

THE GUARDRAIL ANCHOR ASSEMBLY SHALL CONSIST OF A ¼" HOLD DOWN PLATE AND 7 - ⅞" Ø BOLTS WITH NUTS AND WASHERS.

THE HOLD-DOWN PLATE SHALL CONFORM TO AASHTO M270 GRADE 36. AFTER FABRICATION, THE HOLD-DOWN PLATE SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M111.

BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307 AND NUTS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M291. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. AT THE CONTRACTOR'S OPTION, STAINLESS STEEL BOLTS, NUTS AND WASHERS MAY BE USED AS AN ALTERNATE FOR THE  $\frac{3}{8}$ "  $\varnothing$  GALVANIZED BOLTS, NUTS AND WASHERS. THEY SHALL CONFORM TO OR EXCEED THE MECHANICAL REQUIREMENTS OF ASTM A307. THE USE OF THIS ALTERNATE SHALL BE APPROVED BY THE ENGINEER.

THE GUARDRAIL ANCHOR ASSEMBLY IS REQUIRED AT ALL POINTS WHERE APPROACH GUARDRAIL IS TO BE ATTACHED TO THE END OF THE PARAPET. FOR POINTS OF ATTACHMENT, SEE SKETCH.

AFTER INSTALLATION, THE EXPOSED THREAD OF THE BOLT SHALL BE BURRED WITH A SHARP POINTED TOOL.

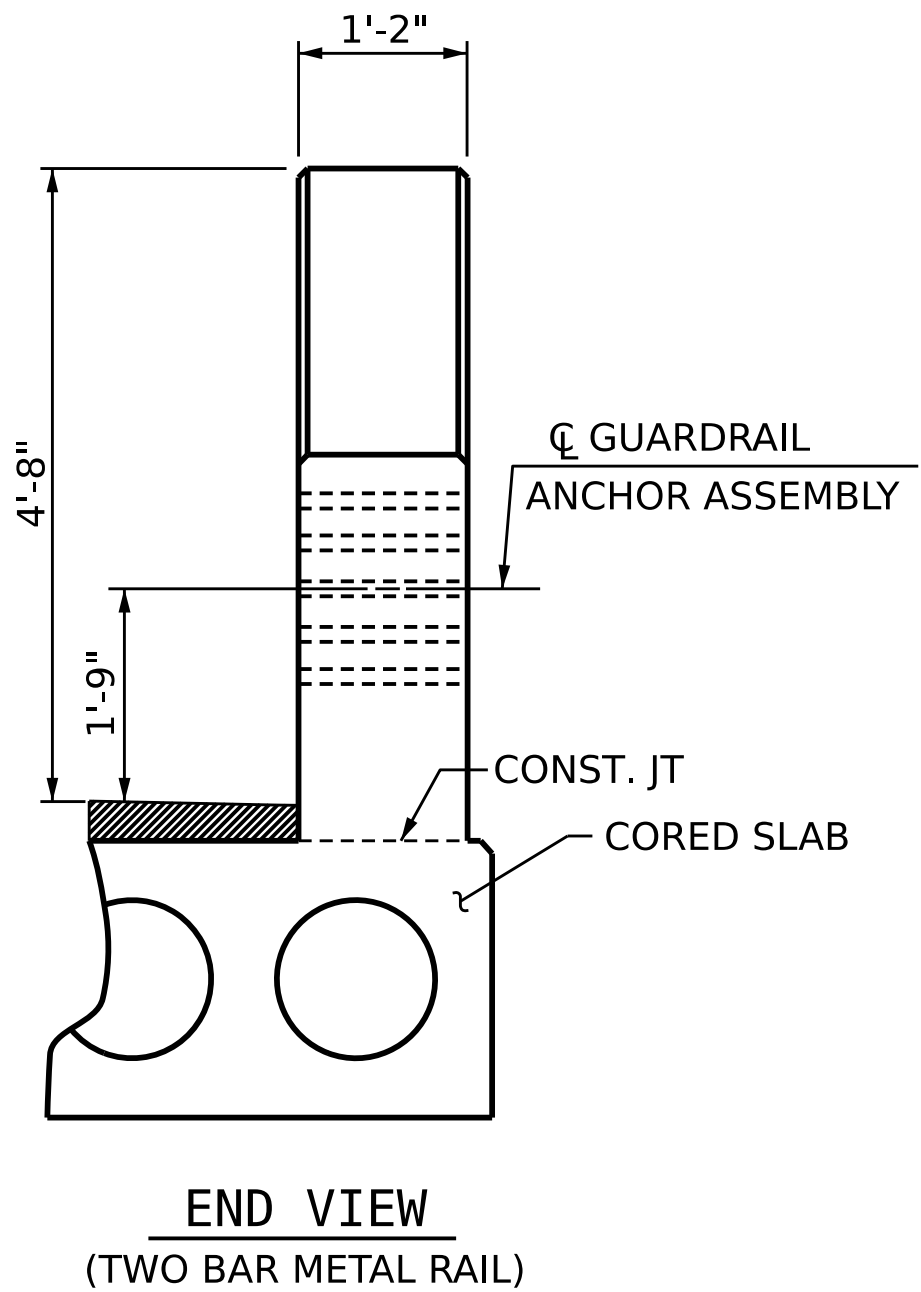
THE COST OF THE GUARDRAIL ANCHOR ASSEMBLIES WITH BOLTS, NUTS AND WASHERS COMPLETE IN PLACE, SHALL BE INCLUDED IN THE VARIOUS PAY ITEMS.

THE VERTICAL REINFORCING BARS MAY BE SHIFTED SLIGHTLY IN THE END POST TO CLEAR ASSEMBLY BOLTS.

THE 1 3/4" Ø HOLES SHALL BE FORMED OR DRILLED WITH A CORE BIT. IMPACT TOOLS WILL NOT BE PERMITTED. ANY CONCRETE DAMAGED BY THIS WORK SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER.

The diagram illustrates a bridge deck cross-section. It features a central rectangular area representing the main deck, flanked by two trapezoidal sections representing the approach slabs. The top and bottom edges of the central area are marked with asterisks (\*). The left and right edges of the approach slabs are also marked with asterisks (\*). Labels with leader lines point to the 'END OF CORED SLAB @ END BENT 1' on the left, 'END OF CORED SLAB @ END BENT 2' on the right, and 'APPROACH SLAB' on both the left and right sides.

## \* LOCATION OF GUARDRAIL ATTACHMENT



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
STANDARD

## GUARDRAIL ANCHORAGE DETAILS FOR TWO BAR METAL RAIL

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-18
1			3			TOTAL SHEETS
2			4			32

DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED

## STD. GRA3

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DRAWN BY : C.P. MALAGON DATE : 08/2025  
 CHECKED BY : E.C. PHELPS DATE : 08/2025  
 DESIGN ENGINEER OF RECORD: W.K. FISCHER DATE : 09/2025

9/15/2025  
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