

Figure 5-397.154

Metal Railing (Type M-1) for Bikeways on Concrete Parapet (Type P-1)

Approved, and signed, December 2, 2015

Re-approved 12-02-2015

This standard was updated to remove all of the reinforcement and details regarding the concrete parapet, as that information is now provided on Std Figure 5-397.166. The statement regarding the railing meeting NCHRP TL-2 was also removed as that is a function of the parapet, not the railing. The title of the standard was also updated.

The following additional changes were made:

At INSIDE ELEVATION OF RAILING:

- The reinforcement was removed from the parapet.
- The top and bottom rails were changed from C 3 x 4.1 to C 3 x 6.
- Reference to the abutment wingwall and bridge superstructure were eliminated.
- A 12" minimum spacing between the rail post and adjacent control joint was added.
- The maximum post spacing was changed from 10' to 8'.
- A designer note and updated note regarding the joint opening was added.
- Added circled notes at the light pole.

At SECTION B-B (Now A-A):

- Section B-B was changed to Section A-A.
- The reinforcement was removed.
- The shape of the parapet was changed to reflect that shown on Std Figure 5-397.166.
- Added a designer note stating "For roadway design speeds greater than 35 mph, ornamental railings must be protected by a traffic barrier."

At DETAIL A and DETAIL B:

- The weld symbols were corrected, the detail was expanded, and the size of the steel end plate was added.

At RAILPOST BASE PLATE:

- The baseplate thickness was changed from 1/2" to 3/4".
- The weld between the railpost and baseplate was changed from 3/8" to min. weld.

At END RAILPOST DETAIL:

- The channel members were changed from C 3 x 4.1 to C 3 x 6.
- The weld symbols were updated and the 1/4" welds were changed to minimum weld size required by code.

At INTERMEDIATE RAILPOST DETAIL:

- The 1/4" welds were changed to minimum weld size required by code.

At TYPICAL RAILPOST DETAIL:

- The channel members were changed from C 3 x 4.1 to C 3 x 6.
- The weld between the railpost and baseplate was changed from 3/8" to min. weld.
- The width and details regarding the parapet were updated to match Std Figure 5-397.166.
- The note regarding shims was removed.

The following details/tables were removed:

DEFLECTION JOINT DETAIL

RAIL RUSTICATION

GUARDRAIL CONNECTION DETAIL

SECTION B-B

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The following details/tables were removed (cont'd):

SECTION C-C

BILL OF REINFORCEMENT TABLE

All reinforcement bend details

At GENERAL NOTES:

The notes were completely rewritten in active voice and updated to conform to current requirements for ornamental metal railings, including updates to the adhesive anchor requirements. New notes were added for the anchorages including minimum embedment and torque requirements. A new note was added for continuous grounding of the railing.

Revised 04-17-2013

This standard was updated to convert reinforcing bar marks from metric to U.S. customary bar designations.

Approved, and signed, December 18, 2003.