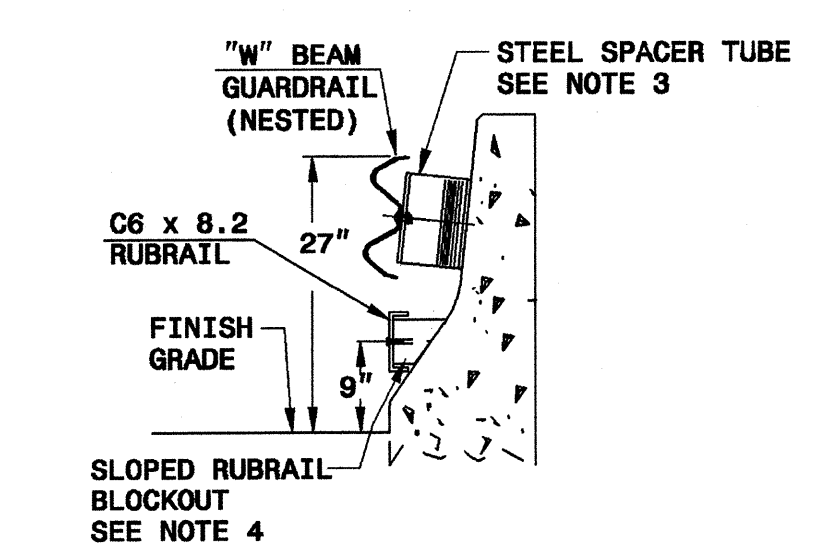
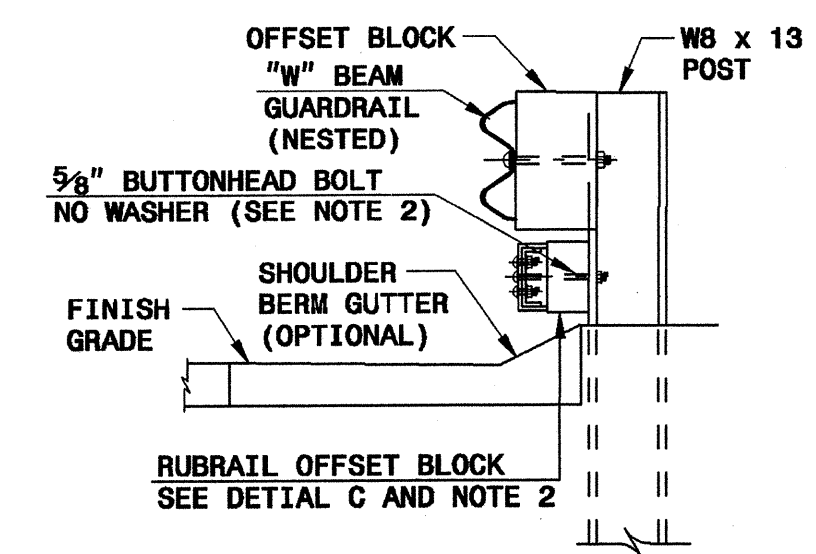


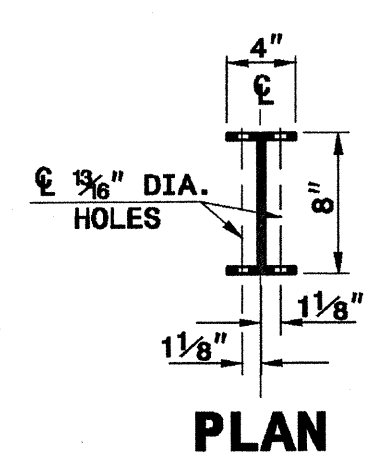
**SECTION A-A**



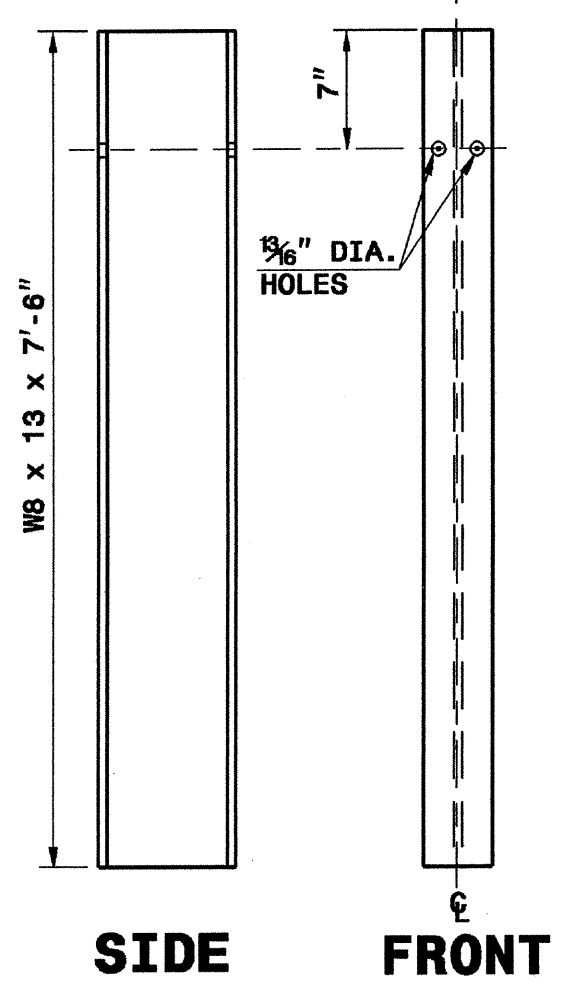
**SECTION B-B**



**SECTION C-C**

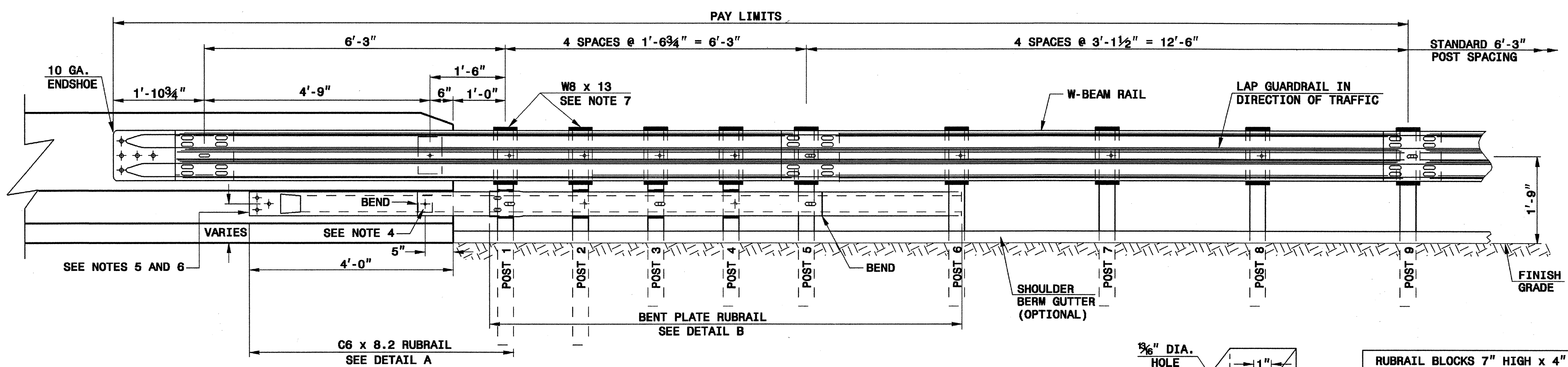


**PLAN**

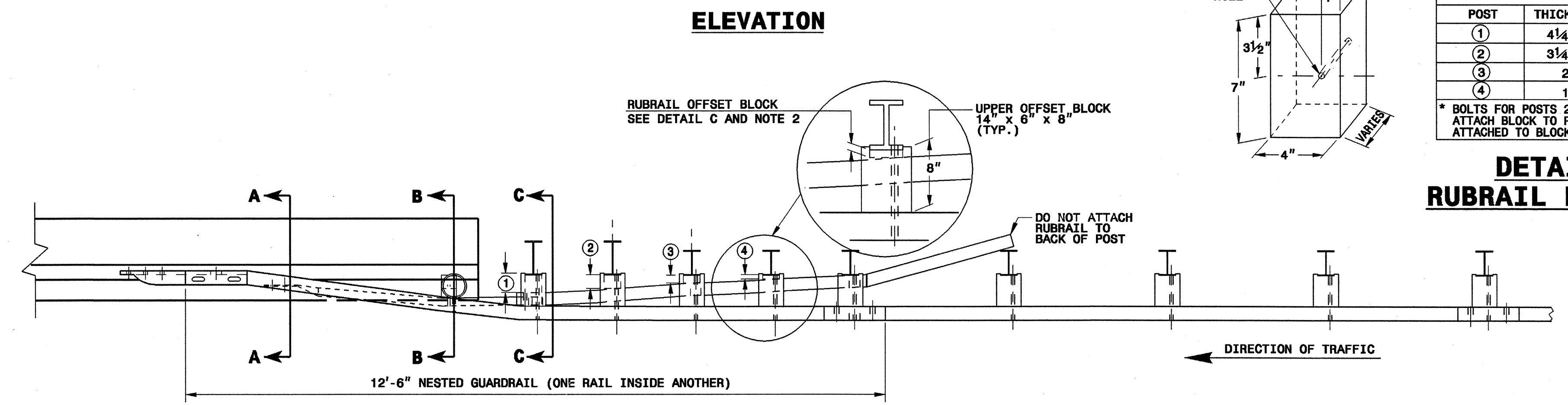


**SIDE FRONT**

**"W8 X 13 X 7'-6" STEEL POST**



**ELEVATION**

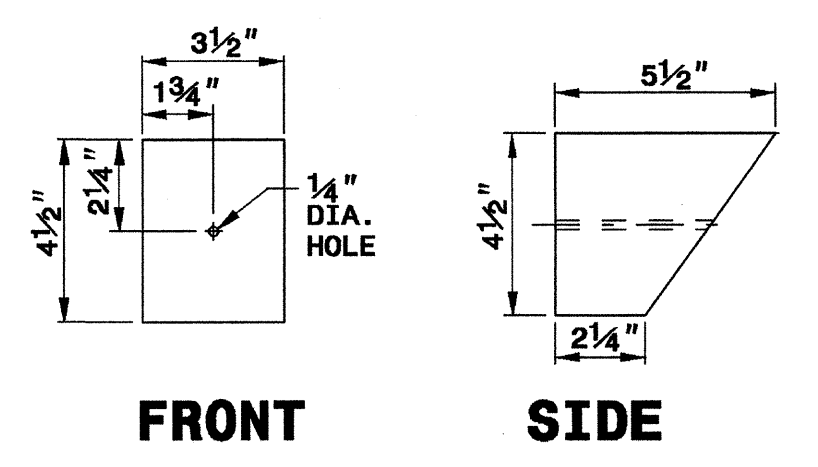


**PLAN**

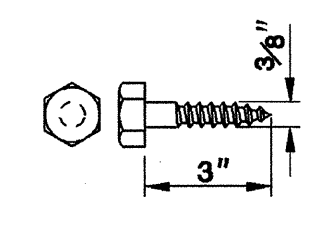
| RUBRAIL BLOCKS 7" HIGH X 4" WIDE |           |             |
|----------------------------------|-----------|-------------|
| POST                             | THICKNESS | BOLT LENGTH |
| ①                                | 4 1/4"    | 9"          |
| ②                                | 3 3/4"    | 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**

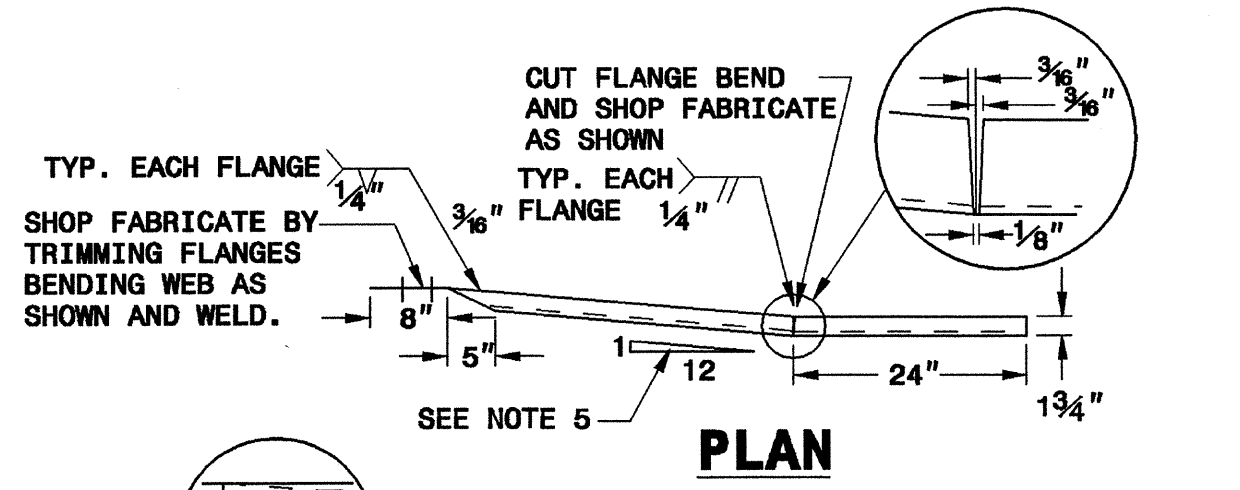


**DETAIL D SLOPED RUBRAIL BLOCKOUT**

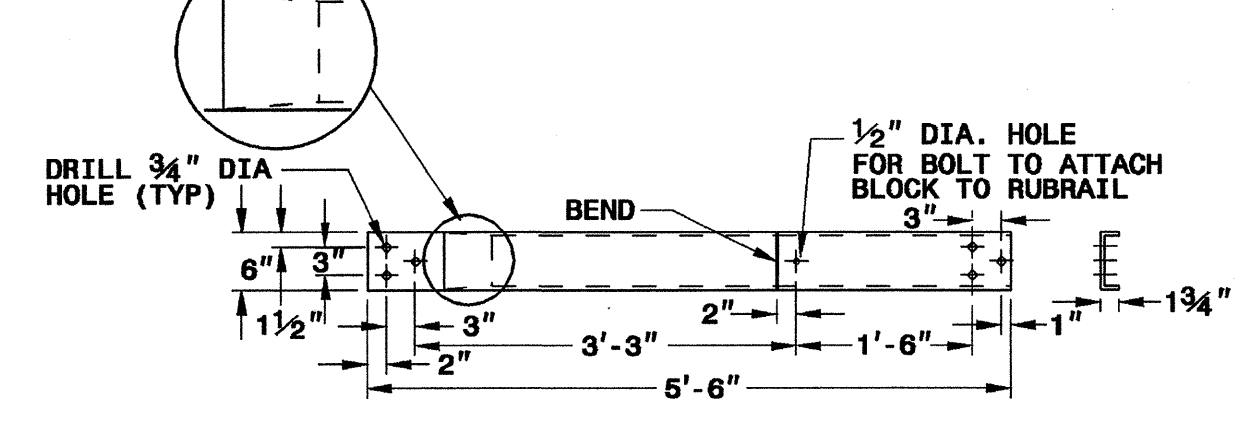


**DETAIL E LAG BOLT**

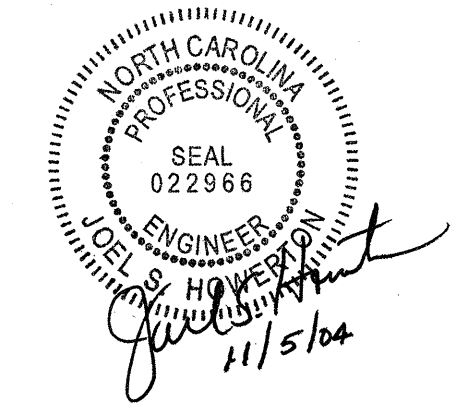
- GENERAL NOTES:**
- POSTS 1 THROUGH 5 REQUIRE AN ADDITIONAL HOLE TO ATTACH LOWER BLOCKOUTS AND/OR RUBRAIL.
  - RUBRAIL BLOCKOUTS LOCATED ON POSTS 2 AND 4 ARE OFFSET DRILLED AND SECURED WITH 5/8" BUTTONHEAD BOLTS (SEE CHART FOR BOLT LENGTHS). SECURE BLOCKS ONLY TO POSTS 2 AND 4. SECURE RUBRAIL AND BLOCKOUTS 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.
    - AT EXISTING BRIDGE RAIL AND NEW OR EXISTING BARRIERS, THE W-BEAM END SHOE SHALL BE ANCHORED USING A 4 BOLT HOLD-DOWN PLATE AS SHOWN ON DETAIL 857D01 SHEET 6. A 4 BOLT INSERT ASSEMBLY IS ALLOWED ON PRECAST REINFORCED CONCRETE BARRIER (857D01). THE W-BEAM END SHOE SHALL BE INSTALLED BEHIND THE NESTED W-BEAM ELEMENTS.
    - 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 W8 X 8.5.



**DETAIL A C6 X 8.2 RUBRAIL**



**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: 04-07-04  
 CHECKED BY: DATE: \_\_\_\_\_  
 FILE SPEC.: \_\_\_\_\_

5/14/99  
 12-APR-2004 16:11 J:\Projects\guardrail\NCHRP350 Approved\B-77 ConnDot.dgn  
 E:\Special\_Details\B-77.dwg  
 10/22/04