

NOTES

THE GUARDRAIL ANCHOR ASSEMBLY SHALL CONSIST OF A 1/4" HOLD DOWN PLATE AND 4 - 7/8" Ø BOLTS WITH NUTS AND WASHERS.

THE HOLD-DOWN PLATE SHALL CONFORM TO AASHTO M270 GRADE 36. AFTER FABRICATION, THE HOLD-DOWN PLATE SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M111.

BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307 AND NUTS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M291. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. (AT THE CONTRACTOR'S OPTION, STAINLESS STEEL BOLTS, NUTS AND WASHERS MAY BE USED AS AN ALTERNATE FOR THE 7/8" Ø GALVANIZED BOLTS, NUTS AND WASHERS. THEY SHALL CONFORM TO OR EXCEED THE MECHANICAL REQUIREMENTS OF ASTM A307. THE USE OF THIS ALTERNATE SHALL BE APPROVED BY THE ENGINEER.)

THE GUARDRAIL AND RUBRAIL ANCHOR ASSEMBLIES ARE REQUIRED AT ALL POINTS WHERE APPROACH GUARDRAIL IS TO BE ATTACHED TO THE END OF BARRIER RAIL. FOR POINTS OF ATTACHMENT, SEE SKETCH.

AFTER INSTALLATION, THE EXPOSED THREAD OF THE BOLT SHALL BE BURRED WITH A SHARP POINTED TOOL.

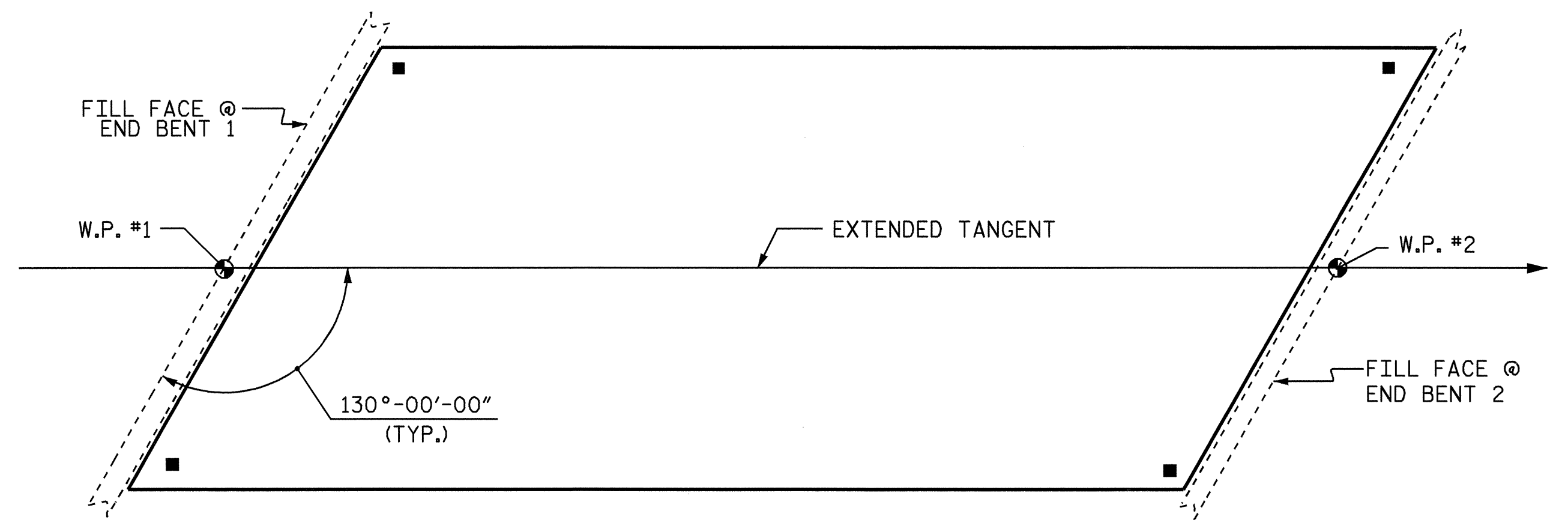
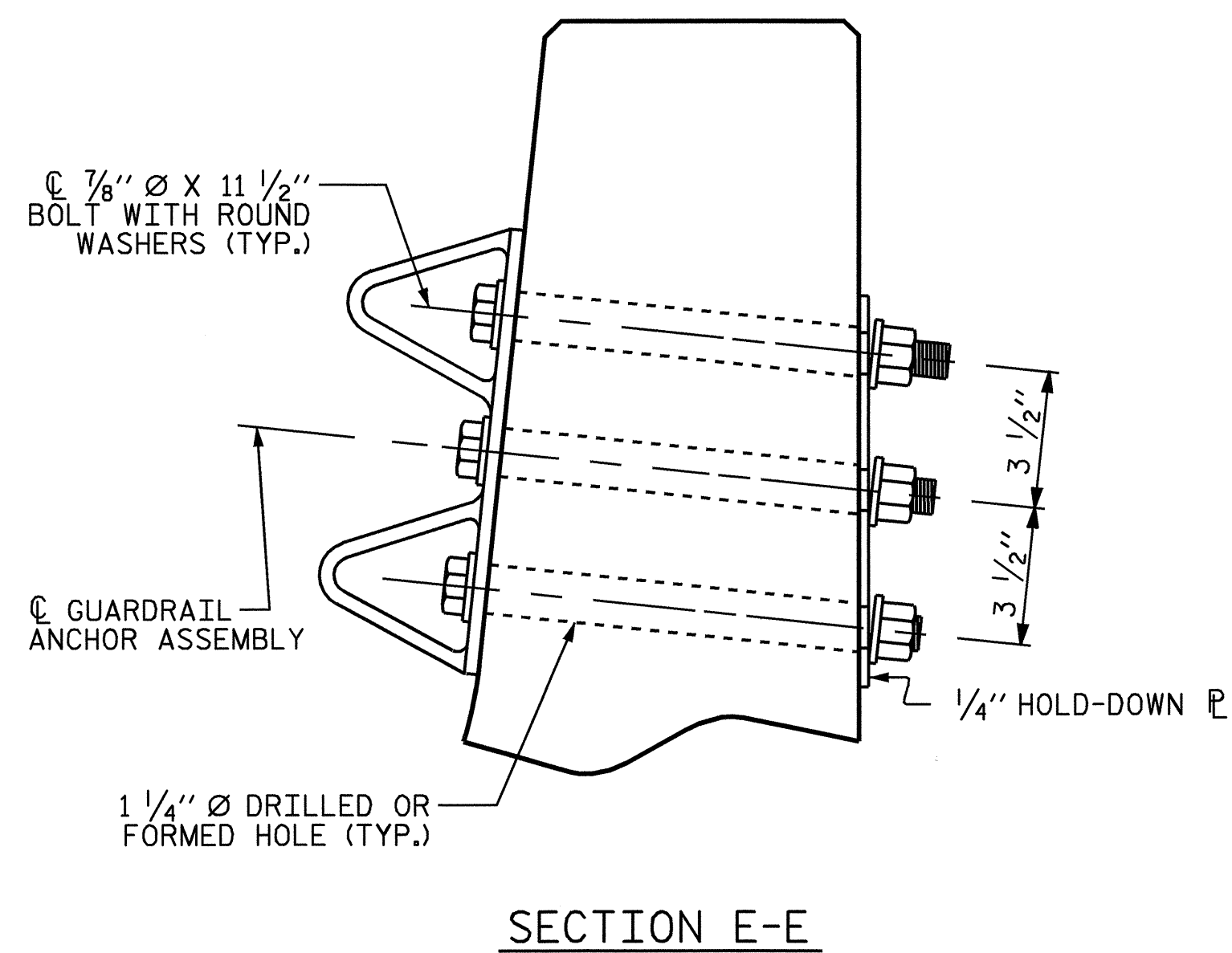
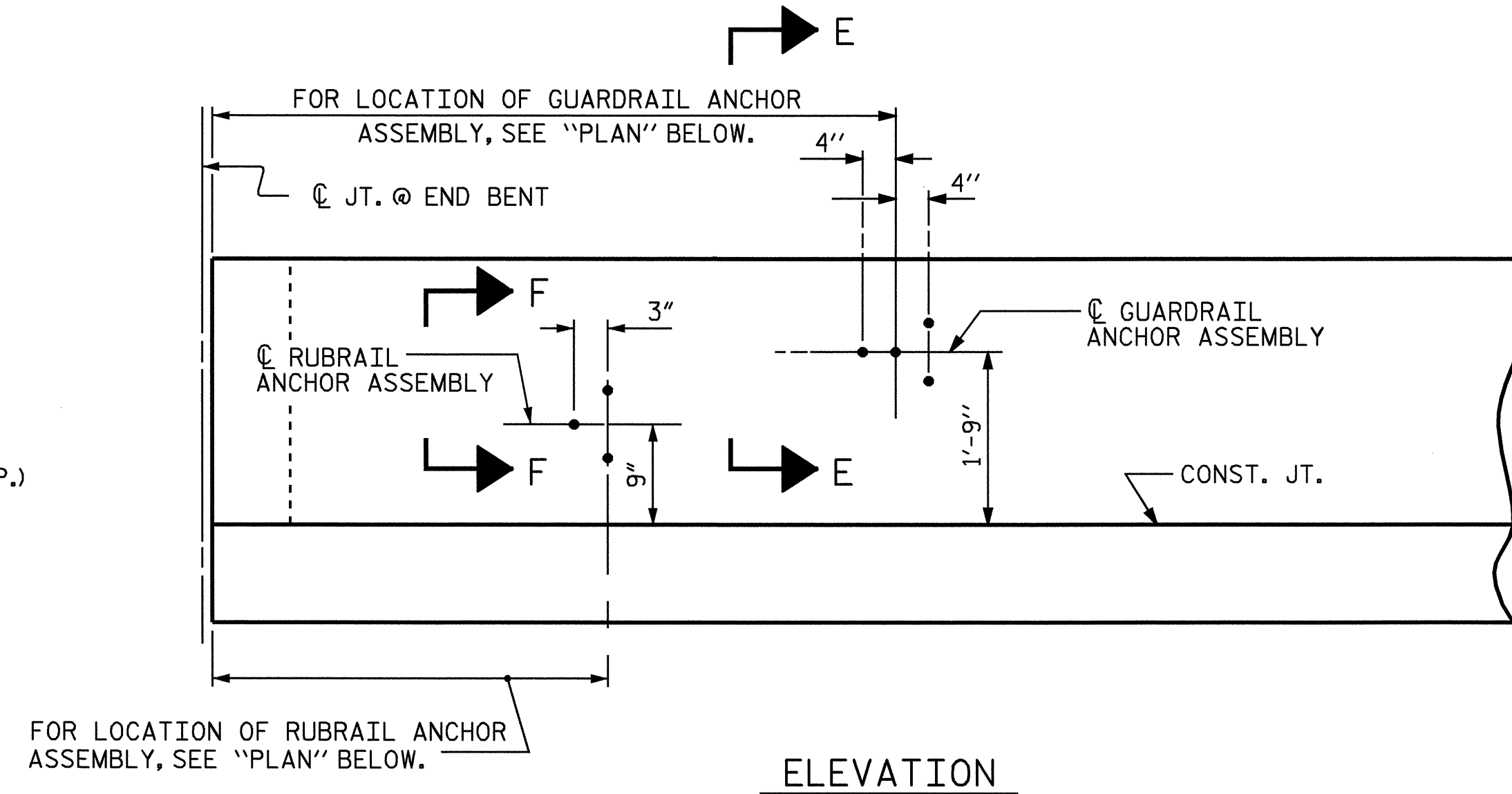
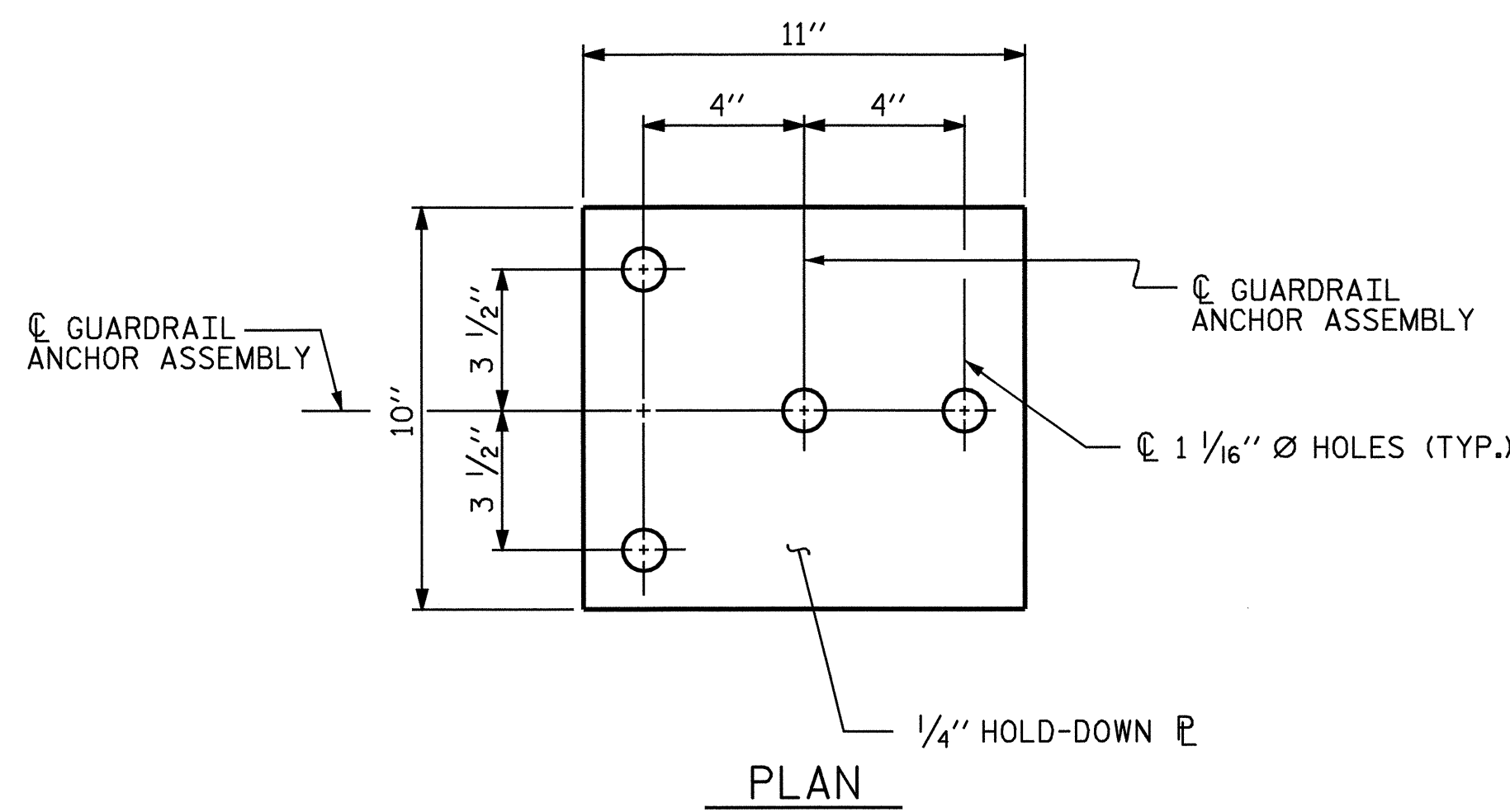
THE COST OF THE GUARDRAIL ANCHOR ASSEMBLIES WITH BOLTS, NUTS AND WASHERS COMPLETE IN PLACE, SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR CONCRETE BARRIER RAIL.

THE 1/4" Ø AND 3/4" Ø HOLES SHALL BE FORMED OR DRILLED WITH A CORE BIT. IMPACT TOOLS WILL NOT BE PERMITTED. ANY CONCRETE DAMAGED BY THIS WORK SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER.

THE RUBRAIL ANCHOR ASSEMBLY SHALL CONSIST OF 3 - 5/8" Ø BOLTS WITH WASHERS.

THE BOLTS FOR THE RUBRAIL ANCHOR ASSEMBLY SHALL BE INSTALLED, USING AN ADHESIVE ANCHORING SYSTEM, AFTER DRILLING THE 3/4" Ø HOLES. FOR ADHESIVELY ANCHORED ANCHOR BOLTS SEE SPECIAL PROVISIONS. THE YIELD STRENGTH SHALL BE 125% OF THE DEVELOPED YIELD STRENGTH OF THE BOLT. PERFORM TESTING OF THE BOLT TO 90% OF THE SPECIFIED STRENGTH PERFORMED IN THE PRESENCE OF THE ENGINEER.

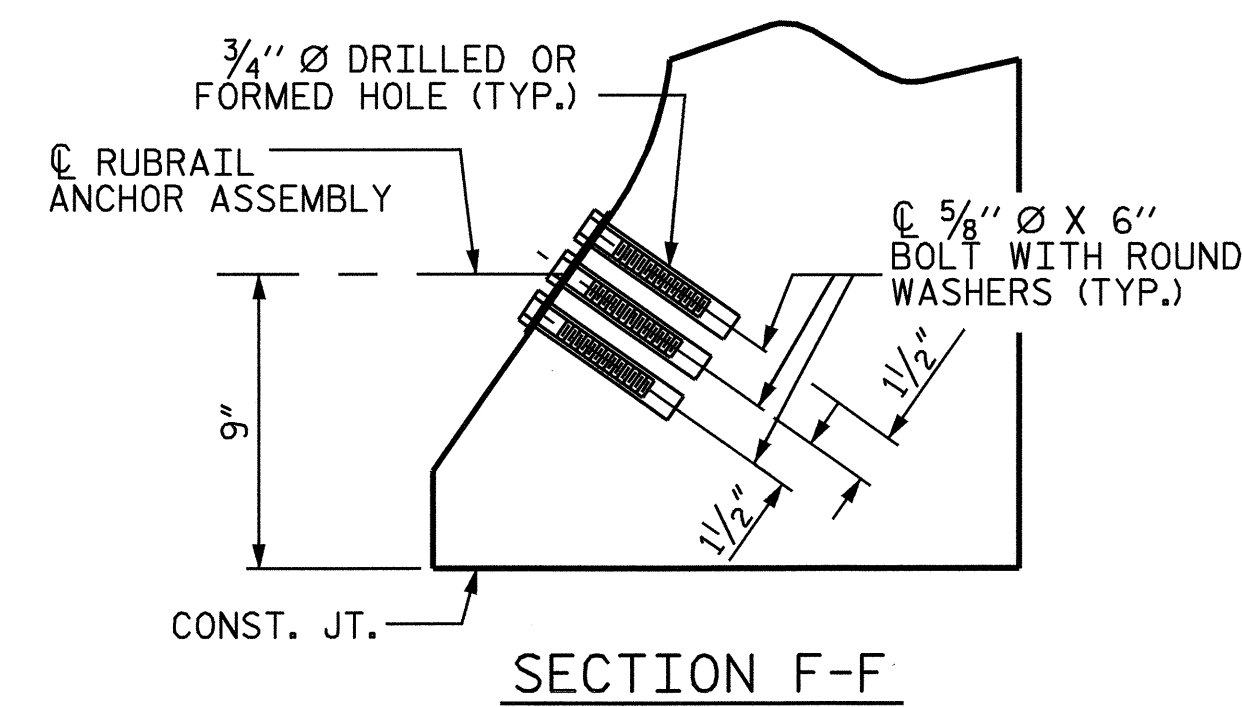
THE COST OF THE RUBRAIL ANCHOR ASSEMBLIES WITH BOLTS AND WASHERS COMPLETE IN PLACE, SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR CONCRETE BARRIER RAIL.



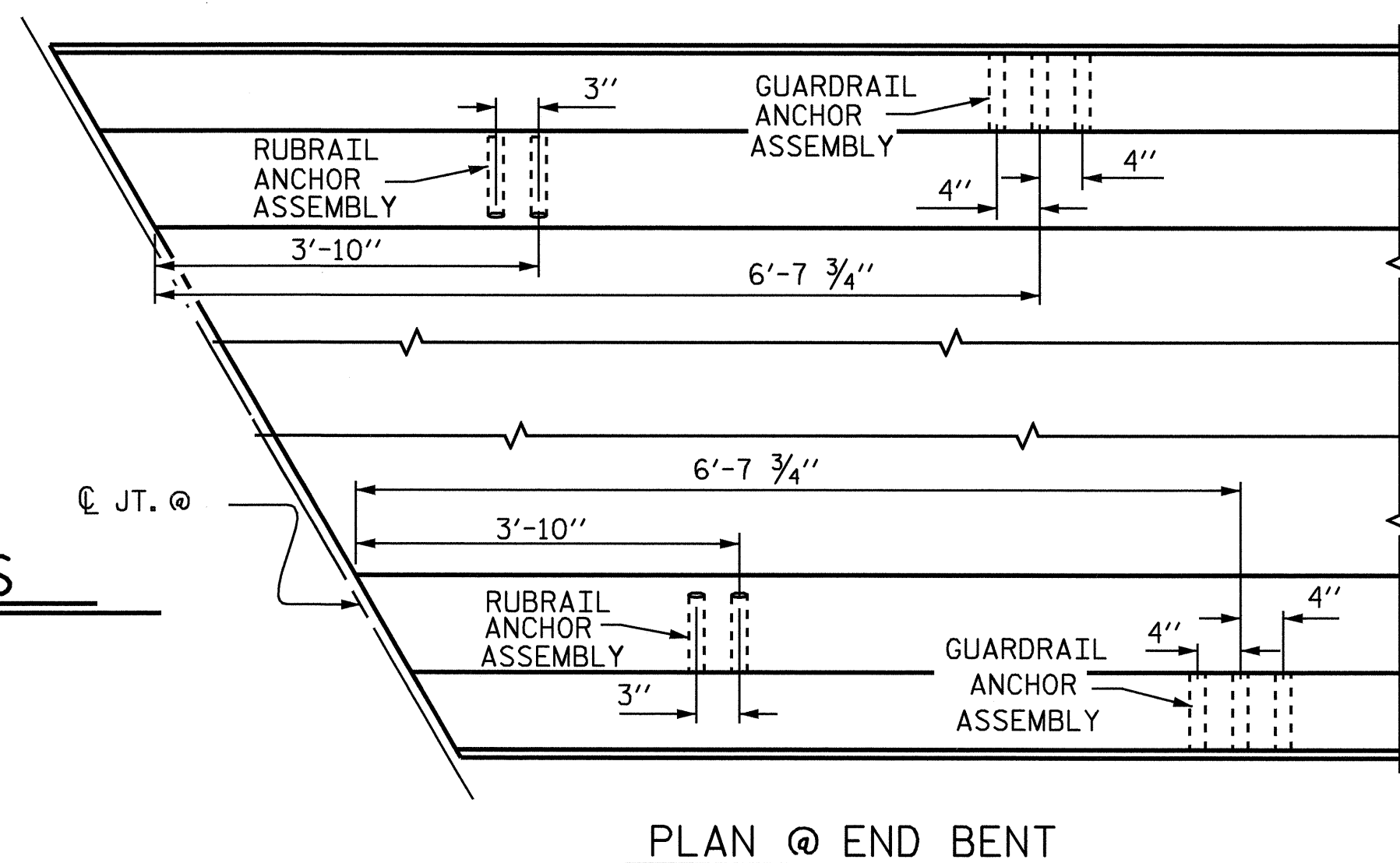
SKETCH SHOWING POINTS OF ATTACHMENTS

■ DENOTES GUARDRAIL AND RUBRAIL ANCHOR ASSEMBLY, SEE "LOCATION OF ANCHORS FOR GUARDRAIL AND RUBRAIL" FOR DETAILS.

GUARDRAIL ANCHOR ASSEMBLY DETAILS



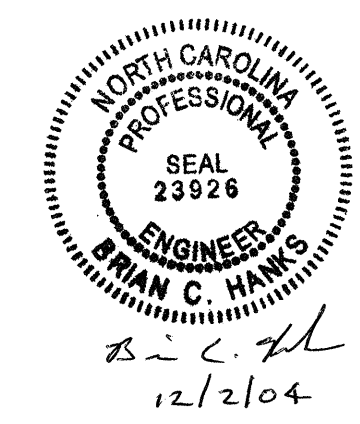
RUBRAIL ANCHOR ASSEMBLY DETAILS



PLAN @ END BENT

LOCATION OF ANCHORS FOR GUARDRAIL AND RUBRAIL

ASSEMBLED BY : D. G. ELY	DATE : 4/21/04
CHECKED BY : B. C. HANKS	DATE : 10/1/04
DRAWN BY : JMB 12/87	REV. 6/1/94 EEM/GRP
CHECKED BY : ARB 12/87	REV. 8/16/99 RWW/LES



PROJECT NO. B-3659
HAYWOOD COUNTY
 STATION: 14+42.00 -L-

SHEET 2 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GUARDRAIL ANCHORAGE
 FOR BARRIER RAIL

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-12
1			3			TOTAL SHEETS 23
2			4			