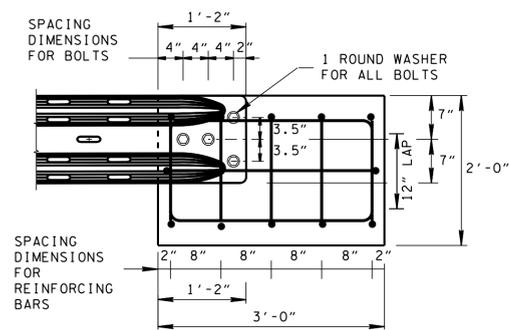
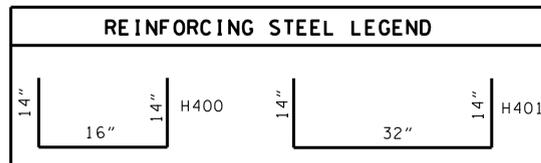


PLAN



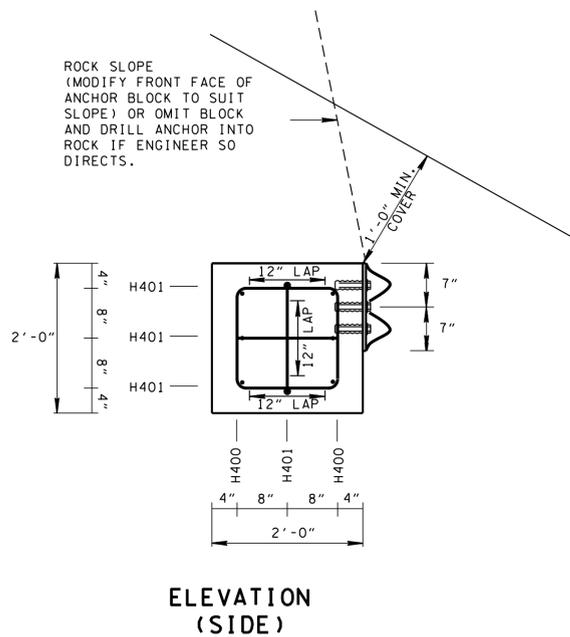
ELEVATION (FRONT)



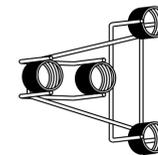
SPECIAL INSTALLATION NOTE

FOR THIS GUARDRAIL ANCHOR TO FUNCTION AS IT WAS CRASH TESTED UNDER NCHRP-350 TEST LEVEL 3 IT MUST BE CONSTRUCTED PER STANDARD DRAWING NO. S-GRT-1.

TO BE USED WITH S-GRT-1 ONLY



ELEVATION (SIDE)



ANCHOR BLOCK INSERT ASSEMBLY

CAST IN PLACE THREADED STEEL INSERT WITH 7/8" DIA. X 2" HEX HEAD GALVANIZED BOLTS (ASTM A307) HOT DIP ZINC COATING ASTM A153

GUARDRAIL ANCHOR (BURIED-IN-BACKSLOPE) GENERAL NOTES

- (A1) REQUIREMENTS FOR ANCHOR INSERT BOLTS SHALL BE 7/8" HEX HEAD INSTALLED IN 7/8" MASONRY ANCHOR. THE INSERTS ARE TO BE THREADED A MINIMUM OF 1 3/4 INCHES. THE CONTRACTOR SHALL FURNISH ANCHOR PULL-OUT DATA FROM AN INDEPENDENT TESTING LABORATORY USING CLASS "A" CONCRETE IN ACCORDANCE WITH STATE OF TENNESSEE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION". THE ULTIMATE LOAD FOR 7/8" ANCHOR SHALL BE 19,000 POUNDS. BOLTS SHALL CONFORM TO ASTM A307.
- (A2) THE MASONRY ANCHORS SHALL BE SUB-SET IN THE CONCRETE AT A DEPTH OF BETWEEN 3/52" TO 1/4" AND TORQUED WITH THE END TERMINAL IN THE PLACE TO AN EQUIVALENT DIRECT PULL-OUT LOAD OF 12,000 POUNDS. SLIPPAGE SHALL NOT EXCEED 1/4".
- (A3) THE CONTRACTOR WILL PERFORM ON-SITE TESTING OF EACH BOLT IN THE PRESENCE OF DOT PERSONNEL TO INSURE THESE REQUIREMENTS. ANY INSTALLATION NOT MEETING THESE REQUIREMENTS SHALL BE CORRECTED AT THE CONTRACTORS EXPENSE.
- (A4) THE CONTRACTOR MAY ELECT TO USE 7/8 INCH DIAMETER DRILLED IN ANCHORS WITH 50 KIPS PER SQUARE INCH OR GREATER YIELD STRENGTH WHEN ATTACHING THE TERMINAL END ELEMENTS INTO ROCK. SEE ABOVE GENERAL NOTE (A2) FOR PULL OUT REQUIREMENTS.
- (A5) IF THE CONTRACTOR DRILLS THESE ANCHOR BOLTS IN ROCK, THE SAME FLARE RATE MUST BE USED THAT WOULD BE USED WITH THE CRASH TESTED CONCRETE ANCHOR BLOCK.
- (A6) COST OF ANCHOR TO BE INCLUDED IN THE COST OF ITEM NO. 705-04.02.
- (A7) ESTIMATED QUANTITIES OF CONCRETE AND STEEL ARE:
CLASS "A" CONCRETE= 0.44 CUBIC YARD
NO. 4 STEEL REINFORCING BARS= 52 POUNDS
- (A8) SEE STD. DWG. S-GRA-1A FOR ALTERNATE BURIED-IN-BACKSLOPE ANCHOR.