

3-MAY-2017 11:32 S:\Contracts\Contractors\Special Details\Standard Drawings\Details in Lieu of Standards\Division 8\862d01 862d03 862d03.dgn Jhowerton - PL - CSU-2-12-2015

STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR  
**GUARDRAIL ANCHOR UNIT**  
GUARDRAIL ANCHOR UNIT TYPE B-77  
FOR F-SHAPE BARRIER

SHEET 4 OF 7  
**862D03**

**ELEVATION**

GENERAL NOTES:  
 1) POSTS 1 THROUGH 5 REQUIRE AN ADDITIONAL HOLE TO ATTACH LOWER BLOCKOUTS AND/OR RUBRAIL.  
 2) AS SHOWN, RUBRAIL IS TO BE INSTALLED ON ALL LOWER BLOCKOUTS AND RUBRAIL BLOCKOUTS AT POSTS 1 AND 5. 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.  
 3) STEEL SPACER TUBE IS A SCHEDULE 40 GALVANIZED PIPE 6" INSIDE DIAMETER x 9" LONG. ATTACH TUBE TO GUARDRAIL ONLY WITH 3/8" x 1 1/4" LONG BUTTONHEAD BOLT AND RECTANGULAR PLATE WASHER.  
 4) SET DETAIL OF FOUR SLOPED RUBRAIL BLOCKOUT, BLOCKOUTS ATTACHED TO RAIL ELEMENT ONLY. USE 3/4" x 3" LAG BOLT WITH FLAT WASHER.  
 5) SET DETAIL OF 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.  
 6) ANCHORAGE:  
 (a) 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 1/2". ANCHOR THE W-BEAM END SHOE USING A 4" BOLT HOLD DOWN PLATE (SEE STD. DWG. 862.04).  
 (b) A 1" BOLT INSERT ASSEMBLY IS ALLOWED ON PRECAST REINFORCED CONCRETE BARRIER (SEE STD. DWG. 857.01).  
 (c) AT NEW BRIDGE RAIL, ANCHOR THE W-BEAM END SHOE AND RUBRAIL AS DETAILED ON THE STRUCTURE PLANS.  
 7) 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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ROADWAY DETAIL DRAWING FOR  
**STRUCTURE ANCHOR UNITS**  
GUARDRAIL ANCHOR UNIT, TYPE III

SHEET 3 OF 7  
**862D03**

**SECTION OF THRIE BEAM GUARDRAIL**

**SECTION OF THRIE BEAM POSTS 1 THRU 6**

**SECTION OF WTR BEAM POST 7**

**SECTION OF WTR BEAM POST 8**

**SECTION OF WTR BEAM POST 9**

**THRIE-BEAM SECTION**

**END SHOE**

**WTR SECTION ELEVATION VIEW**

**THRIE BEAM OFFSET BLOCK**

**THRIE BEAM LINE POST**

NOTE: THE MID POST AND OFFSET BLOCK OF THE WTR SECTION WILL REQUIRE SPECIAL BOLT HOLE DRILLING IN THE THRIE BEAM OFFSET BLOCK AND LINE POST.

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GUARDRAIL ANCHOR UNIT, TYPE III

SHEET 3 OF 7  
**862D03**

PROJECT REFERENCE NO.  
B-5348

SHEET NO.  
2C-12

**SEE TITLE BLOCK**

ORIGINAL BY: J. HOWERTON DATE: 06-22-12

MODIFIED BY: DATE:

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FILE SPEC.:

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

**CONTRACT STANDARDS AND DEVELOPMENT UNIT**  
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