

Chapter 4

Bridge Program Drawings

Section 4.11 - Pedestrian Railing

Introduction

Pedestrian railing is installed on the outside edge of a bridge sidewalk/walkway for pedestrian safety.

Pedestrian Railing Types

STANDARD PEDESTRIAN RAILING normally has a four-rail with expanded metal configuration, with the top rail 3'- 7" above the sidewalk/deck, and is used on bridges that do not cross over a railroad, highway, or any urban traveled way. Top rail height above a sidewalk/deck may be increased by adding more rails at spacing equal to standard railing.

PEDESTRIAN SAFETY RAILING includes an industrial fence that curves partially over the pedestrian walkway, thereby preventing debris from being tossed over the railing onto the railroad, highway, or traveled way below.

General Design and Detail Information

EXPANSION SPLICES refer to the expansion joint placed in the railing, in the span between railing posts, that crosses over the bridge expansion device.

Post locations are governed by a **MAXIMUM AND MINIMUM POST SPACING**, the location of expansion devices and sidewalk contraction joints, and the **MINIMUM CONCRETE CLEARANCE** between the end of slab/sidewalk and the portion of the anchorage system nearest the face of the concrete.

Standard Pedestrian Railing

Maximum Post Spacing: 9'-6"

(Use 1" increments for post spacing when possible.)

Minimum Post Spacing: 7'-0"

Minimum Concrete Cover at end of slab and approach slab, cold joints, and expansion joints: 6" (This is not applicable at sidewalk contraction joints on bridges with continuous decks.)

Pedestrian Safety Railing

Maximum Post Spacing: 10'-0"

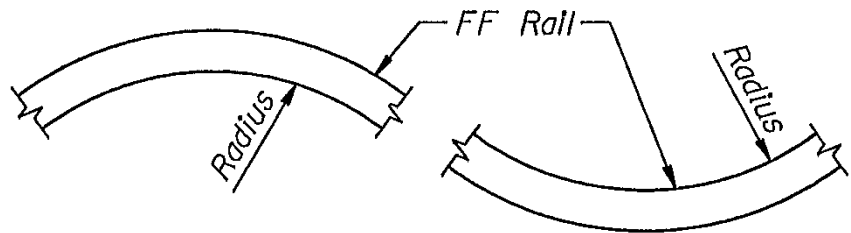
(Use 1" increments for post spacing when possible.)

Minimum Concrete Clearance at end of slab and approach slab, cold joints, and expansion joints: 6" (This requirement is not applicable at sidewalk contraction joints on bridges with continuous decks.)

If a **HANDRAIL** is used, it shall be a 1¼" ϕ pipe located 3'-0" \pm above the walking surface. The minimum clearance of a handrail is 1½". Use a handrail when pedestrian traffic is anticipated.

RAILING POST BASE PLATES may not have any portion of the plate extend onto or lie across sidewalk contraction joints.

On curved bridge decks, the pedestrian railing lengths shall be shown along the front face of the railing. Radius to the railing shall be shown to the inside of the curve.



Standard pedestrian railing **TERMINAL CANTILEVER** past the end post should be 2'-0" (minimum) and 3'-0" (maximum) with increments of 3".

**Standard
Sheets**

Name Description

PDRAIL_PD1	Standard four-rail pedestrian railing. Details of post, anchorages, and post on sidewalk.
PDRAIL_PD2	Standard four-rail pedestrian railing. Elevation and details of rail to post connection and sleeve
PDSAFE_PD1	Pedestrian safety railing. Details of end and expansion panels. Pedestrian safety railing plan to be drawn on this sheet.
PDSAFE_PD2	Pedestrian safety railing. Details of post on sidewalk, anchorage, handrail, and U-bolts.