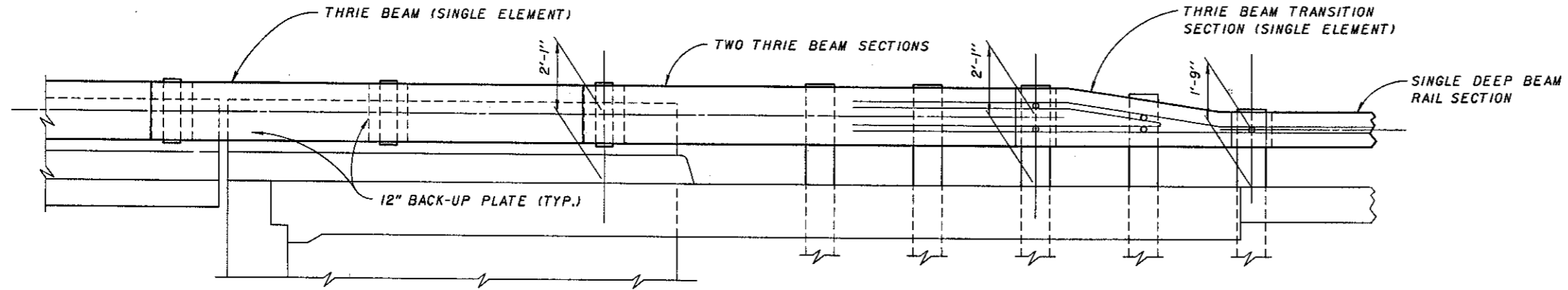


* SINCE THE LENGTH OF RAILING REQUIRED FOR A GIVEN STRUCTURE WILL NOT BE DIVISIBLE BY 6'-3", ODD PANEL LENGTHS SHALL BE PROVIDED NEAR THE CENTER OF BRIDGE. THE PANEL LENGTHS MAY VARY FROM THE TYPICAL BY PLUS ONE FOOT OR MINUS TWO FEET MAXIMUM.

PART PLAN AT ABUTMENT



SECTION A-A

GENERAL NOTES:

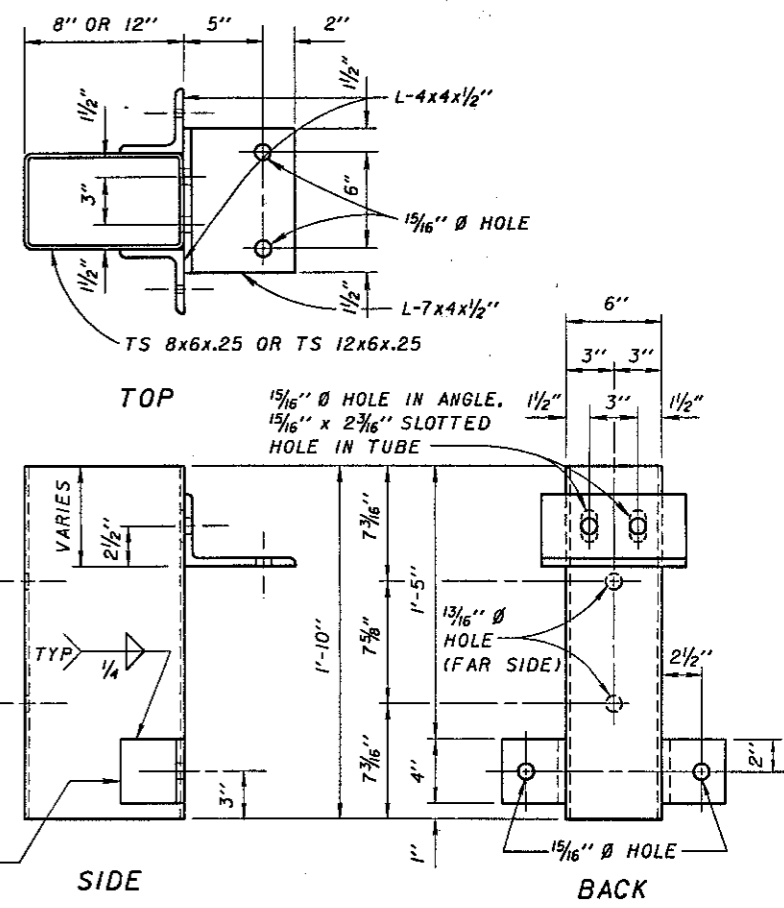
DESIGN SPECIFICATIONS: "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY AASHTO, 1989, INCLUDING THE 1990 AND 1991 INTERIM SPECIFICATIONS AND THE OHIO "SUPPLEMENT" TO THESE SPECIFICATIONS.

THRIE BEAM BRIDGE RAILING SHALL BE IN ACCORDANCE WITH ITEM 517 EXCEPT THAT ALL REFERENCE TO DEEP BEAM RAIL SHALL BE TAKEN TO INCLUDE THRIE BEAM RAIL. ADDITIONALLY, PROVISIONS OF 710.06 SHALL APPLY EXCEPT THAT THE THRIE BEAM RAIL ELEMENT SHALL CONFORM TO AASHTO M 180, TYPE II, CLASS B.

STRUCTURAL STEEL ANGLES SHALL CONFORM TO ASTM A36.

STRUCTURAL TUBING SHALL CONFORM TO THE PROVISIONS OF 707.10 EXCEPT THAT THE "DROP WEIGHT TEAR TEST" AS PER ASTM E 436 NEED NOT BE PERFORMED.

- NOTE 1: 5/8" DIA. BUTTON HEAD BOLT (ASTM A307) WITH PLATE WASHER UNDER HEAD AND STANDARD WASHER UNDER THE NUT.
- NOTE 2: 3/4" DIA. HIGH STRENGTH THREADED ANCHORS, BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325. ANCHORS SHALL BE EMBEDDED A MINIMUM OF 7" INTO THE EXISTING CONCRETE PARAPET AND ANCHORED IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATIONS 852 AND 952.

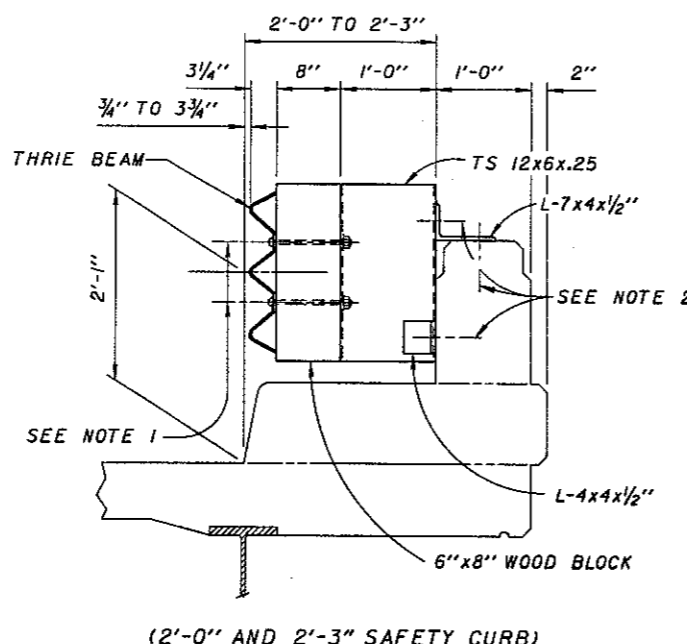
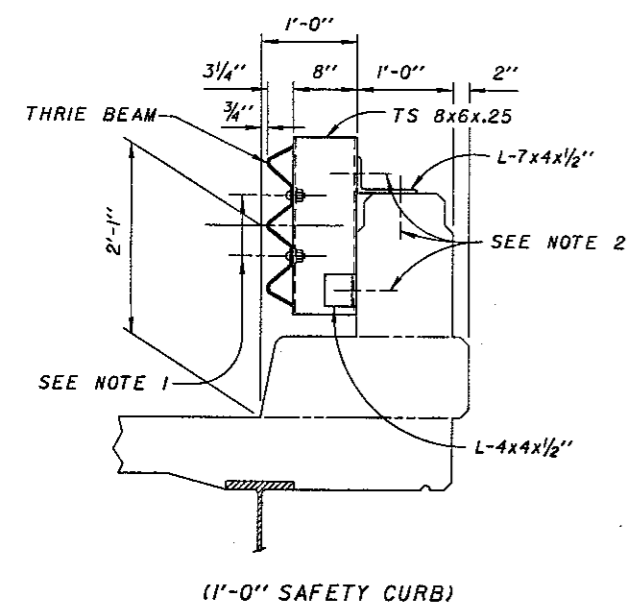


GUARDRAIL SUPPORT BRACKET ASSEMBLY

GALVANIZING: ALL GUARDRAIL SUPPORT BRACKET ASSEMBLIES, HARDWARE AND ACCESSORIES SHALL BE GALVANIZED IN ACCORDANCE WITH 711.02.

THRIE BEAM EXPANSION: ALL BOLTS IN THE OFF STRUCTURE END OF THE APPROACH PANEL THRIE BEAM RAIL SECTION THAT SPANS THE ABUTMENT SHALL BE TIGHTENED AS SPECIFIED FOR EXPANSION JOINTS IN 606.05. IF ADDITIONAL EXPANSION JOINTS ARE REQUIRED IN THE THRIE BEAM RAILING, THEIR LOCATION SHALL BE NOTED ON THE CONTRACT PLANS.

REMOVAL OF EXISTING ALUMINUM RAILING AND POSTS SHALL BE IN ACCORDANCE WITH ITEM 202.03. PAYMENT FOR REMOVAL SHALL BE INCLUDED WITH ITEM 517, RAILING.



SECTION B-B

REVISIONS		STATE OF OHIO DEPARTMENT OF TRANSPORTATIONS BUREAU OF BRIDGES AND STRUCTURAL DESIGN			
		STANDARD			
		BRIDGE RETROFIT RAILING THRIE BEAM BRIDGE RAILING FOR BRIDGES WITH SAFETY CURBS			
APPROVED:		DATE: 4-24-92		DRAWING NO. TBR-91	
PREPARED	DRAWN	CHECKED	REVIEWED		
AJM	GFJ	MRG	LMW		