



Illinois Department of Transportation

Memorandum

To: ALL BRIDGE DESIGNERS 25.4
From: Jayme F. Schiff
Subject: 2025 Railing Library Update
Date: November 7, 2025



On September 30, 2022, the Department issued ABD 22.5 regarding bridge railing compliance with the 2016 AASHTO Manual for Assessing Safety Hardware (MASH). Portions of ABD 22.5 have since been incorporated into the 2025 Bridge Manual (Section 2.3.6.1.7). However, evaluation of the Department's bridge railing policies are ongoing, and this memorandum supersedes ABD 22.5 and summarizes the latest status of select railings in our [IDOT CADD Bridge Cell Library](#).

Summary

1. The R-34 (Steel Railing, Type SM) is now specified using 4,000 psi concrete for the deck/approach slab.
2. The R-41 (Steel Railing, Type SMX) has successfully passed the physical crash tests for MASH TL-3 using 4,000 psi concrete for the deck/approach slab. The Department has removed its "Conditional" rating stated in policy and base sheet documents.
3. The Department has updated its policy for selecting Temporary Steel Railings when Base Sheet R-27 Temporary Concrete Barrier (Highway Standard 704001) cannot be used.
4. The District or Owner shall specify the railing treatment in the General Notes on the Contract. Railings are typically galvanized, but alternate treatment options are available upon request.

R-34 (Steel Railing, Type SM) and R-41 (Steel Railing, Type SMX)

The R-34 (Steel Railing, Type SM) railing was re-evaluated and now specifies using 4,000 psi concrete in the deck/approach slab for its existing MASH TL-2 rating. Also, the Conditional MASH TL-3 R-41 (Steel Railing, Type SMX) railing passed the two required physical crash tests using 4,000 psi concrete in June 2025 and is acknowledged as a MASH TL-3 crashworthy system.

Guide Bridge Special Provision (GBSP) 34 (Concrete Wearing Surface) has been updated for the latest concrete strength railing requirement. Bridge Manual Section 2.3.6.1.7 will be revised accordingly on its next scheduled update

Summary and Changes from Prior ABD 22.5 Policy

Removed / Archived Railing	Suitable Alternative Railing	
	Name	MASH Test Level
R-23A (Type S-1) *	R-34 (Type SM)	2
R-24A (Type T-1) *	R-34CWSC (Type SM)	2
R-25 Steel Railing (Temporary)** or TxDOT T631 Railing (Temporary)**	R-27 (Temporary Concrete Barrier)	NCHRP 350 TL-3
	www.roadsidepooledfund.org	3
R-26 (Type TP-1)	R-28 (Bridge Fence Railing)	NCHRP 350 TL-4
	R-32 (Bridge Fence Railing, Curved)	NCHRP 350 TL-4
R-30 (Type WT)	R-34HMAWS (Type SM)	2
R-31 (Type 2399)	R-42 (Type CO-10)	4
R-39 (Bicycle Railing, Parapet)	R-29 or R-33 (Parapet Railing)	4
	R-29 (Bicycle Railing) or R-33 (Bicycle Railing, Curved)	NA

Notes:

* **Local Only Railings:** The R-23A (Type S-1) & R-24A (Type T-1) railings remain removed and archived as stated September 30, 2022, for use on State Routes. For local public agencies on the local system, the R-23A (Type S-1) & R-24A (Type T-1) continue to be used and are available in the “Local Bridge” Base Sheets at the primary [IDOT CADD Bridge Cell Library page](#).

** **Temporary Railings:** The R-25 Steel Railing (Temporary) remains removed and archived as stated September 30, 2022, due to (a) its geometric and structural deficient MASH Test Level requirements, and (b) its rare usage on staged construction projects where there is not adequate space for a temporary concrete barrier and drilling into the concrete deck is allowed.

Although the Department stated September 30, 2022, that the temporary TxDOT T631 Bridge Railing, which is crash tested to a MASH Test Level 3, was an available alternative, the Department no longer encourages its use due to its potentially large lateral deflections.

When Base Sheet R-27 Temporary Concrete Barrier (Highway Standard 704001) cannot be used, the planner/designer may consider specifying a MASH TL-3 crash tested railing from the following link: <https://www.roadsidepooledfund.org/mash-implementation/search/>. The Department is not currently maintaining standard details for temporary steel railings on this website due to insufficient demand.

Specifying Railing Treatment

Designers shall specify the District's or Owner's desired railing treatment on the Contract plan General Notes according to the existing note located on Base sheets R-28, R-29, R-32, and R-33. Galvanizing is typically the preferred treatment for most railings. If an alternate railing treatment is desired, please contact the Bureau of Bridges and Structures for railing treatment options.

Implementation

This memorandum shall be applicable to all design plans prepared from TS&L plans approved on or after December 1, 2025. Railing CADD Cell Library base sheets (with revision date 10/3/2025) and General Notes have been uploaded to the IDOT website.

Railings which have been removed and archived may still be requested for projects if a suitable MASH Test Level railing is not available, and when approved by the Bureau of Bridges and Structures.

Please direct questions to Kevin Riechers, Policy, Standards and Final Plan Control Unit Chief, by email at dot.bbs.comsuggest@illinois.gov.

PLP