

**Figure 5-397.116**

**Concrete Barrier (Type F, TL-4) With Separate End Post  
(With Concrete Wearing Course)**

Approved, and signed, November 06, 2013. Last date revised: November 3<sup>rd</sup>, 2015

**Revised 11-03-2015**

At Section C-C:

- Changed the deck overhang at the backside of the barrier from 1” to 2”.

**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 ½” 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:

- 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, dashed horizontal line representing the 2” x 1’-0” barrier aesthetic coping.
- Changed the approach curb look. Changed the note: “Top of Structural Slab” to “Top of Slab”. Changed longitudinal bar designations.

At SECTION A-A:

- Widened the barrier (full depth) matching the coping on the superstructure. Changed the barrier dimensions accordingly.
- Changed the look of the R708E bar to represent the actual shape of the bar. Increased the length of the Guardrail Connection pipes to accommodate the widened barrier.

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.

At the PLAN VIEW OF END POSTS:

- Changed the look to represent the widening of the end posts and the added aesthetic coping on the deck.
- Added sub-title “Expansion Joint (Device Not Shown)”

Removed the “Barrier Rustication” detail from the standard.

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

Adjusted R502E and R503E 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. Removed the barrier longitudinal bar designations in the table.

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

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