Standard Division Bridge

FILE:  
DATE:  
JTR:  
SHEET NO.:  
COUNTY:  
SECT:  
DIST:  
REVISIONS:  

TxDOT

DISCLAIMER:

End of Bridge Rail
End of Tubular Raised Sidewalk

Showing combination rail on a raised sidewalk.

ELEVATION SHOWING TYPICAL REINFORCING PLACEMENT

TERMINAL CONNECTION DETAILS

1. Terminal Connectors and associated hardware are to be paid for under the item "Metal Beam Guard Fence". Metal Beam Guard Fence transitions to the bridge rail and extend along the embankment unless otherwise shown in the plans.
2. Expansion Joint or Splice Joint as required.
3. Same as slab joint opening. (10" Max Expansion Joint).
4. 1/2" Min. 8" Max.
5. Rail member sections must have at least two posts but not more than four.
6. HSS 6 x 2 x 1/4 (ASTM-A6063 or A500 Grade B).

ELEVATION

SECTION

ROADWAY ELEVATION OF RAIL

Demonstrating combination rail on a raised sidewalk.

INTERMEDIATE CURB JOINT DETAIL

Provide at all interior bents without slab expansion joints.

COMBINATION RAIL

TYPE CIW

Sheet 1 of 4
CONSTRUCTION NOTES:
The face of slab and curb must be planed unless otherwise approved by the Engineer. Steel bars must be square to the top of curb. Use Type V358 epoxy mortar under post base plates if gage larger than 1/4" wide.

Cement ties to required radius for curbed rafts. Shop drawings for approval are required for curbed rafts.

One shop splice per rail member section is permitted with two extra splices permitted for curbed rafts. Splices must be square groove or single reel groove. Grind smooth.

Round or chamfer exposed edges of rail members and rail post must be rounded or chamfered to approximately 1/4" by grinding. Chamfer all exposed concrete corners.

MATERIAL NOTES:
Provide ASTM A1035 or A325 or B for all HSS. Provide Grade 60 reinforcing steel (Type Epoxy) for use in combination rail. 

Provide Type A325 or A449 Grade A325 or A449 (ASTM A193) or B7 or F1554 Grade 1300 threaded rods with one tack welded heavy hex nut with each hardened steel washer (ASTM F436) placed under each heavy hex nut that conforms to ASTM A434 requirements.

Provide Type A193 round bar (ASTM A36) with plane washer (ASTM A439) and regular lock washers placed under hex nuts that conform to ASTM A434 requirements. 

Provide Class "S" concrete. When Class "S" concrete for slab is NCP, include a minimum of 3 gallons of calcium nitrate inorganic corrosion inhibitor per cubic yard of Class "S" concrete.

Provide bar caps, where required, as follows:

- A36 carbon steel.
- A193 Gr B7 or F1554 Gr 105 threaded rods with one tack welded heavy hex nut with each hardened steel washer (ASTM F436) placed under each heavy hex nut that conforms to ASTM A434 requirements. 

GENERAL NOTES:
This railing cannot be used on bridges with expansion joints elsewhere in plans for these modifications.

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