

# Fireball Fab – Welded Baluster Insert Panel

## System Installation Instructions

Prior to construction, check with your local regulatory agency for special code requirements in your area. Common railing height is 36" or 42". Maximum post spans will vary depending on job site conditions. Never span more than 6' on-center between railing posts. Railings longer than 12' in length will require reduced post spans. Read instructions completely to get an understanding of how the product goes together and how each piece affects the other.

### Key notes

- Review parts list installation instructions to ensure all necessary materials are present prior to beginning installation.
- On wood structures, review outer deck framing and determine post placement. Solid, structural blocking is required at all post locations. Typical rail centerline is 3" from deck edge; however, rail centerline can be adjusted to suit the application. Pre-drilling where wood screws will be used is recommended.
- Review and confirm a solid, structural mounting surface is present at building/column locations where railing ends connect to the structure.
- Posts may require shimming to ensure all posts are plumb and level in all directions.
- For installations into wood framing, drill pilot holes through deck boards to prevent splitting.
- Refer to Stair Installation instructions when installing stair railing.
- Use appropriate stainless steel fasteners to attach the railing system to the structure.
- When installing posts, ensure drain holes face outwards from deck surface. This allows for any water that may get trapped inside of posts to drain to the deck exterior. This will also ensure correct screw port orientation inside of posts, which is critical for stair mount plate/post mount installations.
- It is necessary to trim all posts requiring top sleeves to 34" or 40" (depending on System height) to maintain uniform rail height.

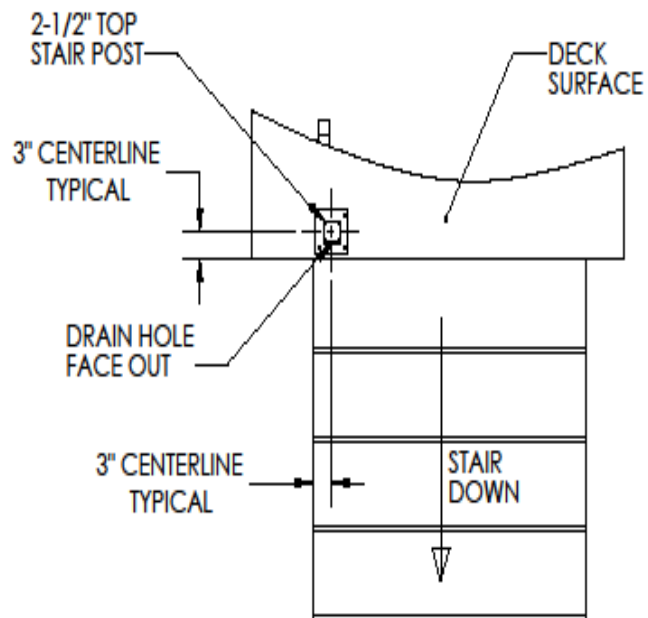
### Items required for installation

- Appropriate fasteners for mounting posts
- Power drill
- Level
- Metal drill bits (1/8" and 3/16")
- # 3 Square driver bit
- Miter saw with carbide-tipped, multipurpose blade
- Tape measure
- Power cords, drop sheets and safety glasses
- # 2 Square driver bit

## Step 1

### Installation of top stair posts (If applicable)

On decks with stairs present, begin by installing post at top of stair locations to ensure proper transitional alignment between deck rail and stair rail meeting points. Locate center of top stair post, 3" from edge in each direction, so post will align with bottom stair post.



## Step 2

### Installation of stair end posts (If applicable)

Temporarily install end stair post so rail centerline aligns with top stair posts installed in Step 1 (if applicable). Recommended post installation locations are as shown. \*\*\* NOTE\*\*\* Screw port orientation on 1-5/8" posts is critical to accept stair mount plate attachment when completing stair rail installation. Return to completing deck railing installation; upon completion of deck railing, refer to Deck Images stair rail installation instructions.

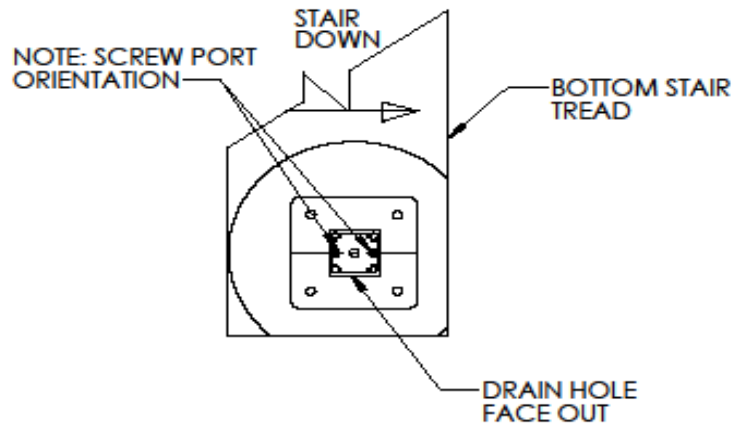
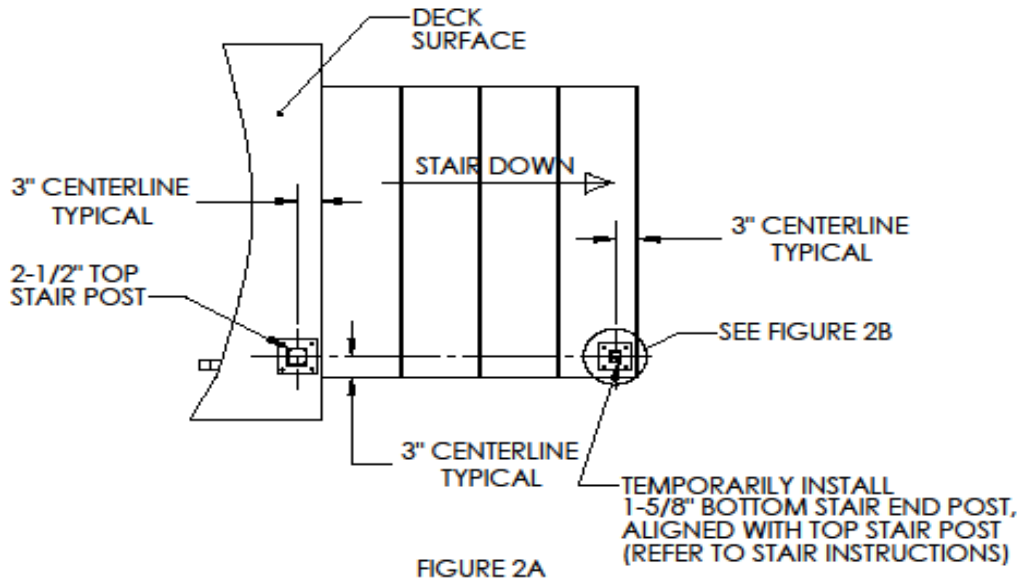


FIGURE 2B

Step 3

Installation of end posts

Install posts at all end locations with maximum gap between post and wall to be less than 4" opening. Install post mounts to top of end posts using 2-#8 X 3/4" stainless steel screws as shown.

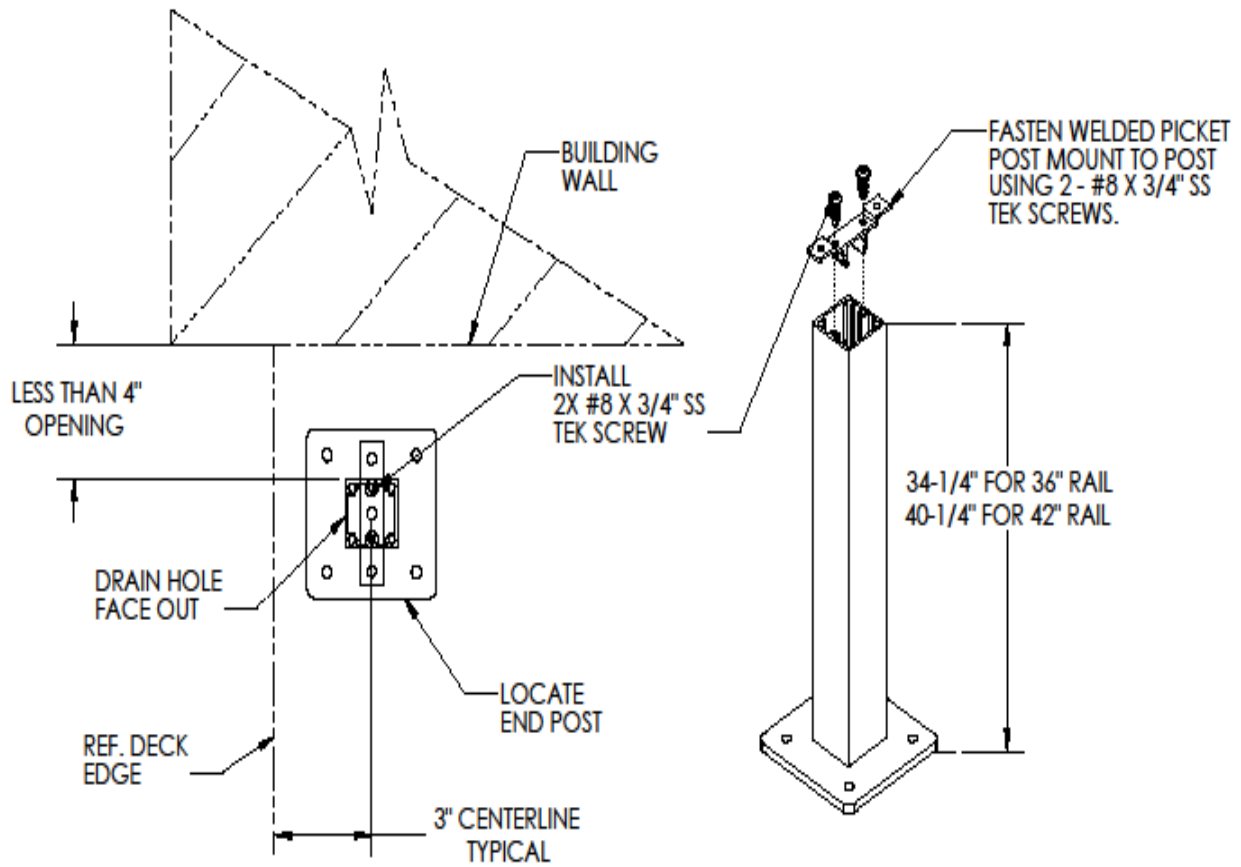


FIGURE 3A

FIGURE 3B

SNAP SERIES PICKET SYSTEM, STEP 3A & 3B,  
END POST, 11-15-10

Step 4

Installation of 90-degree corner posts

Trim 90 degree corner posts to proper height as noted. Position post on same 3" centerline (typical) and temporarily fasten using a single fastener through base plate mounting hole. Loosely install 90-degree top sleeves into top end of post. Do not fasten 90-degree top sleeve to posts to allow for installation of top rail later in the install process.

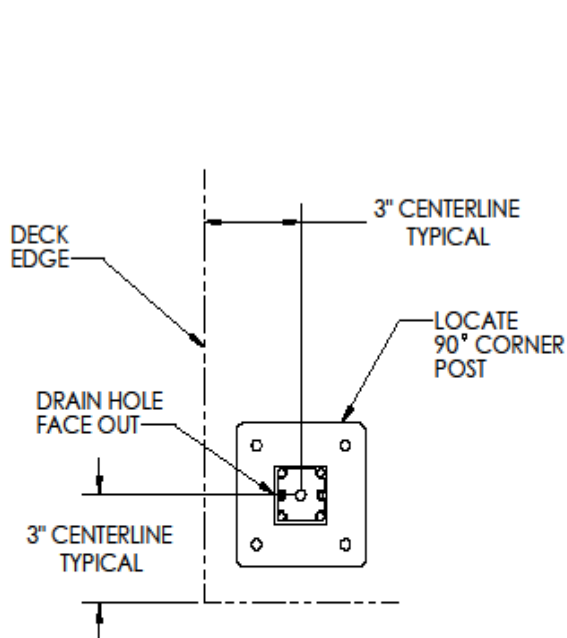


FIGURE 4A

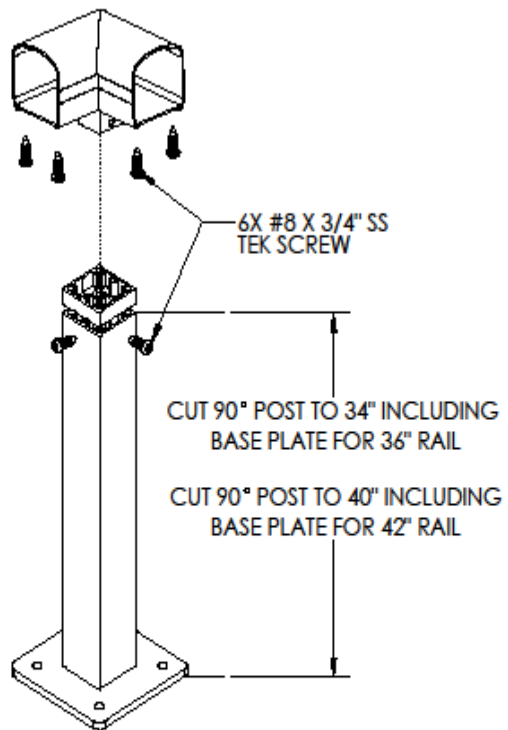


FIGURE 4B

## Step 5

### Installation of 45-degree corner posts

Trim corner posts to proper height as noted. Position post on same 3" centerline (typical) and temporarily fasten. Loosely install 45-degree top sleeves into top end of post. Do not fasten 45-degree top sleeve to post to allow for installation of top rail later in the install process. \*\*\*NOTE\*\*\* 45-degree corner post orientation is determined by bisecting corner angle. This step would also apply if using custom angle sleeves as well.

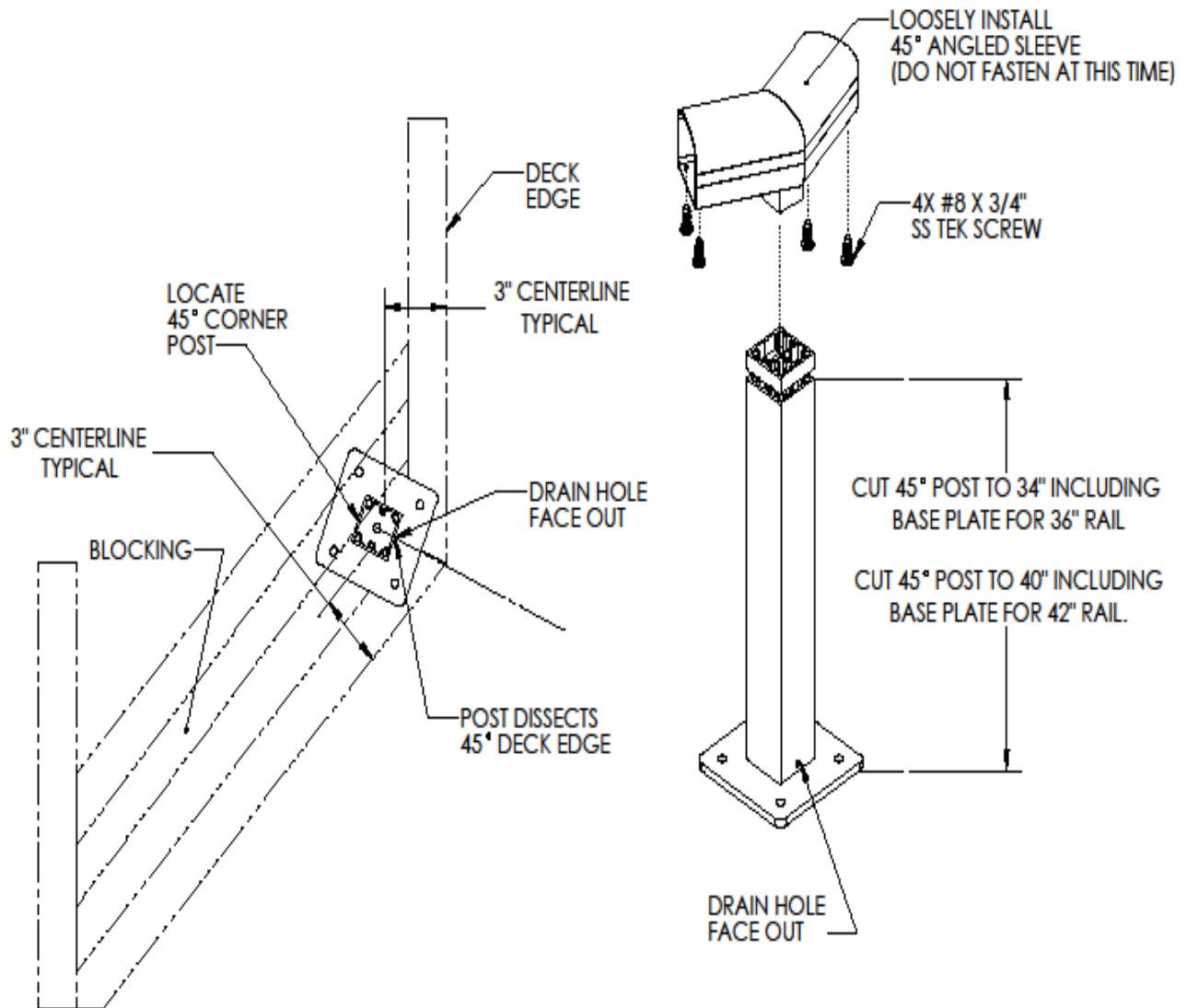


FIGURE 5A

FIGURE 5B

SNAP SERIES PICKET SYSTEM, STEP 5A & 5B,  
45° ANGLED POST, 11-15-10

Step 6

Installation of joiner top sleeve post (If applicable)

Rail sections over 24' will require a joiner top sleeve to join top rail sections. If possible, coordinate placement of joiner top sleeve at a center post in middle of span opening between end and corner posts to create a symmetrical, aesthetically pleasing look. Joiner top sleeve posts will need to be trimmed to required height to allow for uniform rail height. Loosely install joiner top sleeves into top end of all required joiner posts. Do not fasten joiner top sleeves to posts to allow for installation of top rail later. Temporarily fasten post to deck substrate using a single fastener through base plate mounting hole.

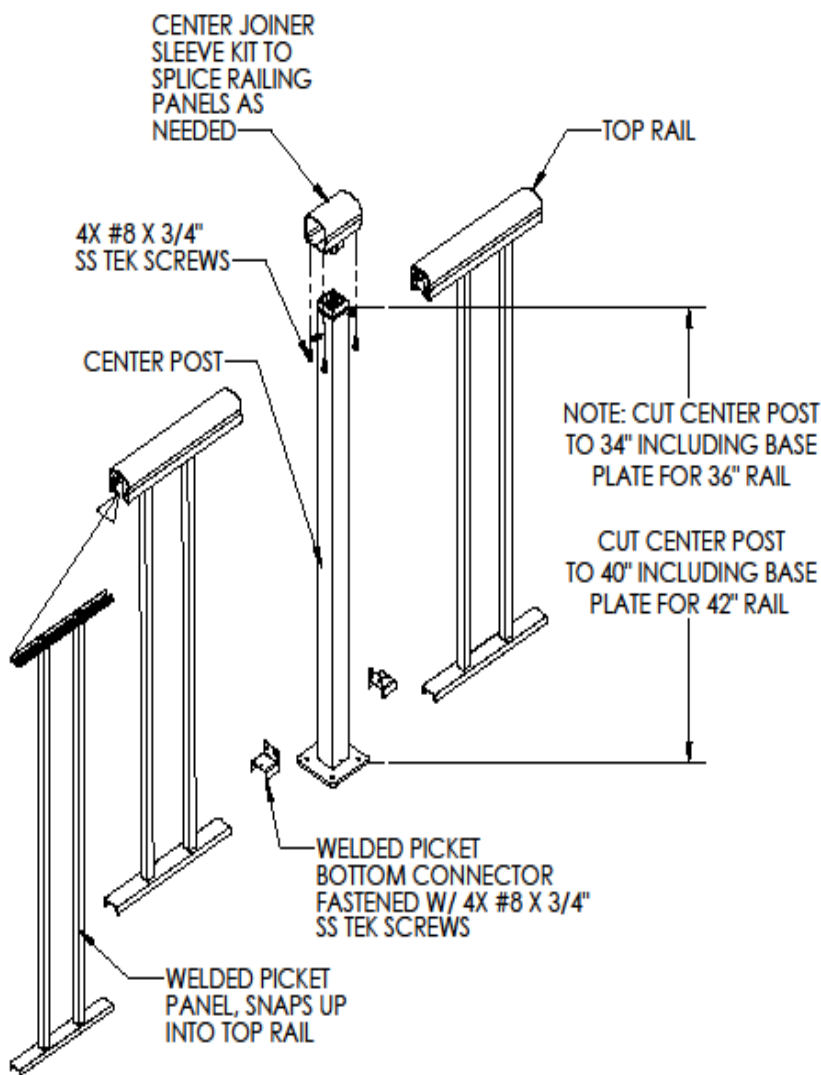


FIGURE 6A

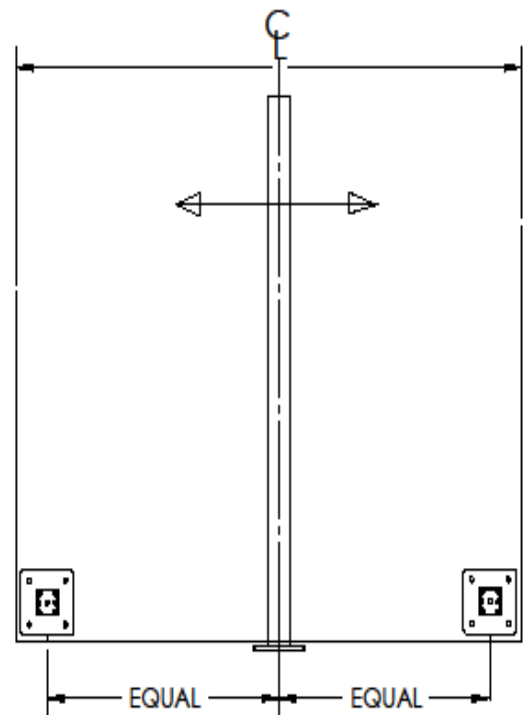


FIGURE 6B

## Step 7

### Installation of post mounts to center posts

Install post mount to top of all center posts using 2-#8 X 3/4" stainless steel screws as shown.

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## Step 8

### Determining center post locations

Loosely lay center post over deck edge and adjust as required to determine final center post mounting locations.

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## Step 9

### Installation of top mounts

Install any top mounts to allow for attachment of top rail to the building structure and deck rail termination points at top stair posts (if applicable). When fastening top mounts to building structure, ensure the mounting surface is structurally sound and adequate fastener type and length is used. Location of top mount should align with post centerlines. Fasten top mounts to top stair post locations using 2-#12 X 3/4" stainless steel Tek screws.

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## Step 10

### Installation of top rail

Measure top rail lengths required and cut to size. Allow approximately 1/2" clearance inside of all top sleeves and top mounts to allow for final plumbing and adjustment of posts. Start installation of top rail at wall locations. Insert top rail into top mounts installed to the building structure. Remove any loosely installed top sleeves to allow for installation of top rail as needed and continue working from one end to the other around the deck until top rail is loosely installed. Once top rail is loosely installed, use #8 x 3/4" screws to fasten all top mounts to the rail, top sleeves to posts and sleeves to the top rail.

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## Step 11

### Fasten post mounts to top rail

Plumb all end and center posts with level and fasten post mounts to top rail using 2- #8 x 3/4" stainless steel screws.

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## Step 12

### Cut baluster insert panels

Measure and cut panel assemblies to fit between post locations. Be sure to take into consideration the larger opening at the bottom rail area versus the top rail area when measuring. This is due to the location of the top mounts, sleeves

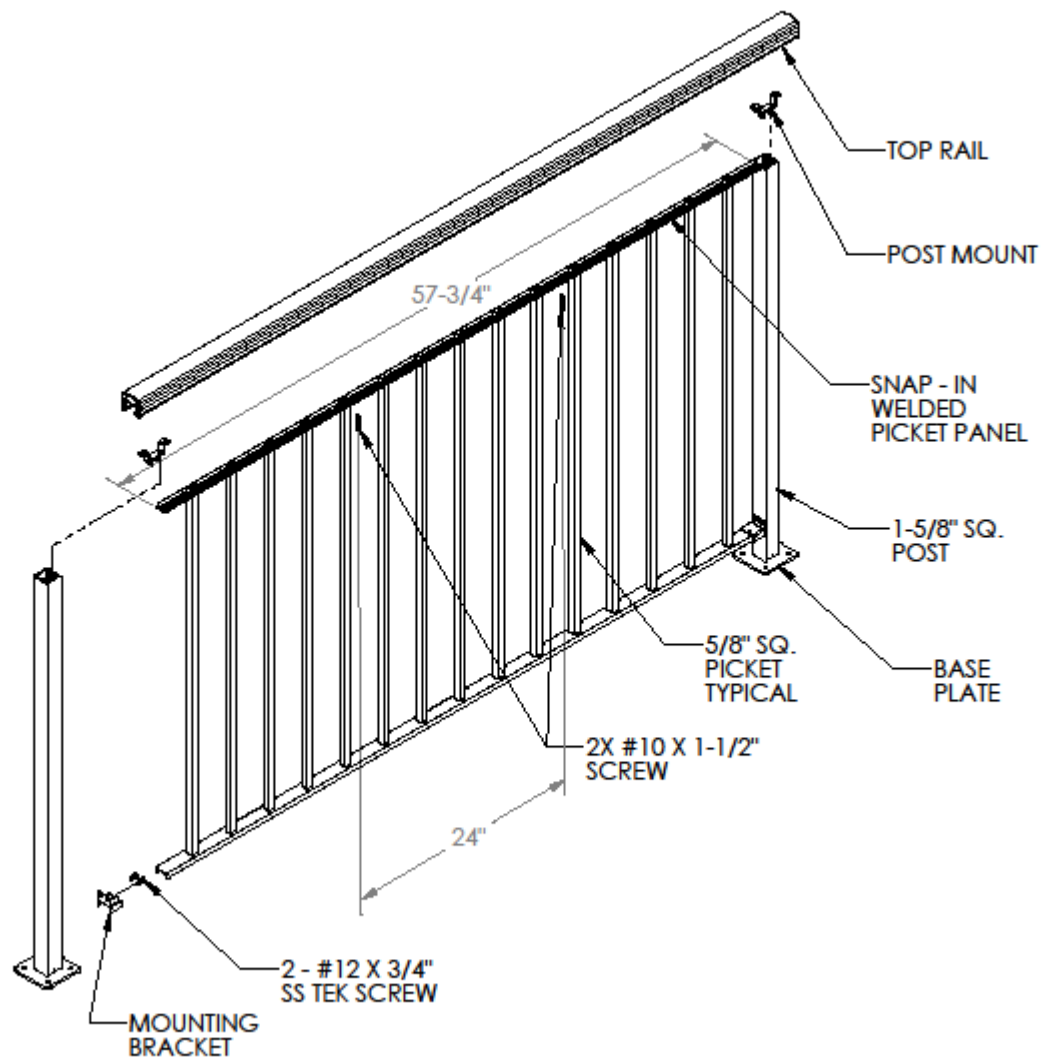


and post mounts. Also, if there is a slight slope to the deck for drainage, there may be a slight out of square condition to make up for. Snap support leg into bottom rail so the mounting hole will face inward toward deck surface.

### Step 13

#### Installation of baluster panels

Snap panels into underside of top rail and determine the desired location by sliding back and forth to make sure there is equal spacing on each end. Lock panel to top rail using 2 - #10 x 1-1/2" Tek screws. Center support leg between posts and fasten to deck using proper stainless steel fastener for substrate material.



### Step 15

#### Installation of baluster rail bottom mounts

Slide baluster rail bottom mounts over bottom rail on each end of baluster insert panel. Attach each bottom mount to post using 2 - #12 x 3/4" Tek screws. Check spacing to make sure it is equal between post and last baluster. Use a third #12 x 3/4" Tek screw to lock bottom rail to the bottom mount either through the top or side of it.

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Step 16

Final inspection

Once deck railing is complete, do a final inspection to ensure all required fasteners are correctly installed.