AMERICAN RAILING

Pre-Manufactured Metal Railing Systems — Professional Installation Guide

IMPORTANT CODE COMPLIANCE NOTICE: Users must refer to their local building code requirements before beginning installation. Standard regulations typically mandate that no space between posts, rails, walls, or floors should allow the passage of a 4-inch diameter sphere. Proper planning ensures full structural integrity and compliance.

Pre-Installation Planning & Surface Verification

1 Identify and Verify Mounting Surface

Ensure the installation surface possess the desirable structural properties required to safely accommodate post mounting brackets. Desirable and approved structural surfaces include:

- **Concrete:** Solid, cured concrete structural slabs or footings.
- **Wood Framing:** Solid floor or rim joists located directly beneath the floor sheathing or finish decking material.
- **Steel Framing:** Structurally sound structural steel joists, tube steel, or structural I-beams.

2 Locate and Mark Post Centers

Layout and mark the exact centerline positions for all posts on your mounting surface. Always verify spacing constraints in relation to your local codes (such as the 4" sphere rule).

> **Concrete Edge Proximity Note:** For installations on concrete surfaces, it is highly recommended that posts located near the perimeter are placed **no less than 3 inches from the concrete edge**. This dramatically reduces the possibility of localized concrete fracturing or breaking during anchoring and loading.

Step-by-Step System Installation

3 Install Post Mounting Brackets

Position and orient the mounting brackets over your marked locations. Brackets must be carefully clocked (rotated) appropriately so that the post-to-bracket alignment holes match correctly, while simultaneously ensuring that the integrated post rail holes align perfectly with the trajectory of the horizontal rails in subsequent steps.

> **Fastener Notice:** Due to the various mounting materials unique to each user's structural project, mounting bracket fasteners are **not included** with this kit. Follow the specific substrate criteria below:

Substrate Material	Recommended Fasteners	Installation Requirements
Concrete Surface	High-quality concrete lags or expansion anchors.	Pre-drill using a masonry bit matching the exact diameter required by the anchor manufacturer. Clean hole thoroughly before setting anchor.
Wood Framing	Heavy-duty structural timber fasteners / lag screws.	Pre-drill pilot holes matching manufacturer specs. *Note: Installation into decking/composite boards alone is strictly prohibited. Fasteners must completely penetrate decking into underlying framing.*
Steel Framing	Minimum 1/4" diameter self-drilling structural fasteners, through-bolts with nuts, or heavy-duty threaded inserts.	Select the option that best suits your access. Pre-drill matching pilot holes according to the hardware manufacturer's specification requirements.

4 Secure Posts to Brackets

Slide the pre-fabricated metal posts fully down over the secured mounting brackets. Align the integrated fastening holes and secure the post tightly using the **provided 1/4" self-drilling fasteners** directly through the aligned mounting holes. Thread lubricant must be used to prevent fastener breakage.

Alternative Option: Through-bolts with locking nuts (not provided) can be utilized if preferred. If choosing through-bolts, the pre-drilled bracket mounting holes will need to be drilled out to the appropriate corresponding through-bolt diameter size.

5 Measure, Cut, and Install Railings

Carefully measure the center-to-center distance between your installed posts and cut your architectural rails to the respective required lengths.

Critical Corner Adjustments:

Corner posts require the top rectangular rail length to be measured from the **outside of adjacent post rectangular openings**, which translates to exactly **1 inch longer** than the standard center-to-center post measurement per corner post.

Top rectangular rails terminating inside corner posts **must be cut to a 45-degree angle** relative to the direction of the corner. This angle cut provides the vital internal clearance necessary for the adjacent meeting rail to insert deeply enough into the post for its respective securing fasteners to be safely installed.

Final Assembly:

Install all subsequent horizontal rails by carefully sliding the rail profiles directly through the integrated post rail openings. Once seated properly, lock them permanently into place using the **provided self-drilling fasteners**.