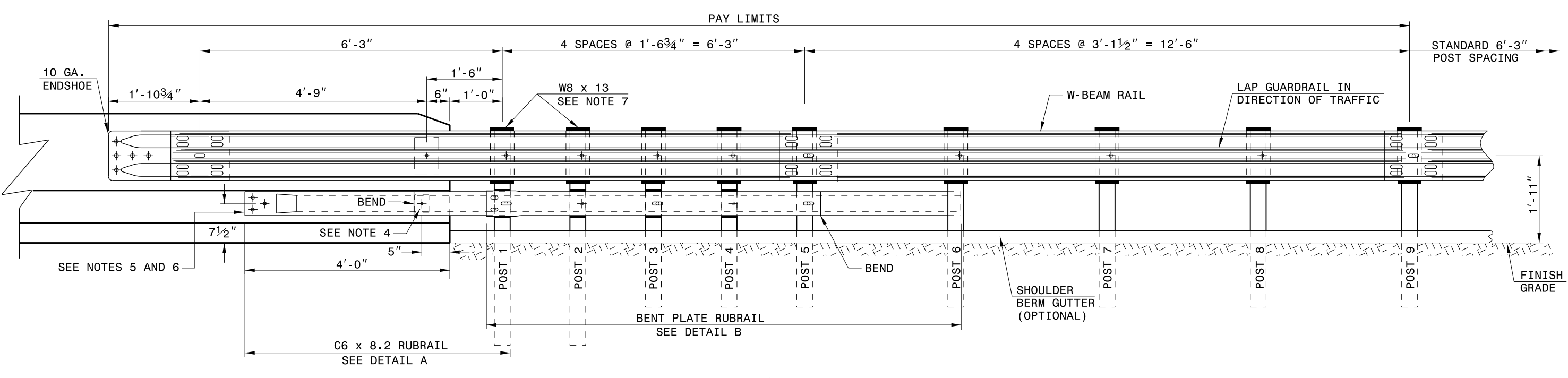


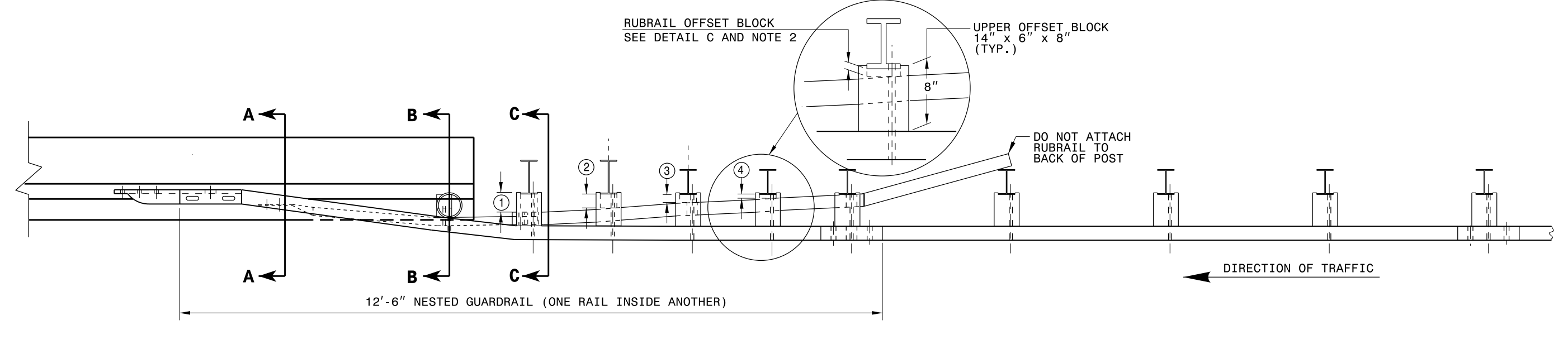
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RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
GUARDRAIL ANCHOR UNIT
FOR F-SHAPE BARRIER



ELEVATION

- 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" BUTTONEAD 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" BUTTONEAD 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 BUTTONEAD 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 C6 x 8.2 RUBRAIL END TO BE CONSISTENT WITH THE SLOPE OF THE F SHAPE AND ATTACH FLUSH WITH THE SLOPED TOE OF THE BARRIER OR BRIDGE RAIL.
 - ANCHORAGE:
 - AT EXISTING BRIDGE RAIL AND NEW OR EXISTING BARRIERS, ANCHOR RUBRAIL USING THREE 5/8" x 6" CHEMICALLY ANCHORED BOLTS WITH WASHERS. MAXIMUM PROJECTION FOR BOLTS IS 1 1/2".
 - AT EXISTING BRIDGE RAIL AND NEW OR EXISTING BARRIERS, ANCHOR THE W-BEAM END SHOE USING A 4 BOLT HOLD DOWN PLATE (SEE STD. DWG. 862.04). A 4 BOLT INSERT ASSEMBLY IS ALLOWED ON PRECAST REINFORCED CONCRETE BARRIER (SEE STD. DWG. 857.01). INSTALL THE W-BEAM END SHOE BEHIND THE NESTED W-BEAM ELEMENTS.
 - AT NEW BRIDGE RAIL, ANCHOR THE W-BEAM END SHOE AND RUBRAIL AS DETAILED ON THE STRUCTURE PLANS.
 - POSTS 1 AND 2 ARE W6 x 13, 7'-6" LONG. ALL OTHER POSTS IN THE ANCHOR UNIT ARE W6 x 8.5.



PLAN

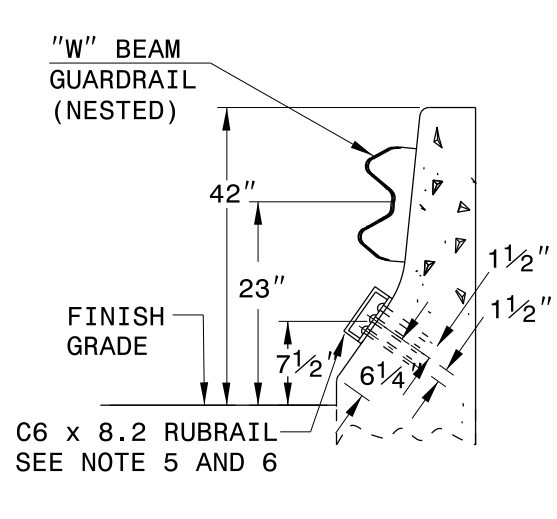
GUARDRAIL ANCHOR UNIT TYPE B-77

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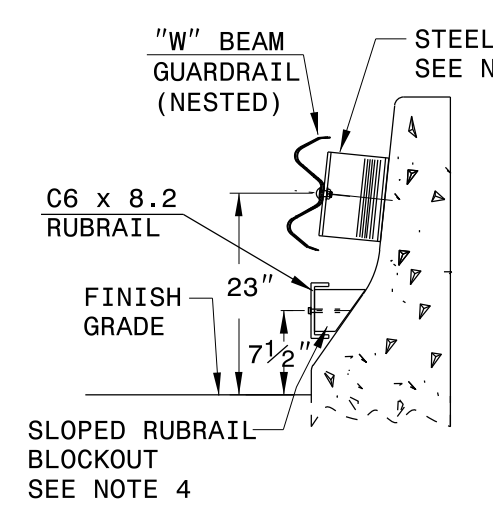
ENGLISH DETAIL DRAWING FOR
STRUCTURE ANCHOR UNIT
GUARDRAIL ANCHOR UNIT TYPE B-77
FOR F-SHAPE BARRIER

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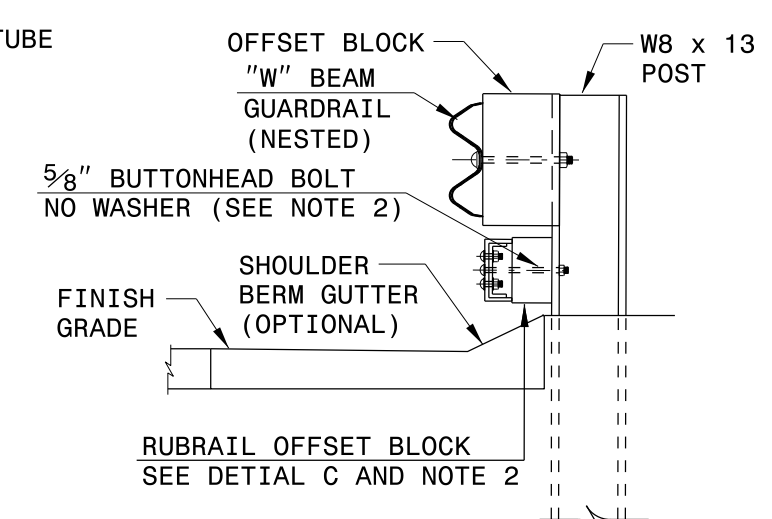
ENGLISH DETAIL DRAWING FOR
STRUCTURE ANCHOR UNIT
FOR F-SHAPE BARRIER



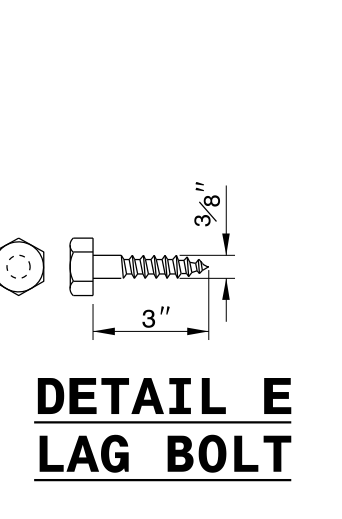
SECTION A-A



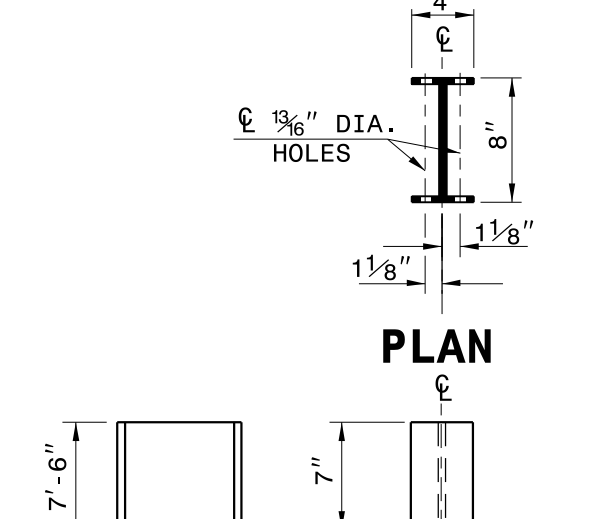
SECTION B-B



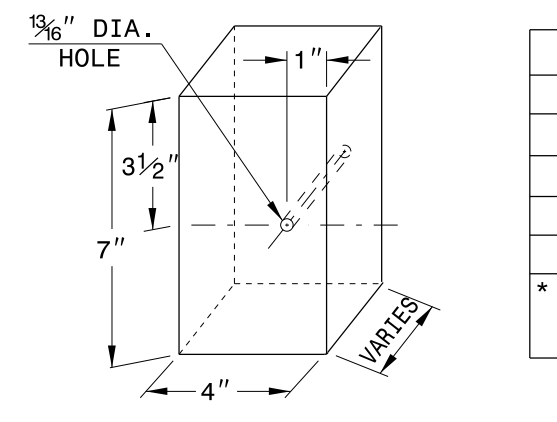
SECTION C-C



**DETAIL E
LAG BOLT**



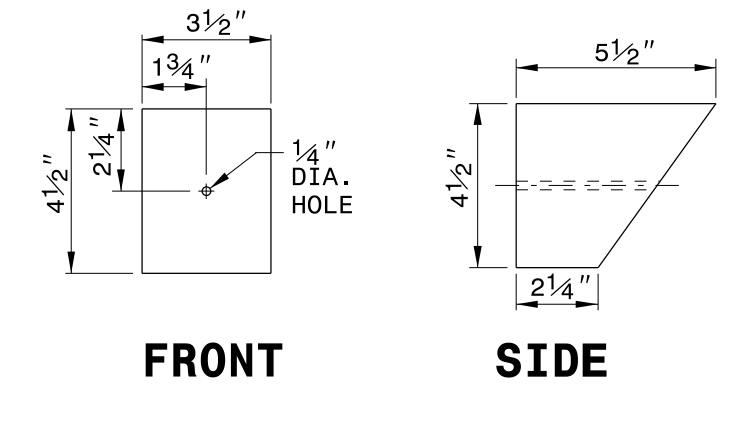
**DETAIL F STEEL POST
"W8 X 13 X 7'-6"**



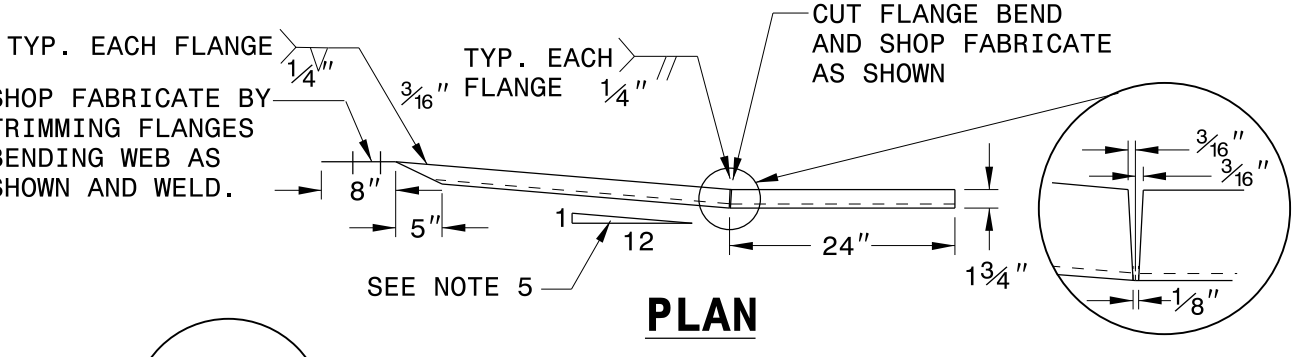
**DETAIL C
RUBRAIL BLOCKOUT**

POST	THICKNESS	BOLT LENGTH
1	4 1/4"	9"
2	3 1/4"	5"
3	2"	6"
4	1"	3"

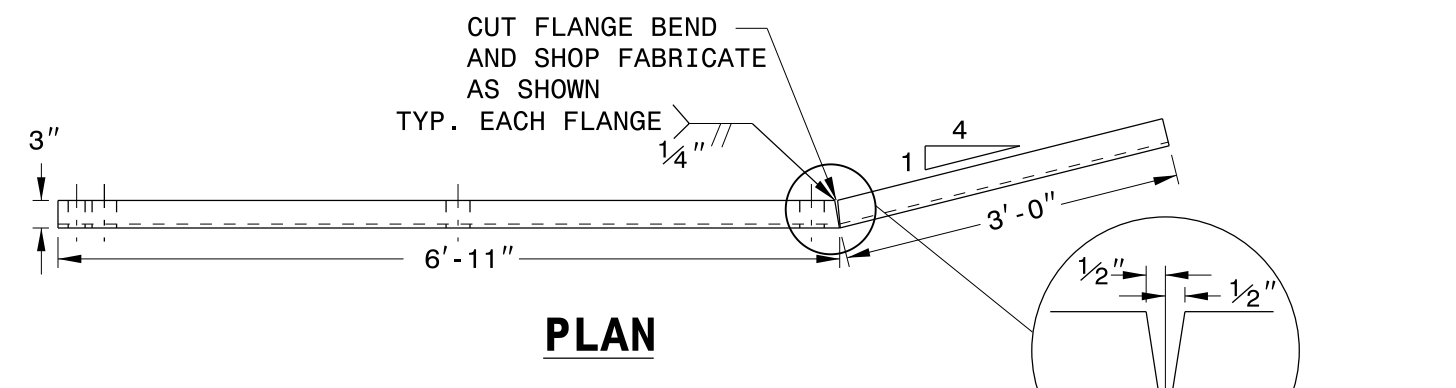
* BOLTS FOR POSTS 2 AND 4 ARE USED TO ATTACH BLOCK TO POST. RUBRAIL NOT ATTACHED TO BLOCK.



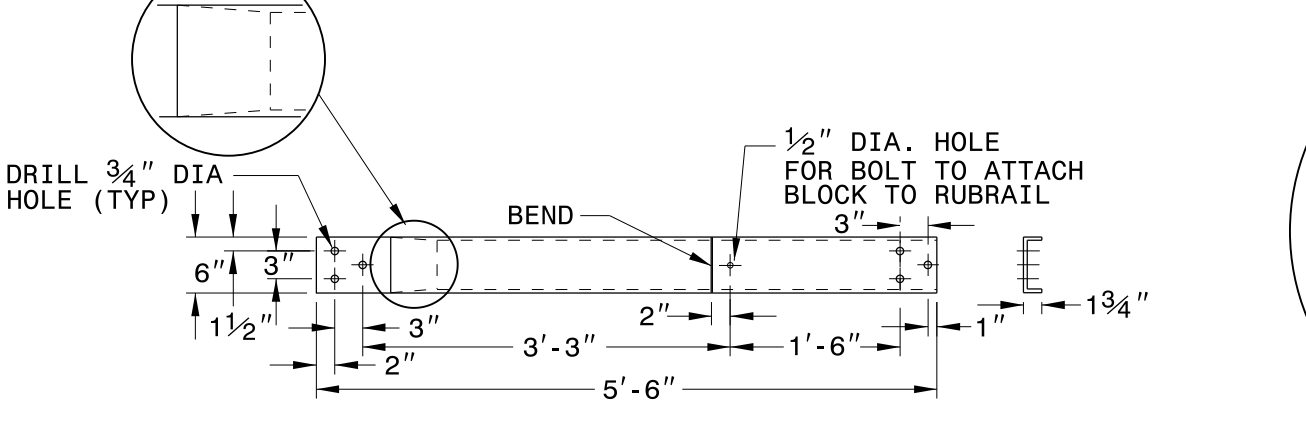
**DETAIL D
SLOPED RUBRAIL BLOCKOUT**



**ELEVATION
DETAIL A
C6 x 8.2 RUBRAIL**



**ELEVATION
DETAIL B
BENT PLATE RUBRAIL**



GUARDRAIL ANCHOR UNIT TYPE B-77

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