

Figure 5-397.117(A)

Concrete Barrier (Type F, TL-4) Integral or Semi-Integral Abutment with Integral End Post (With Concrete Wearing Course)

Approved, and signed, January 13, 2015. Last date revised: November 3rd, 2015

Revised 11-03-2015

At the Bar Bend Details:

- Changed the bar numbering for the barrier ties at the bar bend title from “R503E, R505E & R506E” to “R503E, R504E & R505E”.

Re-Approved 01-13-2015

Changed the Standard Figure number *from* Fig. 5-397.117 *to* Fig. 5-397.117(A).

Changed the Standard Figure sub-title name *from* With Integral End Post (With Concrete Wearing Course) *to* Integral or Semi-Integral Abutment with Integral End Post (With Concrete Wearing Course).

Removed Detail “A” and Detail “B” and all accompanying references to them from the Standard Figure.

Removed reinforcement (* R504E bar) from the Bill of Reinforcement and the bar bend details due to the removal of Detail “A”.

Changed the reinforcement numbering sequence throughout the standard to accommodate the reinforcement change.

At Section A-A:

- Removed the dashed reinforcement and accompanying note within the wingwall.

At the Inside Elevation of Barrier and at Section E-E:

- Changed the saw cut gap *from* 1/8” *to* 1/4” at the joint.

At Section C-C:

- Changed the deck coping/overhang *from* 1” *to* 2”.

Changed the Designer Note to read: For bridges with superelevation exceeding 2%, show the barrier front face dimensions as indicated on this sheet, and also calculate and show the barrier back face dimensions. Also verify that bar R501E has 10" min. projection when cross slope varies from normal 0.02 ft/ft

At GENERAL NOTES:

- Changed 1st note to read: “Measure payment length between the outside faces of the barrier”.
- Changed the 4th note to read: “Space control joints at 10 ft. maximum. See superstructure sheet for joint spacing.”

Re-Approved 11-06-2013

At SECTION C-C:

- Added a 2” x 1’-0” high aesthetic coping to the back face of the barrier and removed the barrier rustication reveals. Added or changed barrier dimensions accordingly. Added 1/2” Chamfer (Typ.) to the outside top corner of the barrier.
- Changed the reinforcement to 3” CLR. at the outside face of the barrier. Changed the deck coping dimension from 2” to 1”
- Removed the “MIN” from the 10” PROJ. MIN. dimension for the R501E bar.

At INSIDE ELEVATION OF BARRIER:

- Added sub-title at INSIDE ELEVATION OF BARRIER: See Detail “A” For Parapet Abutment.
- Changed the joint title *from* “EXPANSION JOINT” *to* “JOINT AT ABUTMENT” and also changed the accompanying sub-title *from* (Expansion Device not Shown) *to* (Integral or Semi-Integral Abutment).
- Changed the look of the Joint at Abutment with Saw Cut information and dimensions, barrier dowel and vertical bar spacing, section arrows E-E and joint notes.
- Changed the dimension of the barrier off the bridge *from* “Abutment Wingwall *to* Bridge Approach - Barrier Length 7’-0” Minimum.

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- Replaced the “Deflection Joint” with a “Control Joint” showing longitudinal reinforcement continuing through the joint and new vertical reinforcement spacing. Added Control Joint spacing and detail notes, along with Section arrows D-D.
- Added the new minimum lap for the longitudinal reinforcement. Added dashed horizontal line representing the 2” x 1’-0” barrier aesthetic coping along with the 3’-0” dimension ending the aesthetic coping.
- Changed the approach curb look. Changed the note: “Top of Structural Slab” to “Top of Slab”. Changed longitudinal and vertical bar designations.

At SECTION A-A:

- Changed the look of the Section to show the barrier on the approach panel and the wingwall outside of the approach panel with 1½” polystyrene separating them with a reference to Detail “B”.
- Widened the barrier (full depth), matching the coping on the superstructure. Changed barrier dimensions accordingly. Increased the length of the Guardrail Connection pipes to accommodate the widened barrier.
- Added R502E bar with dimension to the edge of the approach.
- Added note referencing the reinforcement needed if the barrier is located on the wingwall.

At Section B-B:

- Increased the dimensions for all lengths of pipe by 2” to accommodate the widened barrier.
- Added the ½” dimension from the ends of the pipes to the edge of the concrete.
- Added sub-title note “Trim Guardrail Bolts Such That No More Than 1 ½” Protrudes From Back Face of Barrier”.

At the GUARDRAIL CONNECTION DETAIL:

- Removed the “Mn/DOT” from the “Per Mn/DOT Spec.” reference.
- Changed the estimated weight of the plate from 22 to 23 pounds.

Replaced the “Deflection Joint Details” with “Control Joint Details on the standard.

Removed the “Barrier Rustication” detail from the standard.

Added “Detail “A” detailing the barrier reinforcement for a parapet abutment and barrier on wingwall. Also added “Detail “B” showing the widened barrier, polystyrene and wingwall relationship for the 3’-0” end of barrier along the approach panel.

Adjusted reinforcement bar dimensions and lengths at the “Bar Bend Details” and the “Bill of Reinforcement For Barrier” locations due to the 3” clear at the outside of the barrier. Added barrier dowel R502E bar and adjusted bar designations throughout the standard.

Added to the Designer Note “For bridges with superelevation exceeding 2%, show dimensions for both the front and back face of the barrier.

At GENERAL NOTES:

- Changed 1st note to read: “Payment length shall be measured between the outside faces of the barrier”.
- Changed the 2nd note to read: Concrete Barrier = 502 LBS./FT. (0.124 CU. YDS./FT.)
- In the 3rd note, changed ½” Vee to ½” Chamfer.
- Changed the 4th note to read: “Maximum spacing of control joints shall be 10 ft. See superstructure sheet for joint spacing.”
- In the 5th note, removed the “Mn/DOT” preceding the spec. number.
- Changed the 6th note to read: Guardrail connection and name plate to be considered incidental to barrier.
- Added “② Joint sealant per Mn/DOT approved/qualified products list –Crack and joint materials – Silicone joint sealers.

Revised 04-17-2013

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

Revised 05-26-2006

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Changed title *from* Concrete Railing (Type F) With Integral End Post (With Concrete Wearing Course) *to* Concrete Barrier (Type F, TL-4) With Integral End Post (With Concrete Wearing Course)

Changed all instances of RAIL and RAILING *to* BARRIER.

At INSIDE ELEVATION OF BARRIER:

- Moved name plate an additional 3" from expansion joint (*from* 1'-6" *to* 1'-9")
- Added additional dowel and vertical bars to each side of expansion joint

Under GENERAL NOTES:

- Changed LENGTH OF "TYPE F RAILING CONCRETE ..." *to* LENGTH OF "TYPE F (TL-4) RAILING CONCRETE ..."
- Changed GUARDRAIL CONNECTION TO BE INCLUDED IN PRICE BID FOR OTHER ITEMS. *to* GUARDRAIL CONNECTION, CORK, AND NAME PLATE TO BE CONSIDERED INCIDENTAL TO "TYPE F (TL-4) RAILING CONCRETE (3Y46 OR 3Y46A)".
- Changed RAIL QUANTITIES ARE INCLUDED IN SUMMARY ... *to* BARRIER QUANTITIES ARE LISTED IN SUMMARY ...

Approved, and signed, December 18, 2003, by D. Dorgan