.
2. Follow general guidelines covered in section #2 for layout.
3. **POST SPACING** - We recommend using two (2) Endwood rails cut to (93.5") which may be utilized as jigs for post inside to post inside spacing. Measuring in from each end by 1.5", cut a .1875" slot half-way through the rail. See Fig. AR. To double check for accuracy, the measurement from inside the cut to inside the cut should be 90" which equals inside post to inside post spacing. Insert jigs into top routed hole(s) and bottom hole(s) to maintain a consistent spacing between pickets per assembly drawings. This will help prevent the need to rip pickets. Once posts have been set, move jigs to the next section, and repeat.
4. The 5" x 5" posts are 108" long. 72" will be above grade and 36" below grade (Do NOT cut the bottom of the posts). 5" x 5" posts will require 4 pre-routed holes (6" and 9" from bottom - See Fig. AO) to allow for wet set concrete to flow for the purpose of anchoring the posts into the ground. See assembly drawing for details. Stone is required in the bottom of the post hole to drain off any water running down the post. A 48" Z-shape metal insert is recommended in every third post to add stiffness to the entire fence line. The wet set concrete will also help hold the metal insert in securely.
5. If you are using an optional post cap such as a New England style cap, custom posts are required with routed holes 1.5" lower than noted in the assembling drawing.
6. **INSERT RAILS INTO POSTS** - Secure the top rail inside the 5" x 5" posts using rail ties, a metal or vinyl plate inserted into the top of a post, attached to the ends of both top rails, securing rails in place, additional details are shown in section 21, page 44. Measure the middle and bottom rails a minimum 1.5" in from outer edges and mark as indicated in Fig. AS.
7. Install rails securely into routed holes to the mark. Steel reinforced rails should be utilized in the lower middle and top rail per assembly drawing.
8. Trim rails as required for specific post setting and make adjustments for grade if needed.
9. **INSTALL PICKETS** - Prior to attaching pickets, place a 2.5" x 2.5" x 89.5" angle iron, and clamp to the top mid rail with quick clamps. This will keep the top rail straight and offer a picket guide while installing pickets, thereby preventing the installer from pulling and moving the rail during installation. Once pickets are installed, move clamps and angle iron to the next section - repeat.

**TIP**

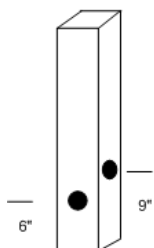


10. We recommend nailing the pickets, starting from the top rail moving down towards the bottom rail. When nailing the top of the pickets into the the upper mid rail, place nails into the bottom half of the rail to allow sufficient space for the lattice to be placed into the rail. Place two (2) nails per into the center of rail as indicated in the assembly drawing. Use six (6) 4D x 1.5" or 1.75" ring shank nails per picket.
11. \*Use spacers to locate pickets properly thereby reducing the requirement to rip pickets. Picket spacing jigs are available with a .093" thick spacing. Assembly drawings assume a spacing of .093" between pickets.
12. Keep the spacer tight, plum and straight between the nailed picket and the adjacent pickets, remove spacer and repeat for each picket until all 16 pickets are installed . Once all pickets are installed, remove clamps and move to next section - repeat.
13. All pickets are installed onto the same side of the fence, generally with the rails on the inside of the fenced area.
14. **INSTALL LATTICE** - There is a 13.5" x .25" rip in the center side of the post for the lattice to slide into. The bottom of the lattice must rest on top of the upper middle rail spine.
15. Once the lattice is placed into the upper middle rail and the top rail is placed over the lattice, the final finishing L-channel trim is placed onto the top of the pickets and fastened into place against the lattice using 5 - # 8 squire drive SS 2" pan head self-cutting screws.

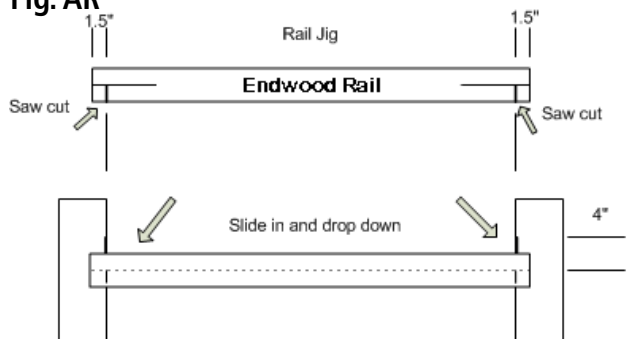
**Fig. AS**



**Fig. AQ**

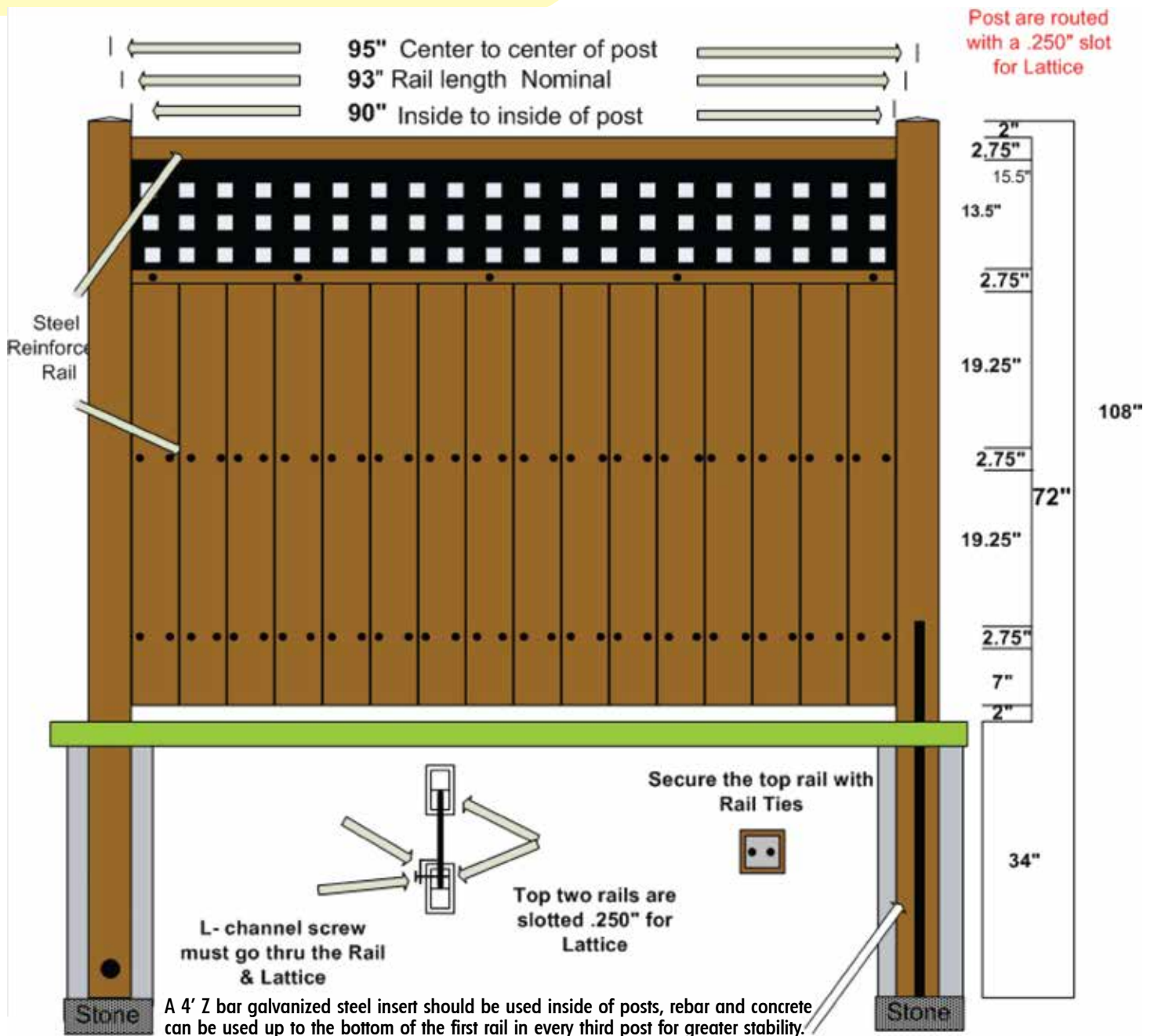


**Fig. AR**



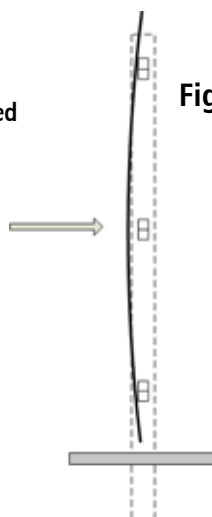
**Standard 6'H x 8'W Privacy & Lattice**  
**5" x 5" Routed Posts**  
**Straight-Edge Pickets**  
**1.75" x 2.7" Rail**

**SECTION 18A2:**  
**ASSEMBLING PRIVACY & LATTICE FENCE PANELS**



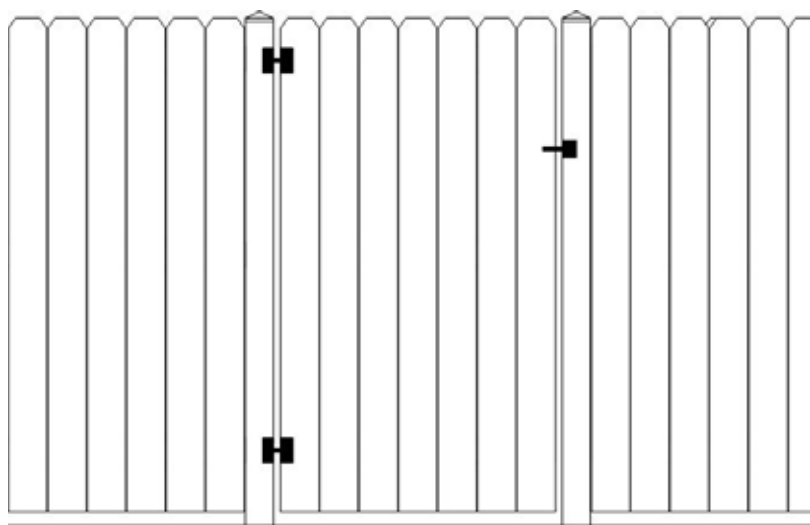
If using an optional post cap such as a New England style cap, custom posts are required with routed holes 1.5" lower than noted in the assembly drawing.

**Note** from Storage and Handling section: Pickets or rails that have been directly exposed to the sun while working may begin to bow. Remember to turn them over and let them set in the sun for a few minutes to straighten prior to installing. For slight bow in picket, install pickets with bow away from midrail as shown in Fig. AT.



Inside post to inside post spacing: 90"  
 Post hole diameter: 12"  
 Post height set above ground: 72"  
 Top Rail: Steel Reinforced  
 Upper Middle Rail: Hollow  
 Lower Middle Rail: Steel Reinforced  
 Lower Rail: Hollow  
 Top Rail Spacing: 2" from top of post  
 Bottom Rail Spacing 7" from bottom of picket  
 \*Picket Spacing: Minimum spacing provides .093" gaps. For first picket, use a double space, .186"

## SECTION 19: Endwood Fusion Welded Gate Installation Guide



### ASSEMBLY AND INSTALLATION FOR:

#### Fusion Welded Gates

39", 45", and 50"

#### Gate Frame with Full Size Pickets

Gate width	Privacy & California # Pickets	Board on Board & Shadowbox # Pickets
39.06"	7	8
44.65"	8	9
50.24"	9	10

After preparing the fence layout, you will need to determine the number and position of your gates as well as gate size

### DIG HOLES FOR GATE POSTS



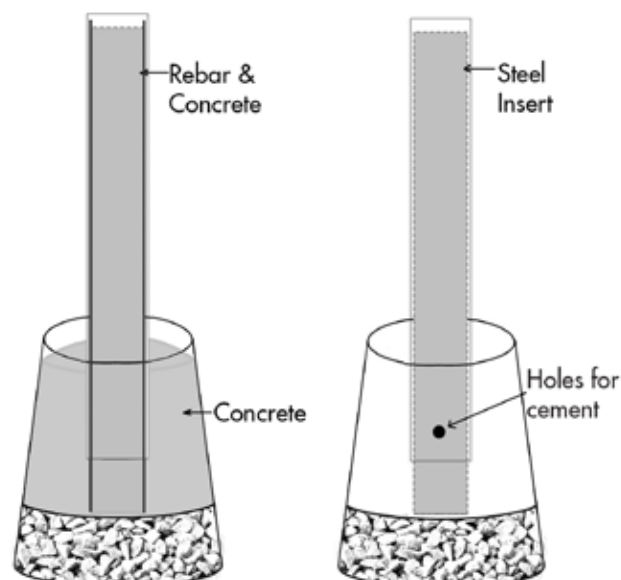
Fig. A

1. According to your prepared fence line, mark location for gate posts based on assembly drawing.
2. Dig gate post holes to be below the frost line. Hole size should be double post width (10"-12" in diameter) and at least 30" deep.
3. Fill hole with a 6" layer of stone to allow drainage. See Fig. A.
4. It is recommended to use rebar and concrete or steel inserts and self-tapping screws for gate posts.

Fig. B

### SET & INSTALL GATE POSTS

1. Slide Endwood post over insert metal insert; if using metal use self tapping screws) paying attention to ensure sides are in alignment with fence line and post and insert are flush at top. Fasten a self-tapping screw and place several holes in the bottom of the post for wet set concrete to flow through. See Fig. B.
2. Install assembled gate post into the designated gate post hole.
3. Fill hole with wet concrete to 3" below ground level. Ensure post is plumb and the center line is aligned with fence.
4. Position Endwood post to correct height for gate level and match all fence posts.
5. Fill the remainder of the post hole with wet set concrete and allow to cure for 2-3 days before installation of Endwood gate.

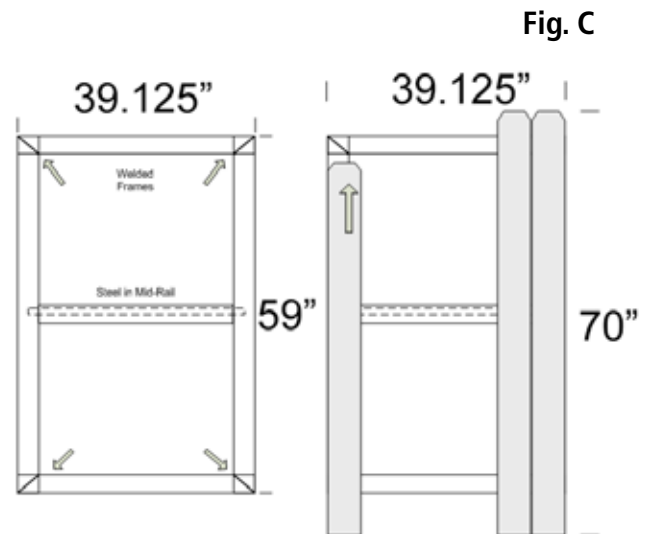


**Note:** All posts with steel inserts require several staggered 2.5" holes to ensure wet set concrete flows into posts.

## Assemble Gate Frame

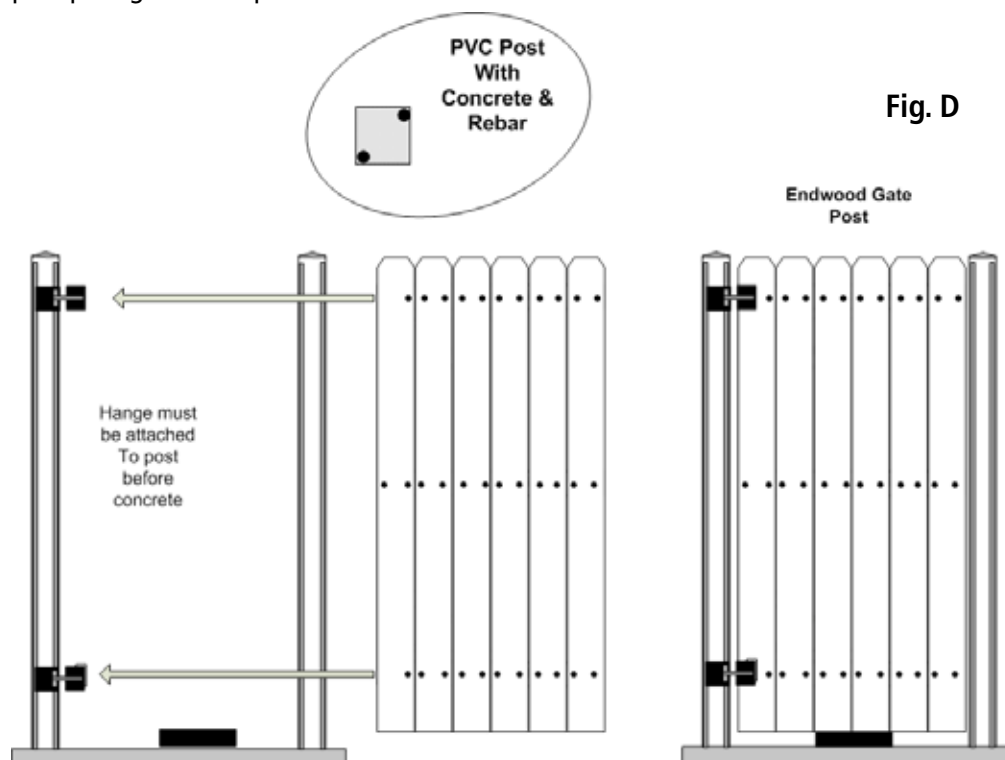
1. To begin assembly of the gate frame, lay frame on a flat surface - flush side down.
2. Install the first and last outer pickets flush with the edge of the gate frame. Place only three (3) nails through first and last outer pickets, nailing only the inside of picket.
3. Attach Endwood Pickets to frame and Endwood Rails. Position pickets vertically to match fence, typically 4" overhang above top rail. See Fig. E. Leave an approximately .093" gap between each picket. Use spacer for consistent spacing.
4. We recommend using 4D x 1-1/2" or 1-3/4" ringshank nails, nailing the pickets, starting from the top rail moving down towards the bottom rail. Place two (2) nails into the center of each rail. Six (6) nails per picket (except outer pickets at edges of gate frame).

**IMPORTANT:** Nails must go through the Endwood picket and into the center of the Endwood rail.



## INSTALL GATE – Using Rebar and Concrete in Posts - Fig. D.

1. Inside width between posts must be at least 1.5" wider than the width of the gate.
2. Determine gate side opening and swing direction before attaching hinges.
3. Use screws provided; attach the hinges to the gate posts. We recommend lining up hinges to match up to gate rails when attached.
4. Place rebar into two opposing corners of the posts, rebar should extend from the bottom to the top of the post, then pour wet set concrete into post holes and inside post, to the top of the posts.
5. Gate posts must set at least 48 hours prior to attaching the gate. Double check to ensure post is plumb and well aligned.
6. Level your temporary block to match the bottom of the fence line, between the gate posts. Set gate on blocks, level with the ground and at the correct height to match the fence line.
7. Attach the adjustable sides of the hinges to the gate. Always try to align the hinges in-line with the rails while keeping gate flush with fence top and bottom.
8. The heavy duty SS Endwood recommended hinges are adjustable for fine tuning gate fit and precision. Adjust hinges to ensure gate has equal spacing between posts on each side.





## INSTALL GATE – Using 5" x 5" Steel Insert - Fig. E

1. Gate posts must set at least 48 hours prior to attaching the gate. Double check to ensure post is plumb and well aligned.
2. Determine gate side opening and swing direction before attaching hinges.
3. Attach the adjustable sides of the hinges to the gate - again check to ensure swing direction. Always try to align the hinges in-line with the rails.
4. Set gate on blocks level with the ground and at the correct height to match the fence line. Inside width between posts must be at least 1.5" wider than the width of the gate. The heavy duty SS Endwood recommended hinges are adjustable for fine tuning gate fit and precision.
5. Level your temporary block to match the bottom of the fence line, between the gate posts and set the gate with attached hinges inside the gate opening.
6. Use screws provided; attach the hinges to the gate post.
7. Adjust hinges to ensure gate has equal spacing between posts on each side.

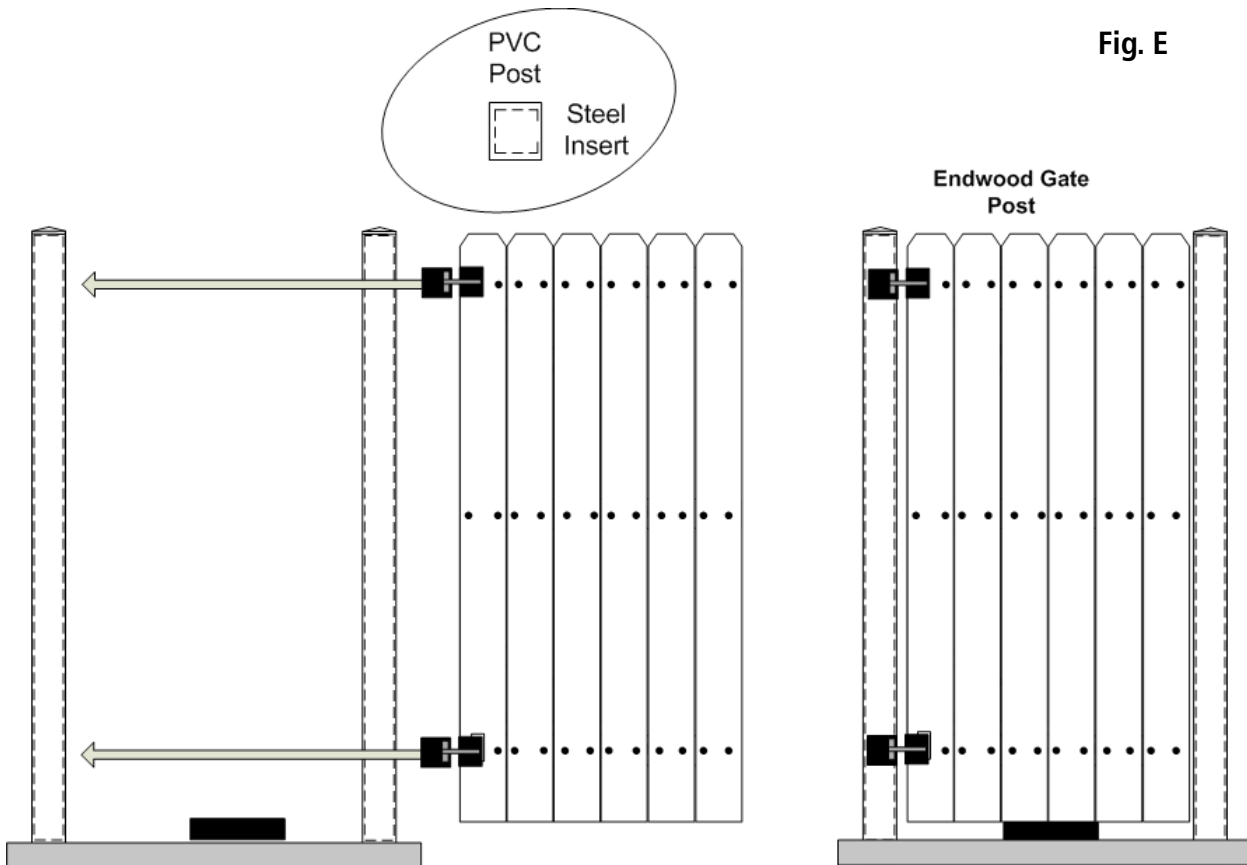


Fig. E

## Attach Latch

1. Install striker with 1" black self-tapping screws into gate frame.
2. Line up latch with striker. Attach latch to post using 1-1/2" black self-tapping screws. See Fig. E for an example of one type of latch that may be used.

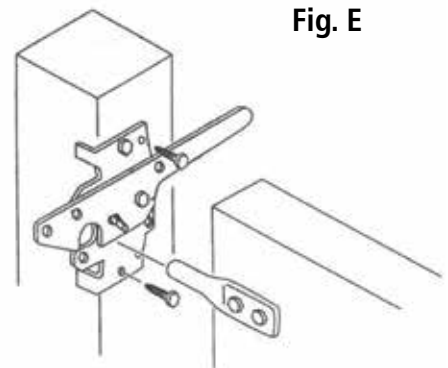
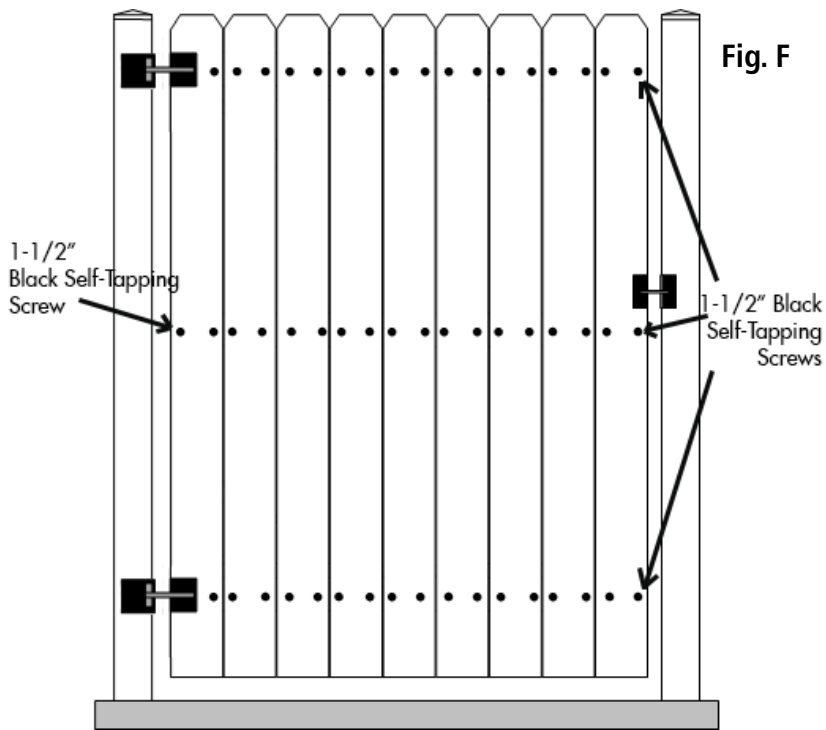


Fig. E

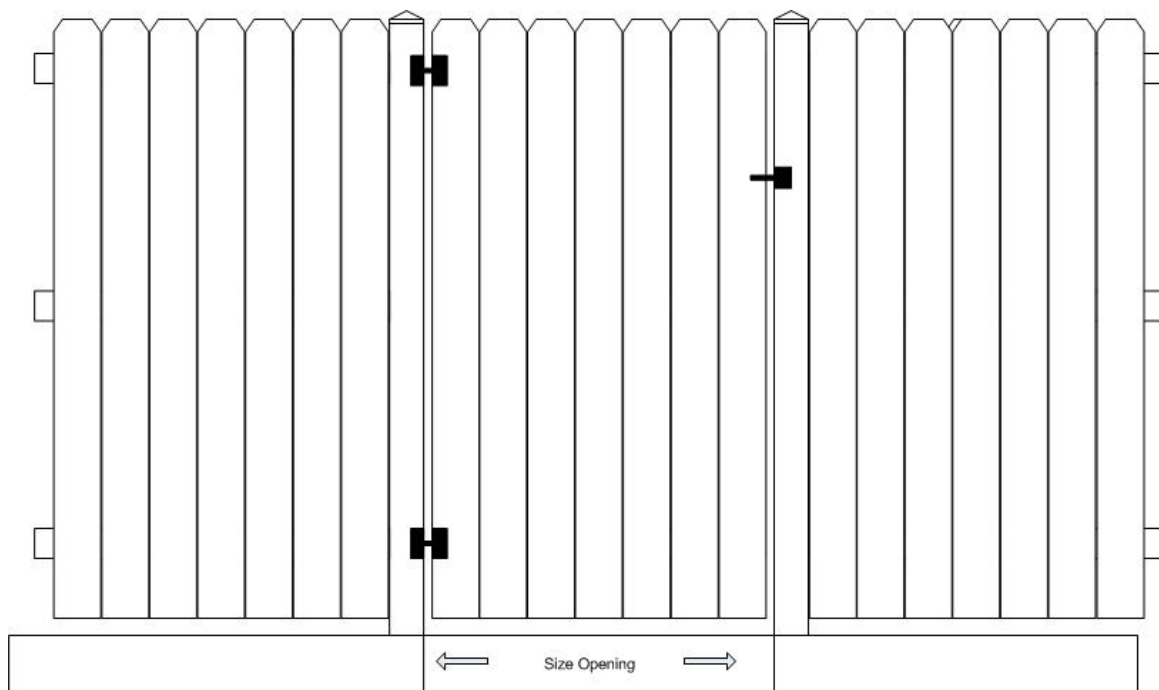
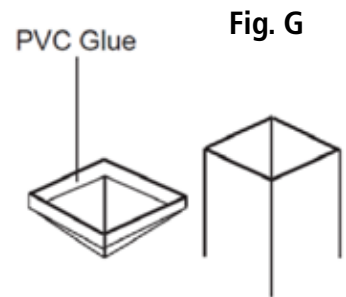


### Attach Final Outer Picket Screws

1. Outer pickets should be fastened with 1-1/2" Black Self Tapping screws after placement of hinges and latch as shown in Fig. F.

### Install Post Caps

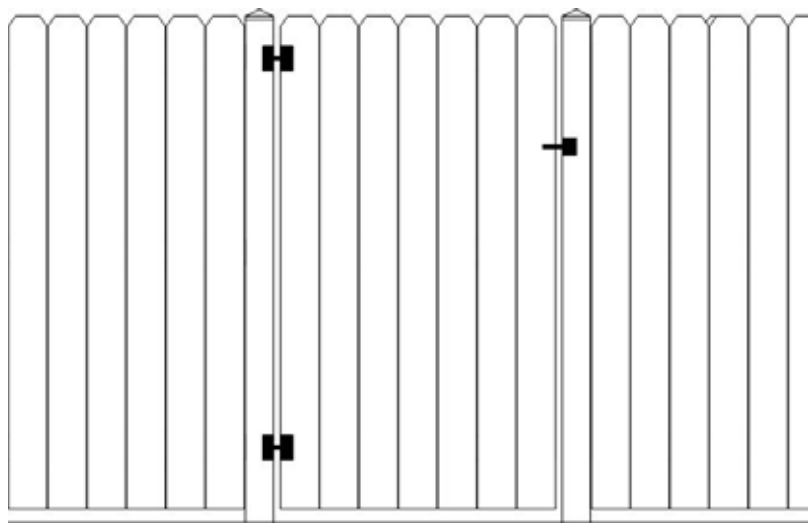
1. Apply a small amount of PVC glue (two part epoxy found in most local hardware stores) to the inside of all four sides of the cap and press cap completely onto the top of the post and hold for a few seconds. Be sure to only apply a small amount, just a little dab on each side is sufficient for a firm hold. See Fig. G.



## SECTION 20: Endwood Adjustable Gate Installation Guide

### Adjustable Gate Kit Includes:

Vertical Frame Sides (2)  
Expander Bars (2)  
Post Hinge (2)  
Latch Kit (1)  
Truss Cable (1)  
Rail Spacers (6)  
1-1/2" Black Self-Tapping Screws (16)  
1" Black Self-Tapping Screws (20)  
3" Wood Screws (6)  
1" Wood Screws (24)  
Gate Frame Caps (2)



After preparing the fence layout, you will need to determine the number and position of your gates as well as gate size

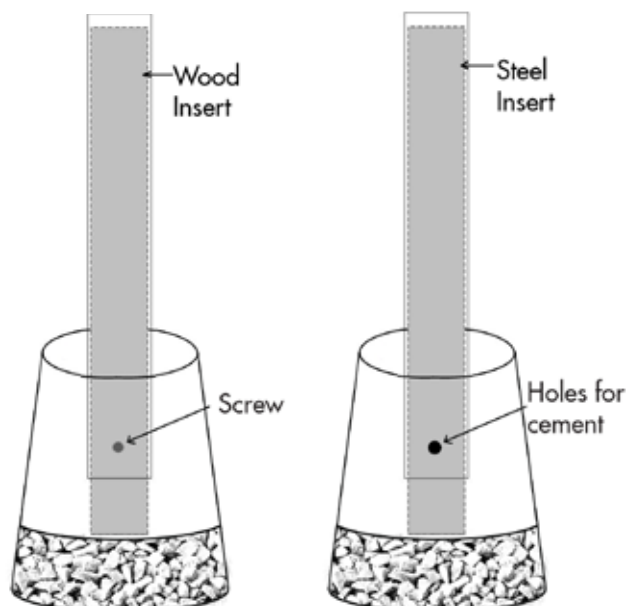
### DIG HOLES FOR GATE POSTS



Fig. A

1. According to your prepared fence line, mark location for gate posts based on assembly drawing.
2. Dig gate post holes to be below the frost line. Hole size should be double post width (10"-12" in diameter) and at least 30" deep.
3. Fill hole with a 6" layer of stone to allow drainage. See Fig. A.
4. It is recommended to use wood or steel inserts and self-tapping screws for gate posts.

Fig. B

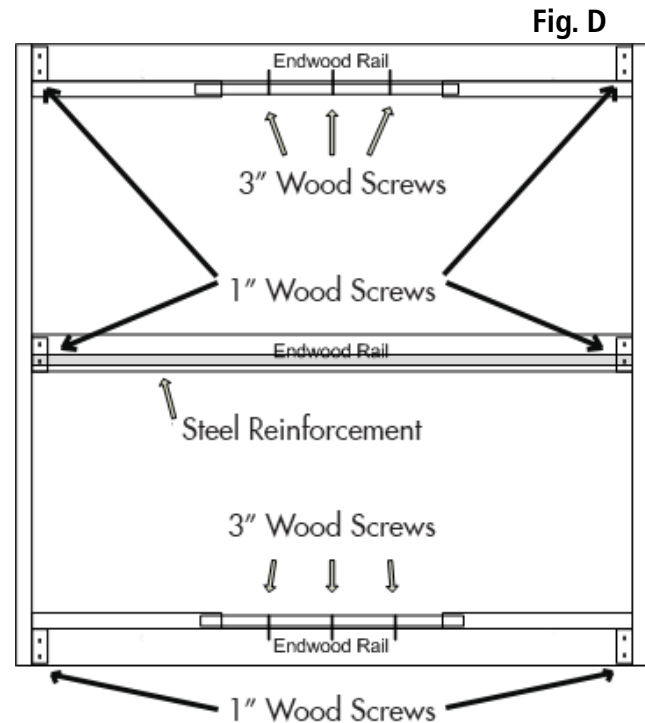
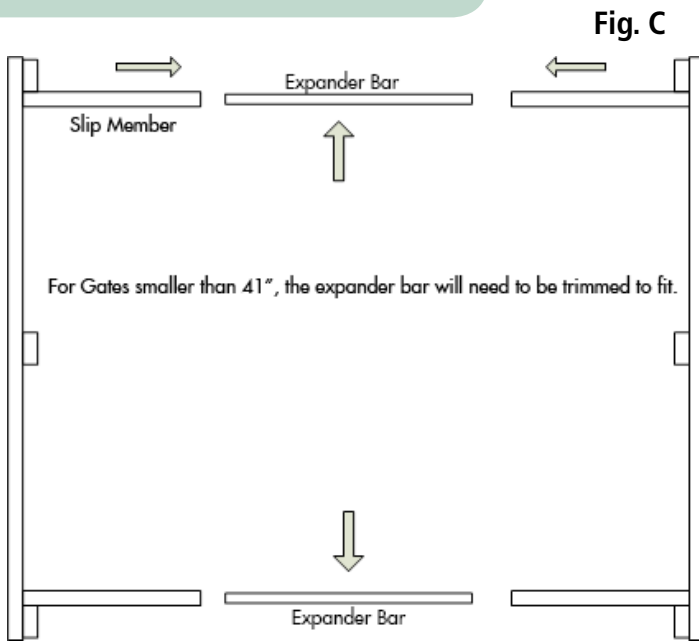


**Note:** All posts with steel inserts require several staggered 2.5" holes to ensure cement flows into post.

### SET & INSTALL GATE POSTS

1. Slide Endwood post over insert (wood or metal, if using metal use self tapping screws) paying attention to ensure sides are in alignment with fence line and post and insert are flush at top. Fasten a screw at 2" below grade to secure post to wood insert or if using a metal insert, use a self-tapping screw and place several holes in the bottom of the post for cement to flow through. See Fig. B.
2. Install assembled gate post into the designated gate post hole.
3. Fill hole with wet concrete to 3" below ground level. Ensure post is plumb and the center line is aligned with fence.
4. Position Endwood post to correct height for gate, be level and match all fence posts.
5. Fill the remainder of the post hole with concrete and allow to cure for 2-3 days before installation of Endwood gate.

## Assemble Adjustable Gate Frame



### Assemble Gate Frame

1. Endwood's versatile adjustable gate frame may be used for Gate openings from 33" to 72" wide.
2. To begin assembly of the gate frame, lay frame on a flat surface - flush side down.
3. Insert expander bar into the side slip members (ensure holes face up and down - not side to side) in top and bottom rail and adjust as needed for gate size. See Fig. C.

### Insert Endwood Rails

1. Trim Endwood rails as required for insertion into brackets. Rails are to be 3-1/8" shorter than finished gate frame. See Fig. E Chart.
2. If using the smaller Endwood 2-5/8" rail, place metal spacer between the bracket and rail prior to fastening screws through bracket, insert, and rail.
3. Attach slip members to top and bottom rail with 3" wood screws. See Fig. D.

### Install Truss Cable

1. Loosen turnbuckle screw. Install the "S" Hook for the truss cable into the hole at the top of the gate on the hinge side.
2. Install the truss cable by hooking the turnbuckle into the hole at the bottom of the gate on the latch side.
3. Adjust turnbuckle to light tension. See Fig. F. Measuring diagonally on both sides, check for squareness.

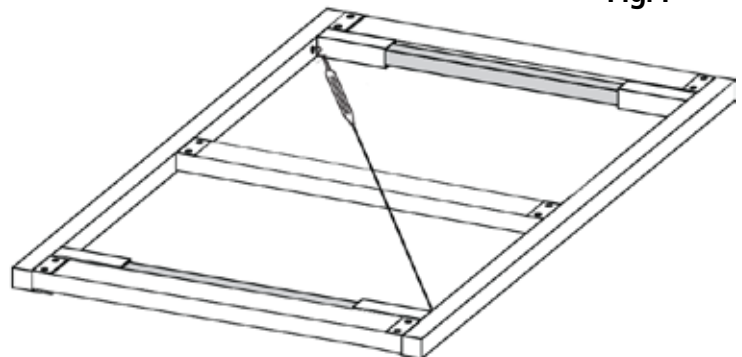
Fig. E

#### Gate Frame with Full Size Pickets

Gate width      Rail Length      # Pickets

33.47"	30.34"	6
39.06"	35.93"	7
44.65"	41.52"	8
50.24"	47.11"	9
55.84"	52.71"	10
61.43"	58.31"	11
67.02"	63.90"	12

Fig. F



## Fasten Pickets onto Gate Frame

1. Flip the gate over.
2. Install the first and last pickets flush with the edge of the frame. Place only three (3) nails through first and last pickets, nailing only the inside of picket. See Fig. G.
3. Attach Endwood Pickets to frame and Endwood Rails. Position pickets vertically to match fence, typically 4" overhang above top rail. See Fig. G. Leave an approximately .093" gap between each picket. Use spacer for consistent spacing.
4. We recommend using 4d x 1-1/2" or 1-3/4" ringshank nails, nailing the pickets, starting from the top rail moving down towards the bottom rail. Place two (2) nails per rail. Six (6) nails per picket. **IMPORTANT:** Nails must go through the Endwood picket and into the Endwood rail.

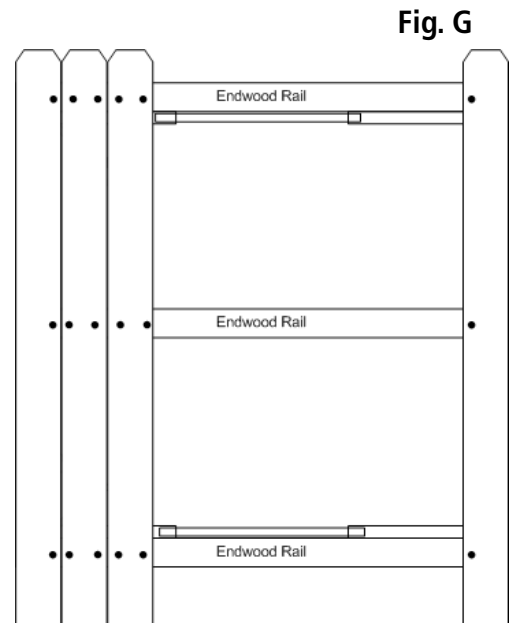


Fig. G

## Attach Hinges onto Gate Frame

1. Position U-shaped portion of hinges around picket and gate frame (see Fig. H) next to metal crossbars. Bolts can be placed on the inside or outside of the gate. Attach hinges to gate with 1" black self-tapping screws. Screws must attach to the metal frame through pickets.
2. Attach the outer edge of the picket on the hinge side between the hinges with a 1-1/2" black self-tapping screw. Attach latch side picket outer edge to the frame with three (3) 1-1/2" black self-tapping screws as shown in Fig. I. **NOTE:** Color matched touch-up paint is available at home depot, see Fig. M on page 38. Stainless steel flat head screws may be used instead (not included).
3. Set gate on blocks level with the ground and at the correct height to match the fence. Allow 1" on either side of the gate opening. Attach lower hinge to gate with 1-1/2" black self-tapping screws. Set bolt into hinge. Position upper hinge in bolt and attach to post with 1-1/2" black self-tapping screws.
4. Attach post hinge using 1-1/2" black self-tapping screws. Take adjustment bolt and slide into hinge barrel opening. Top hinge adjuster bolt will point up, bottom will point down, as shown in Fig. H. Place 2 screws into face of both top and bottom hinges, remove blocks, swing gate open, and place remaining 1-1/2" black self-tapping screws into post hinge bracket

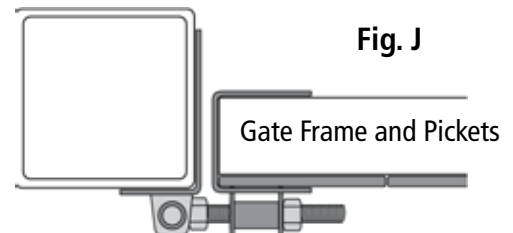


Fig. J

**Note:** The upper bolt points up and the lower bolt points down. Pre-drill with 9/64" drill bit for easier installation of drill point screws.

Fig. H

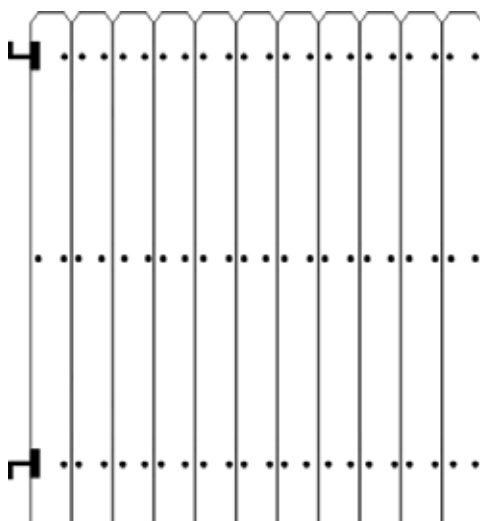
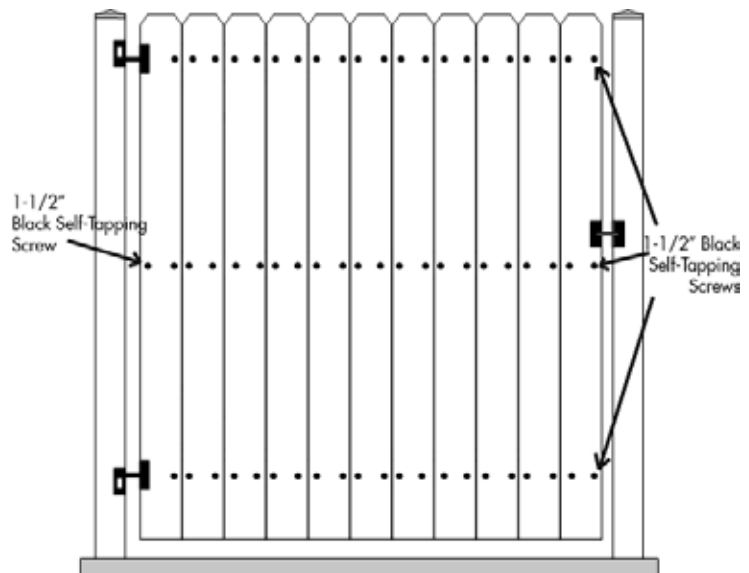


Fig. I





## Attach Latch

1. Install striker with 1" black self-tapping screws into gate frame. See Fig. I.
2. Line up latch with striker. Attach latch to post using 1-1/2" black self-tapping screws. See Fig. K.

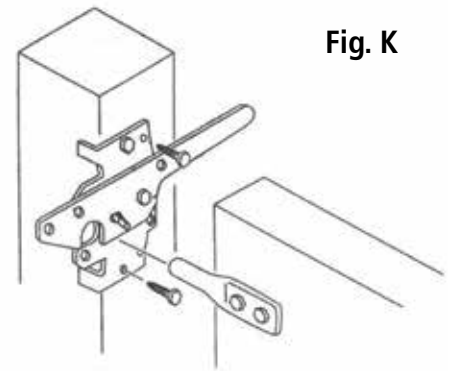


Fig. K

## Install Post Caps

1. Apply a small amount of PVC glue (two part epoxy found in most local hardware stores) to the inside of all four sides of the cap and press cap completely onto the top of the post and hold for a few seconds. Be sure to only apply a small amount, just a little dab on each side is sufficient for a firm hold. See Fig. L.

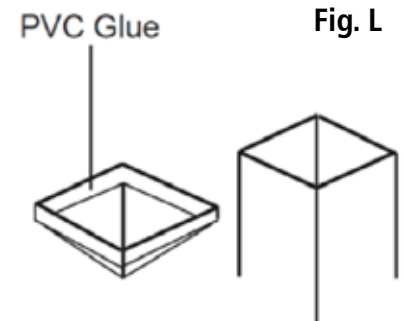


Fig. L

## Install Gate Frame Caps

1. Insert gate frame caps by inserting caps into top of metal gate frame and pressing firmly to secure into place.

## Color Matched Touch Up Paint

Color matched touch up paint may be purchased from home depot using the following information:

Fig. M



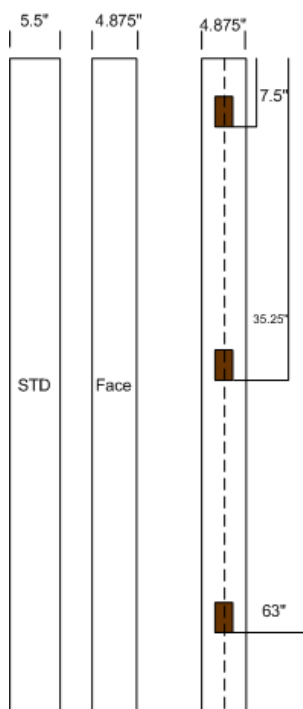
Sable



Slate



Sequoia



## Create your own Bracket Jig

For standard large 3 rail - 6 ft. privacy fence

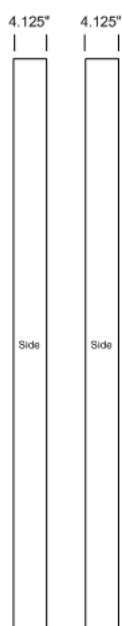
### Jig Face

Start by taking a standard 5.5' x 70" picket and ripping it down to 4.875"

Mark a center line down the picket

Measure and mark for holes, holes should be 1.9375"L x 3.3125"W

Holes should be placed according to drawing at 7.5", 35.25" and 63" from the top of the picket for standard installation in privacy fence style. See assembly drawings for exact placement per fence style.



### Jig sides

Start by taking two 5.5' x 70" pickets and ripping it down to 4.125"

Line up side panels to face panel evenly

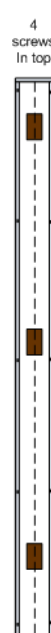
Mount side panels to Jig Face panel using #8, .75" screws



### Jig Top

Cut top panel from same material to measure 4.875" x 4.125"

Mount top panel using 4 screws



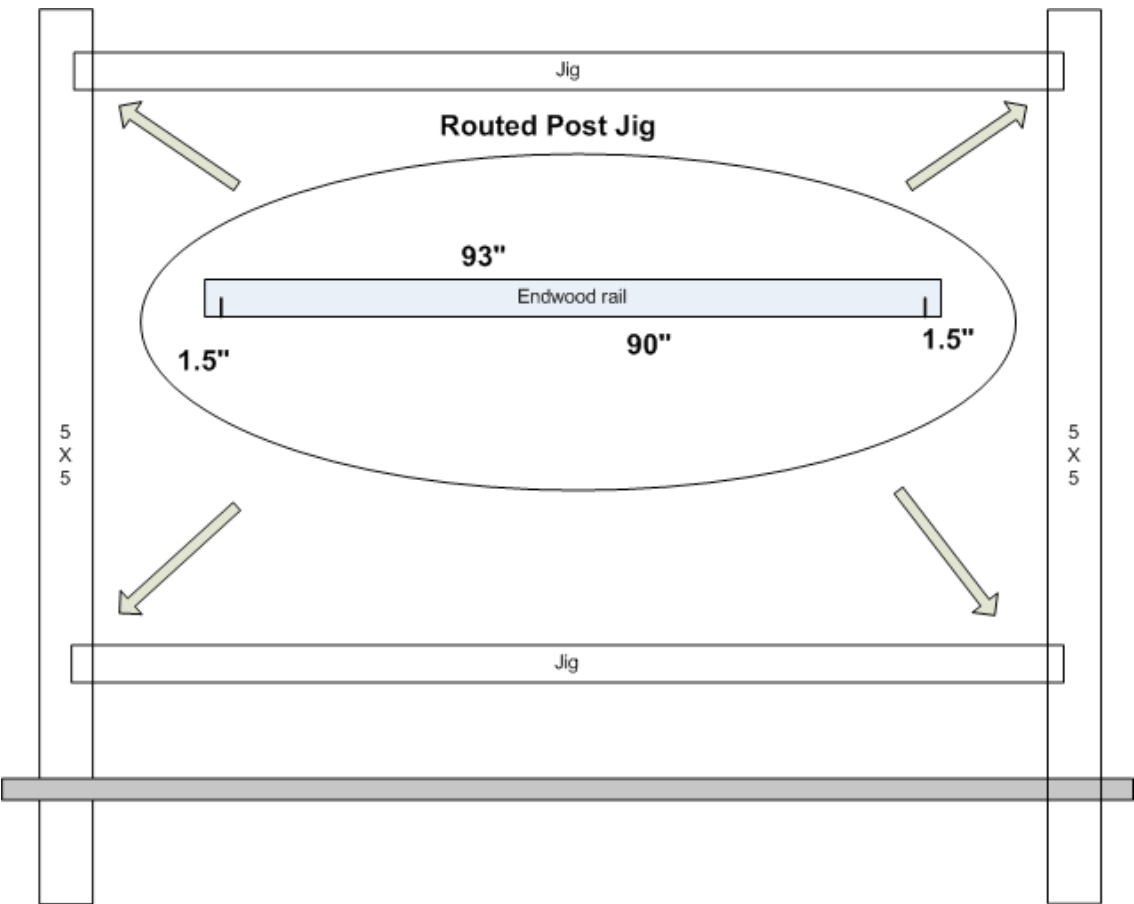
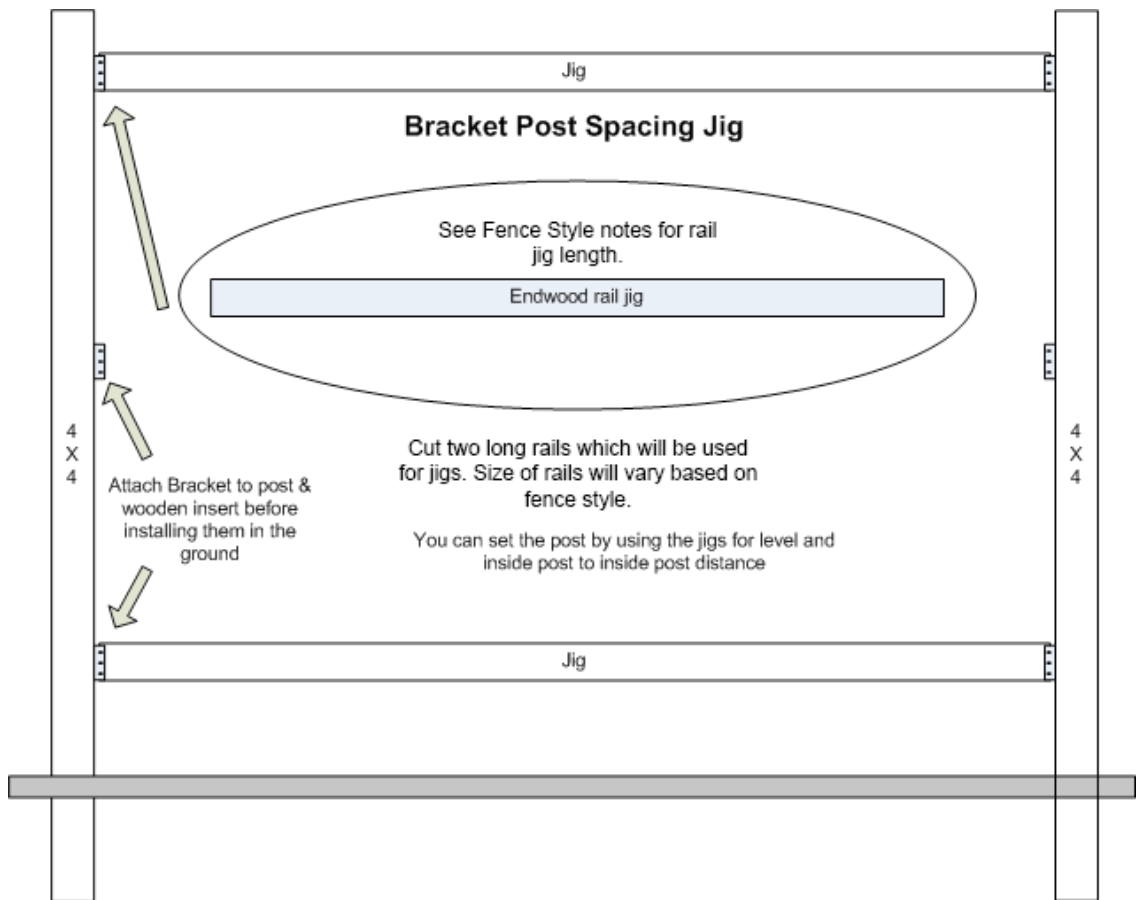
### Mount Jlg onto Post

Place jig securely onto post

Place brackets into jig holes and secure them into place with bracket screws included in bracket kit

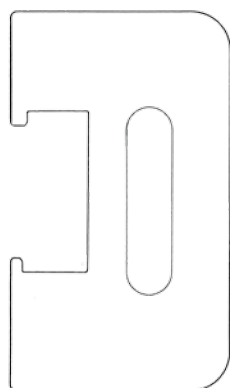
Once brackets are secure in post, move jig to next post and repeat

**Post spacing jigs** - Used to provide uniform and accurate post spacing.





**Angle Iron** - 1.5" x 1.5" x 1/8" - 6 ft. long steel channel used to keep rails straight while installing pickets (2.5" x 2.5" x 1/8" - 6ft. for Lattice and California Style fences). Caution - do not put your body weight on rails when installing pickets. One per crew, found at most local homecenter stores.

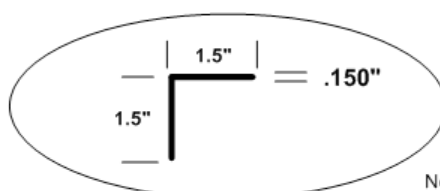


**Picket Spacing Jig** - Used between pickets in privacy fence styles. Spacer provides a .093" between pickets. Double spacing is used in some fence styles to space the end pickets adjacent to the post. See assembly drawings for details.

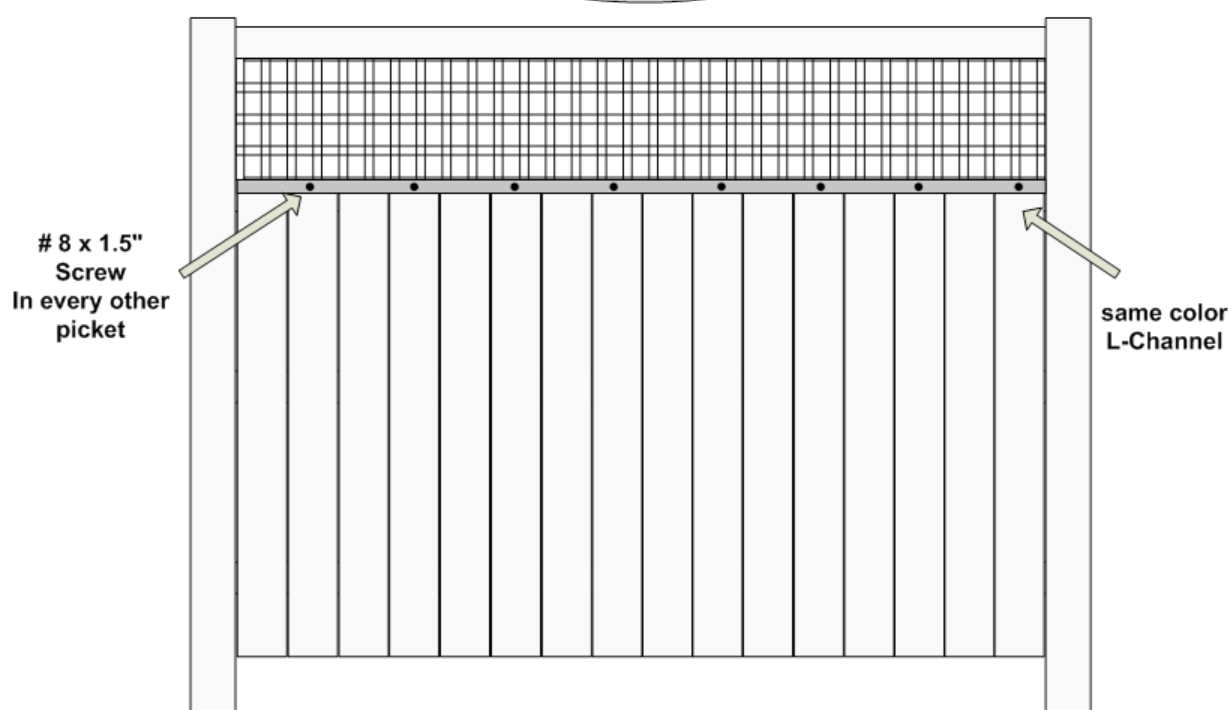
If using a steel L channel on the top rail as a guide, you may choose to file the picket spacing jig adding an extra 1/8" to increase the opening to use over the top rail and L channel.

**L=Channel for lattice fence styles** - A decorative L-Channel is placed upon the upper middle rail and below the lattice insert. The L-Channel is installed to overlap the front fence pickets and fastened at every other picket. See assembly drawings for details.

## L-Channel for lattice fence



Note: 4 pcs. can be cut from an 5 x 5 post







**Mini Quick Clamps** - Used to clamp metal Angle iron to top rail. Available in most hardcenter stores.



**NailPro-Pneumatic nail gun** - Used with nail coils to drive nails through pickets and rails. Available at Enduris. Model #NPCN 565P.



**SUREBONDER 9760 Hand Held Nail Gun** - Used on individual nails not driven flush with picket. Hold nail gun over nail, insert over head of nail, and drive nail to be flush with surface of fence panel. Available in most homecenter stores.

## Installation Extra Tips

- **Storage of Pickets** - When installing an Endwood fence, it is important to keep fence components covered and out of direct exposure to the sunlight until ready to use.
- **Fence Layout** - Measure the overall length of your planned fence and determine how many fence sections you will need – placing posts 8 feet apart will provide the most economical spacing. Fence runs will require adjustment of sections to ensure a perfect fit. A simple option is to make adjustments for shorter sections at the corners or near any gates or buildings. To balance the layout for a more customized look, make adjustments to several sections.
- **Leveling Pickets** - By placing a metal angle iron (available at most hardware stores) on top of the top rail, pickets may be quickly installed for level.
- **Bow in Pickets** - Pickets or rails that have been directly exposed to the sun while working may begin to bow. Remember to turn them over and let them set in the sun for a few minutes to straighten prior to installing. For a slight bow in picket, install pickets with bow away from midrail.
- **Nailing Pickets** - When nailing pickets, always start on one end of the fence panel, and begin nailing from the top, moving downward. Do not lean on rails when installing pickets. Ensure nails go through the pickets and into the center of each rail. Use six (6) 4D x 1.5" or 1.75" ring shank nails per picket (except back row on board on board fence styles which use three (3), see assembly drawing for details).
- **Keeping Nails Flush** - When using the pneumatic nail gun, nails that are not driven flush to the picket may need to be driven in separately. To avoid denting the picket material, a hand held nail gun may be used to drive the remaining nails to be flush with the fence panel. See page 47 for details.
- **Rail Distance** - Endwood assembly drawings are provided to assist in suggested configurations. Custom configurations can easily be made to create any fence style and design keeping in mind that rails should never be greater than 30" apart.
- **Post Inserts for 4" x 4" Post Sleeves** - Slide Endwood post sleeve over insert paying attention to ensure sides are in alignment with the fence line, and post sleeve and insert are flush at top. Fasten a screw at 2" below grade to secure post to insert and prevent the post sleeve from moving during wet set.
- **Post Inserts for 5" x 5" Posts** - A 4' Z bar galvanized steel insert or rebar and concrete should be used inside of 5" x 5" posts, up to the bottom of the first rail in every third post for greater stability.
- **Decorative Post Caps** - When installing select decorative caps such as New England style, posts will need to be adjusted - raising them 1.5" higher, by lowering routing or bracket placement by 1.5".
- **Post Caps** - Post caps are easily attached and snapped onto the post. A two part epoxy glue may be used to ensure a permanent hold by placing two pea size daubs of glue inside the post cap, and firmly placing it into place on top of the post. Glue excess may be quickly wiped off before it dries.

- **Pneumatic Nail Gun** - The color matching nails are normally driven with a pneumatic nail gun with 60 to 80 PSI air pressure at the gun or nails can be driven by hand (for air guns see tool list for model #). Please note the PSI required in warmer temperatures is typically lower than for cooler temperatures and will need to be adjusted on a test board before installation.

## Extra Tips