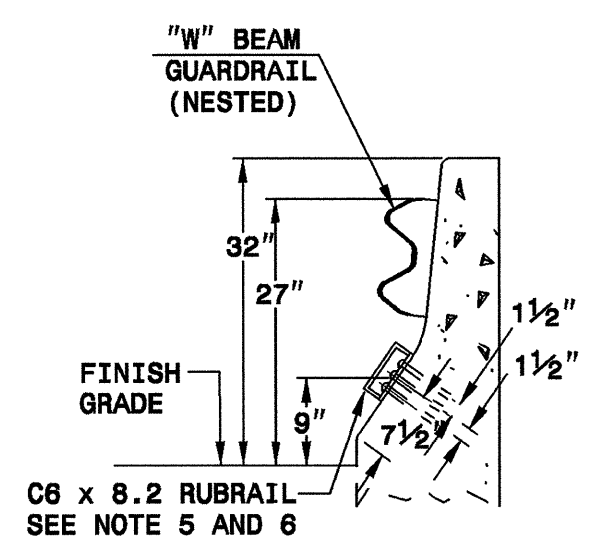
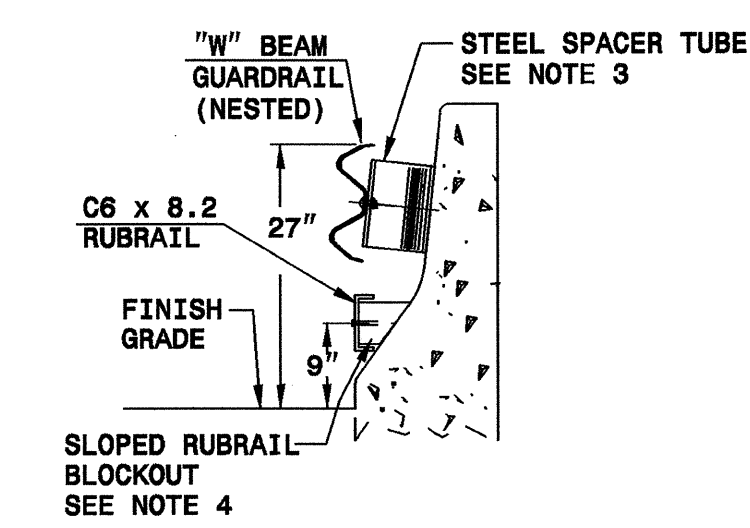


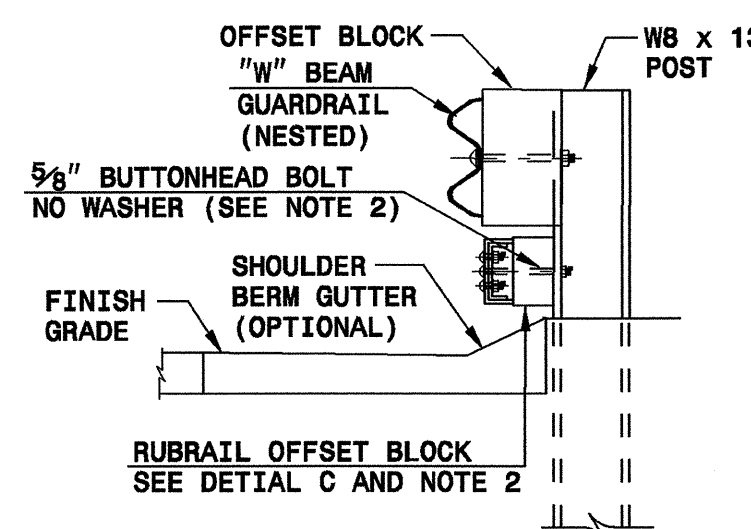
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At D:\88660



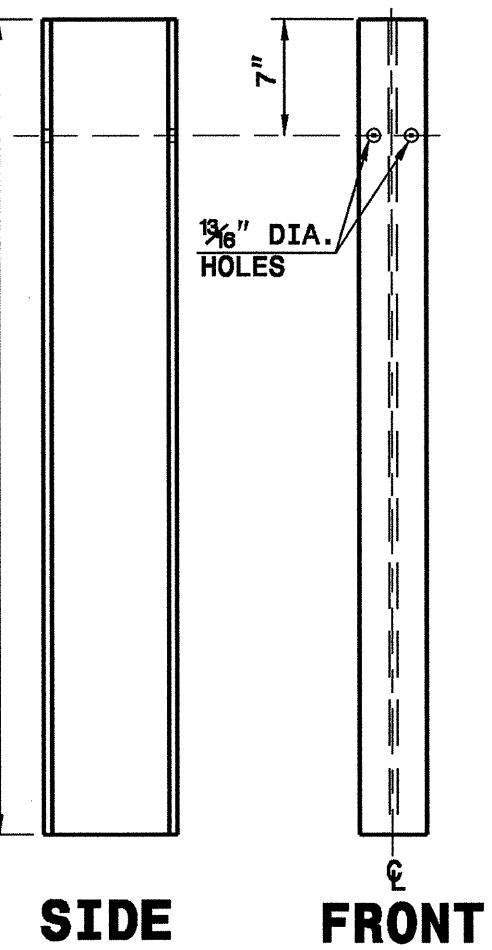
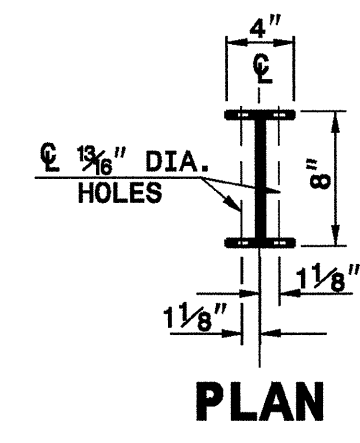
SECTION A-A



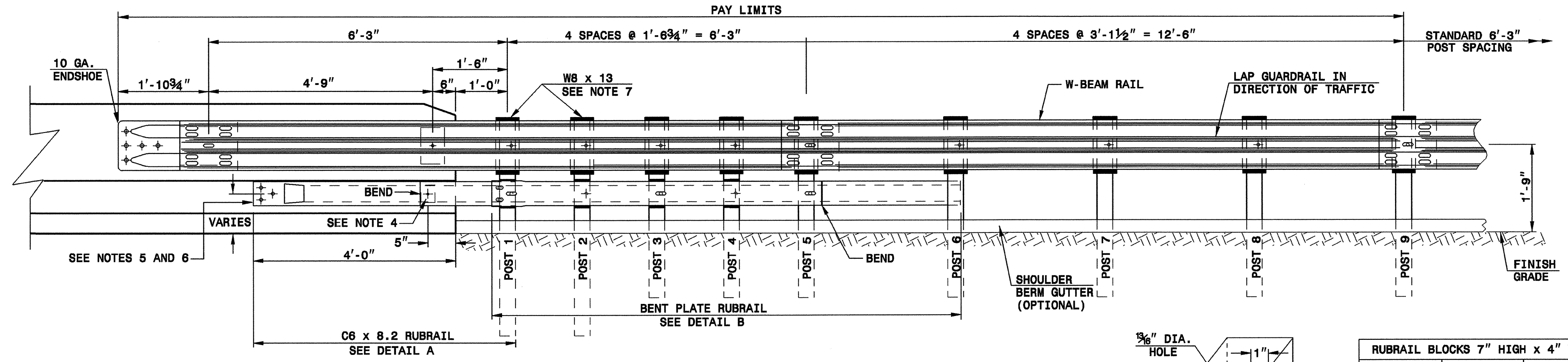
SECTION B-B



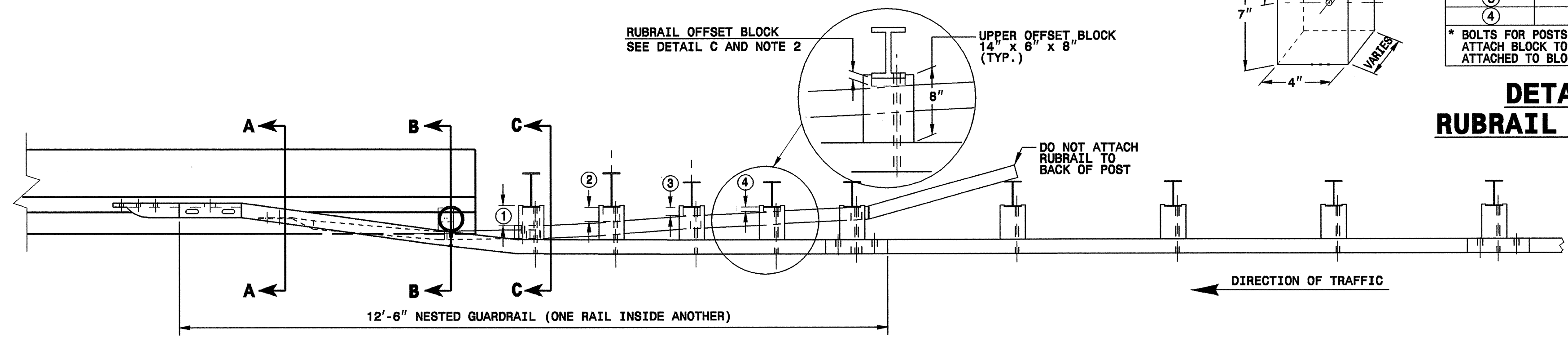
SECTION C-C



DETAIL F
"W8 X 13 X 7'-6" STEEL POST



ELEVATION

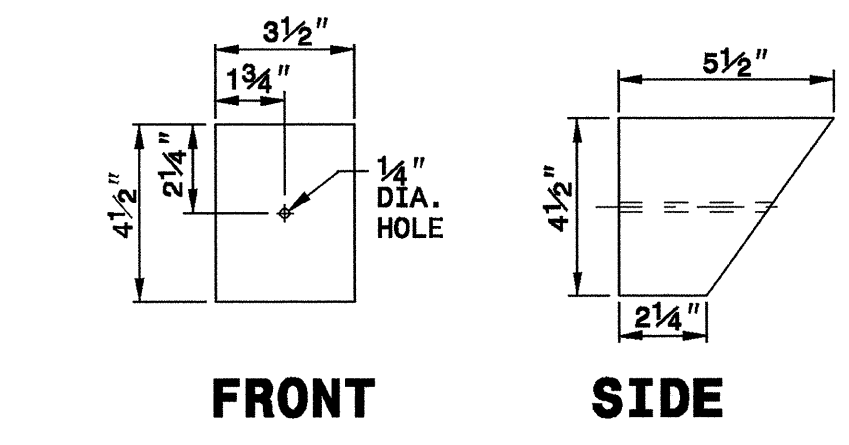


PLAN

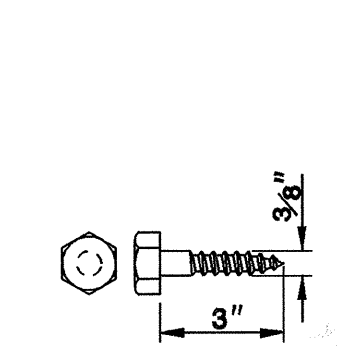
RUBRAIL BLOCKS 7" HIGH x 4" WIDE			
POST	THICKNESS	BOLT LENGTH	
①	4 1/4"	9"	
②	3 1/4"	5" *	
③	2"	6"	
④	1"	3" *	

* BOLTS FOR POSTS 2 AND 4 ARE USED TO ATTACH BLOCK TO POST. RUBRAIL NOT ATTACHED TO BLOCK.

DETAIL C
RUBRAIL BLOCKOUT

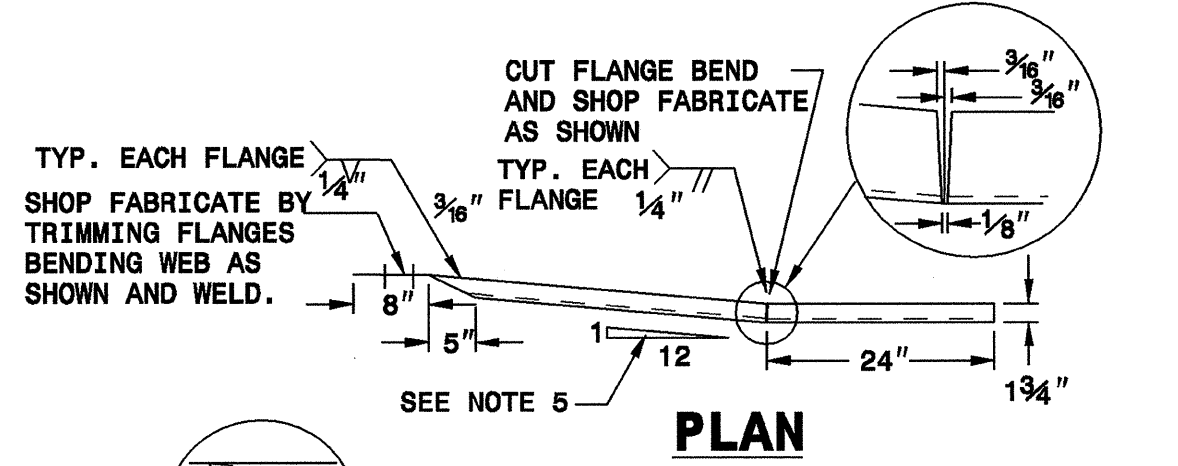


DETAIL D
SLOPED RUBRAIL BLOCKOUT

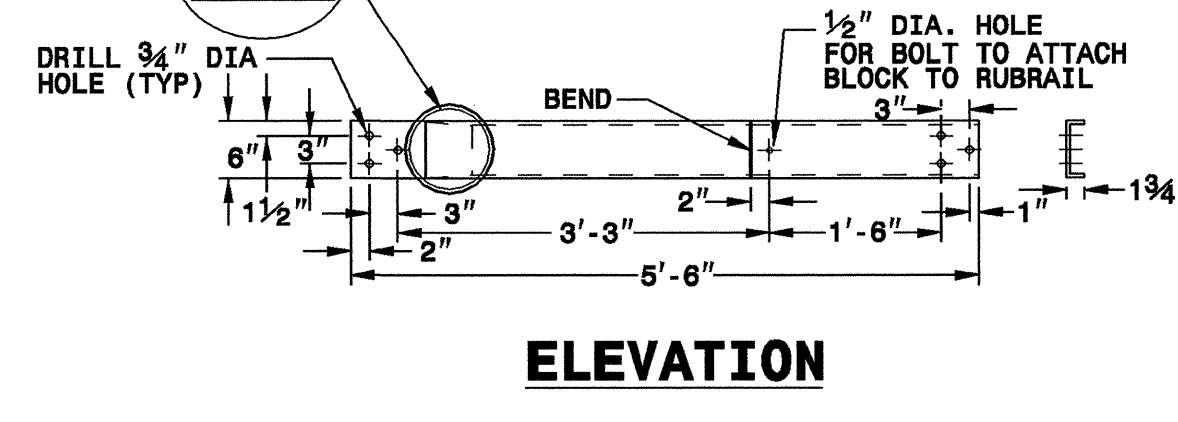


DETAIL E
LAG BOLT

- GENERAL NOTES:**
- POSTS 1 THROUGH 5 REQUIRE AN ADDITIONAL HOLE TO ATTACH LOWER BLOCKOUTS AND/OR RUBRAIL.
 - RUBRAIL BLOCKOUTS LOCATED ON POSTS 1 THROUGH 4 ARE OFFSET DRILLED AND SECURED WITH 5/8" BUTTONHEAD BOLTS (SEE CHART FOR BOLT LENGTHS). SECURE BLOCKS ONLY TO POSTS 2 AND 4. SECURE RUBRAIL AND BLOCKOUTS TO POSTS 1 AND 3. RUBRAIL IS SECURED TO POST 5 WITH A 5/8" x 4 1/2" BUTTONHEAD BOLT. RUBRAIL IS FLARED TO BACK OF POST 6 AND NOT SECURED.
 - STEEL SPACER TUBE IS A SCHEDULE 40 GALVANIZED PIPE 6" INSIDE DIAMETER x 9" LONG. ATTACH TUBE TO GUARDRAIL ONLY WITH 5/8" x 1 1/4" LONG BUTTONHEAD BOLT AND RECTANGULAR PLATE WASHER.
 - SEE DETAIL D FOR SLOPED RUBRAIL BLOCKOUT. BLOCKOUT IS ATTACHED TO RAIL ELEMENT ONLY. USE 3/8" x 3" LAG BOLT WITH FLAT WASHER.
 - SHOP FABRICATE THE C6x8.2 RUBRAIL END TO BE CONSISTENT WITH THE SLOPE OF THE JERSEY SHAPE AND ATTACH FLUSH WITH THE SLOPED TOE OF THE BARRIER OR BRIDGE RAIL.
 - ANCHORAGE:
 - AT EXISTING BRIDGE RAIL AND NEW OR EXISTING BARRIERS, RUBRAIL SHALL BE ANCHORED USING THREE 5/8" x 6" CHEMICALLY ANCHORED BOLTS WITH WASHERS. MAXIMUM PROJECTION FOR BOLTS SHALL BE 1/2".
 - AT EXISTING BRIDGE RAIL AND NEW OR EXISTING BARRIERS, THE W-BEAM END SHOE SHALL BE ANCHORED USING FIVE 7/8" x 12" CHEMICALLY ANCHORED BOLTS WITH WASHERS. MAXIMUM PROJECTION FOR BOLTS SHALL BE 1/2". THE W-BEAM END SHOE SHALL BE INSTALLED BEHIND THE NESTED W-BEAM ELEMENTS. THE 12" MINIMUM LENGTH OF BOLTS MUST INCLUDE A MINIMUM EMBEDMENT DEPTH OF 10" INTO SUITABLY REINFORCED CONCRETE.
 - AT NEW BRIDGE RAIL, THE W-BEAM END SHOE AND RUBRAIL SHALL BE ANCHORED AS DETAILED ON THE STRUCTURE PLANS.
 - POSTS 1 AND 2 ARE W8 x 13, 7'-6" LONG. ALL OTHER POSTS IN THE ANCHOR UNIT ARE W6 x 8.5.

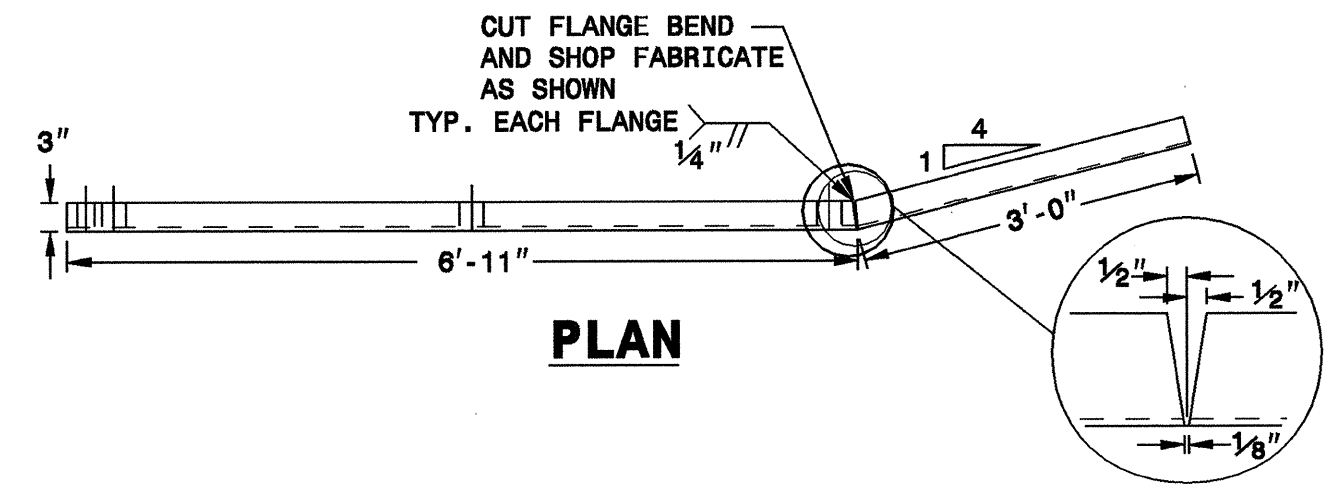


DETAIL A

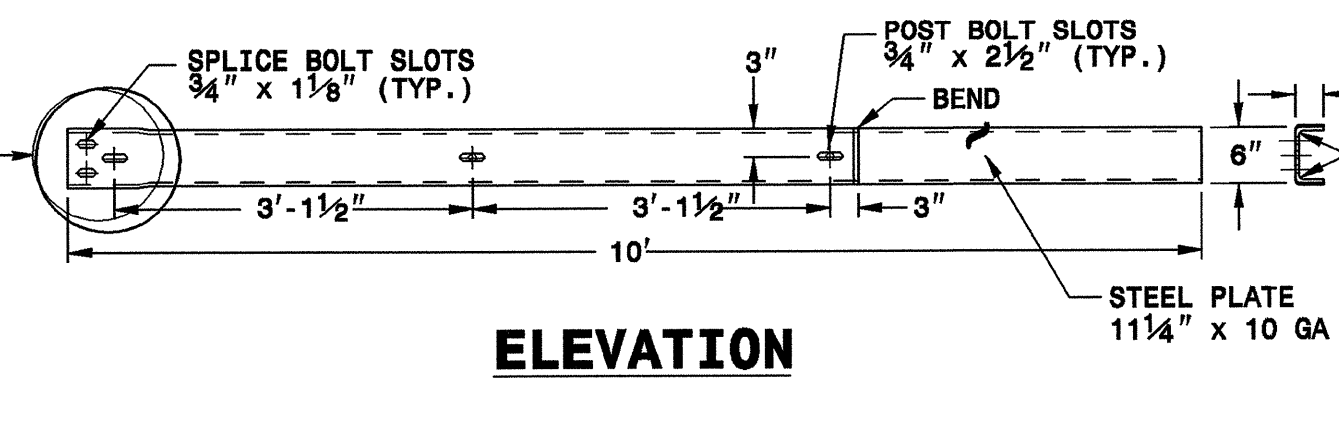


DETAIL A

C6 x 8.2 RUBRAIL



DETAIL B



DETAIL B

DETAIL B
BENT PLATE RUBRAIL



DESIGN SERVICES UNIT
STANDARDS AND SPECIAL DESIGN
Office 919-250-4128 FAX 919-250-4119

GUARDRAIL ANCHOR UNIT
TYPE B-77

ORIGINAL BY: CONNDOT DATE: 10-01-00
 MODIFIED BY: E.E. WARD DATE: 7-15-02
 CHECKED BY: DATE: _____
 FILE SPEC.: _____