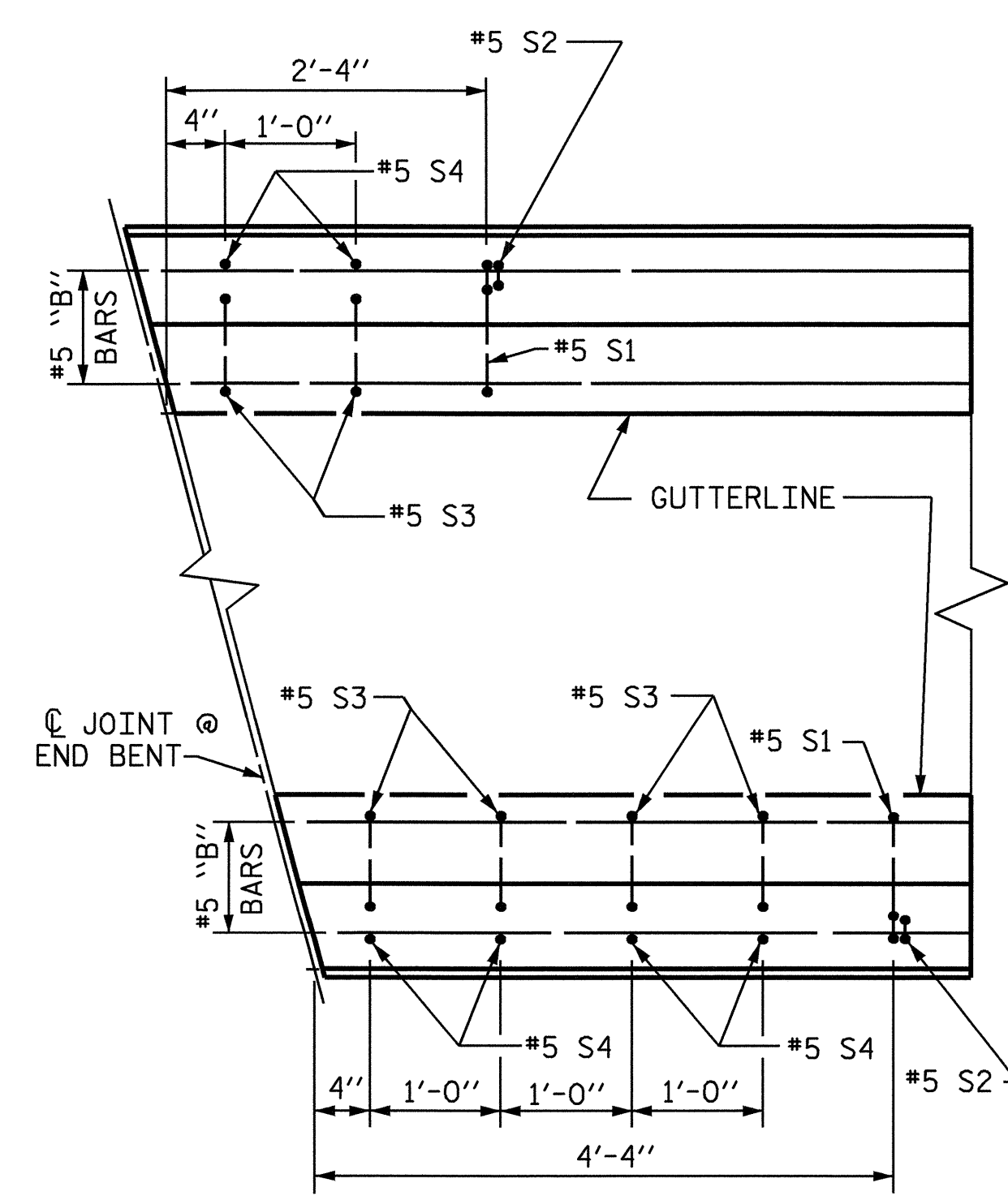
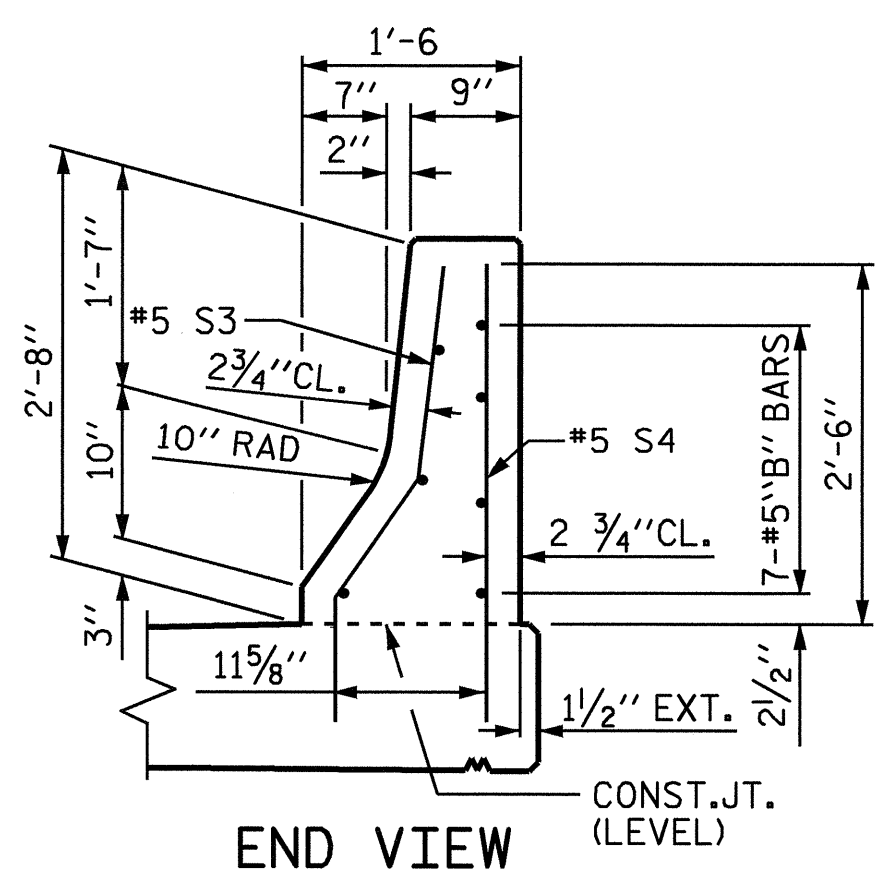


SPAN A

SEE "END OF RAIL DETAILS" FOR ** ADDITIONAL REINFORCING BARS.



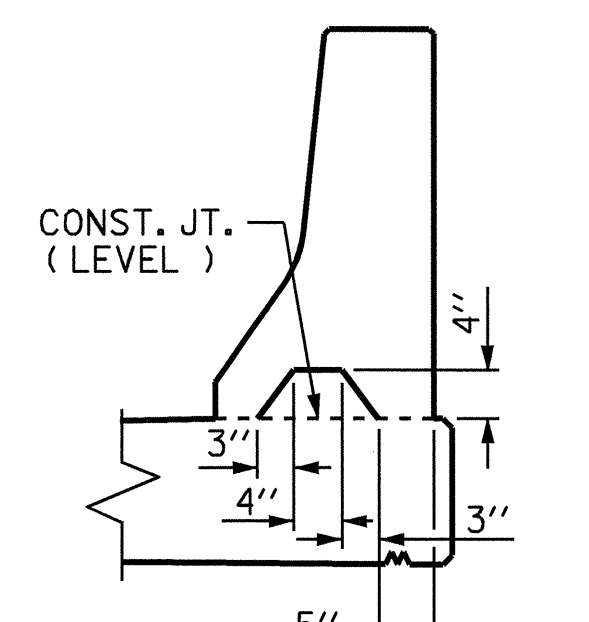
PLAN



END VIEW

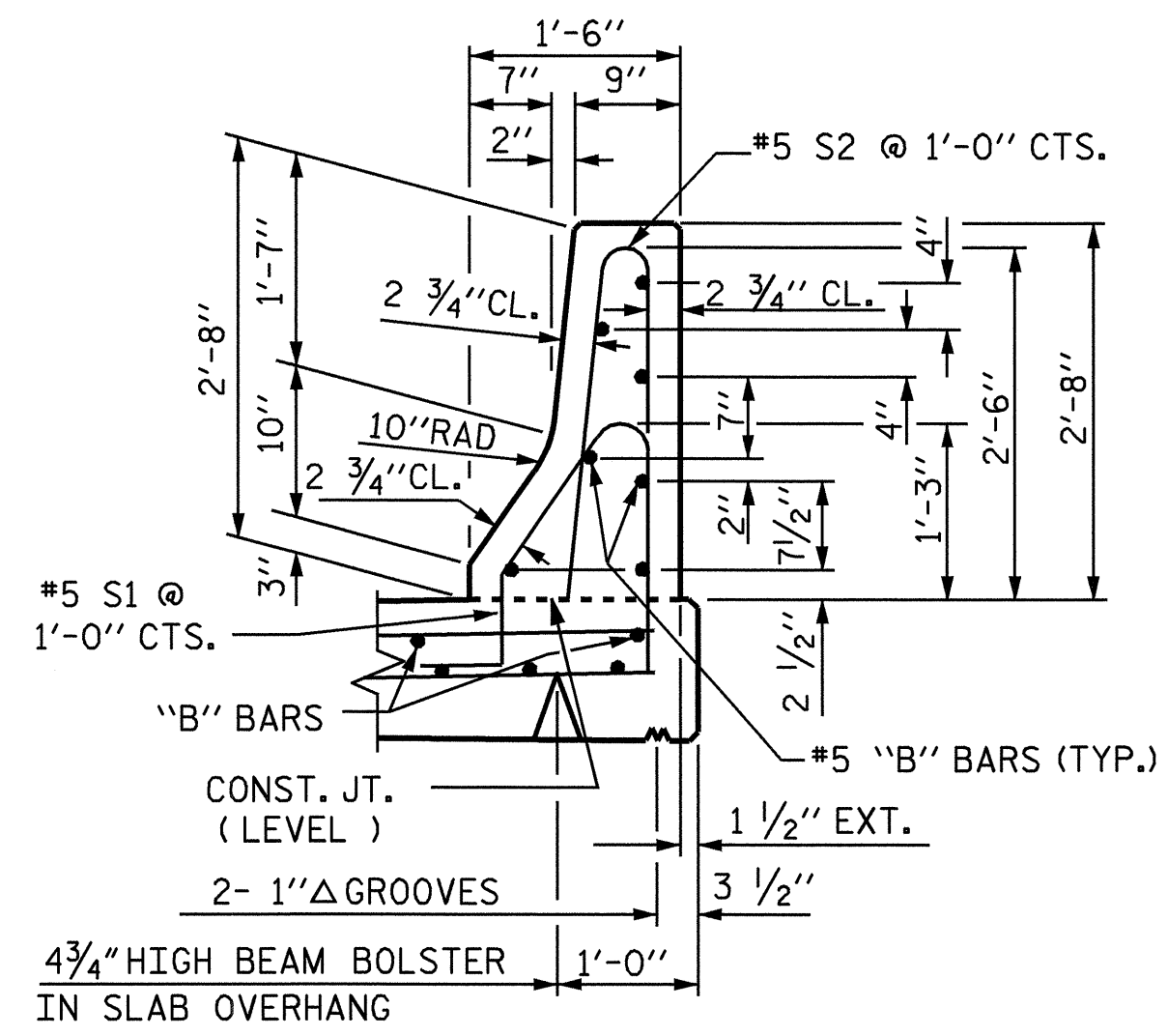
END OF RAIL DETAILS

FOR ADHESIVE ANCHORING AT SAWED JOINTS



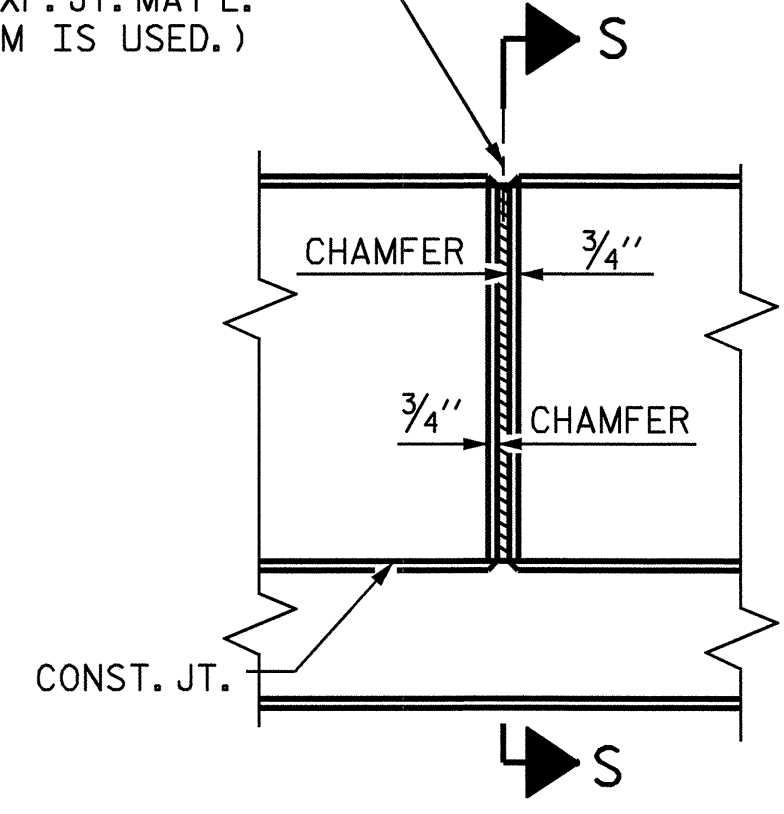
SECTION S-S

AT DAM IN OPEN JOINT (THIS IS TO BE USED ONLY WHEN SLIP FORM IS USED)



SECTION THRU RAIL

1/2" EXP. JT. MAT'L HELD IN PLACE WITH GALVANIZED NAILS. (NOTE: OMIT EXP. JT. MAT'L. WHEN SLIP FORM IS USED.)



ELEVATION AT EXPANSION JOINTS

BARRIER RAIL DETAILS

NOTES

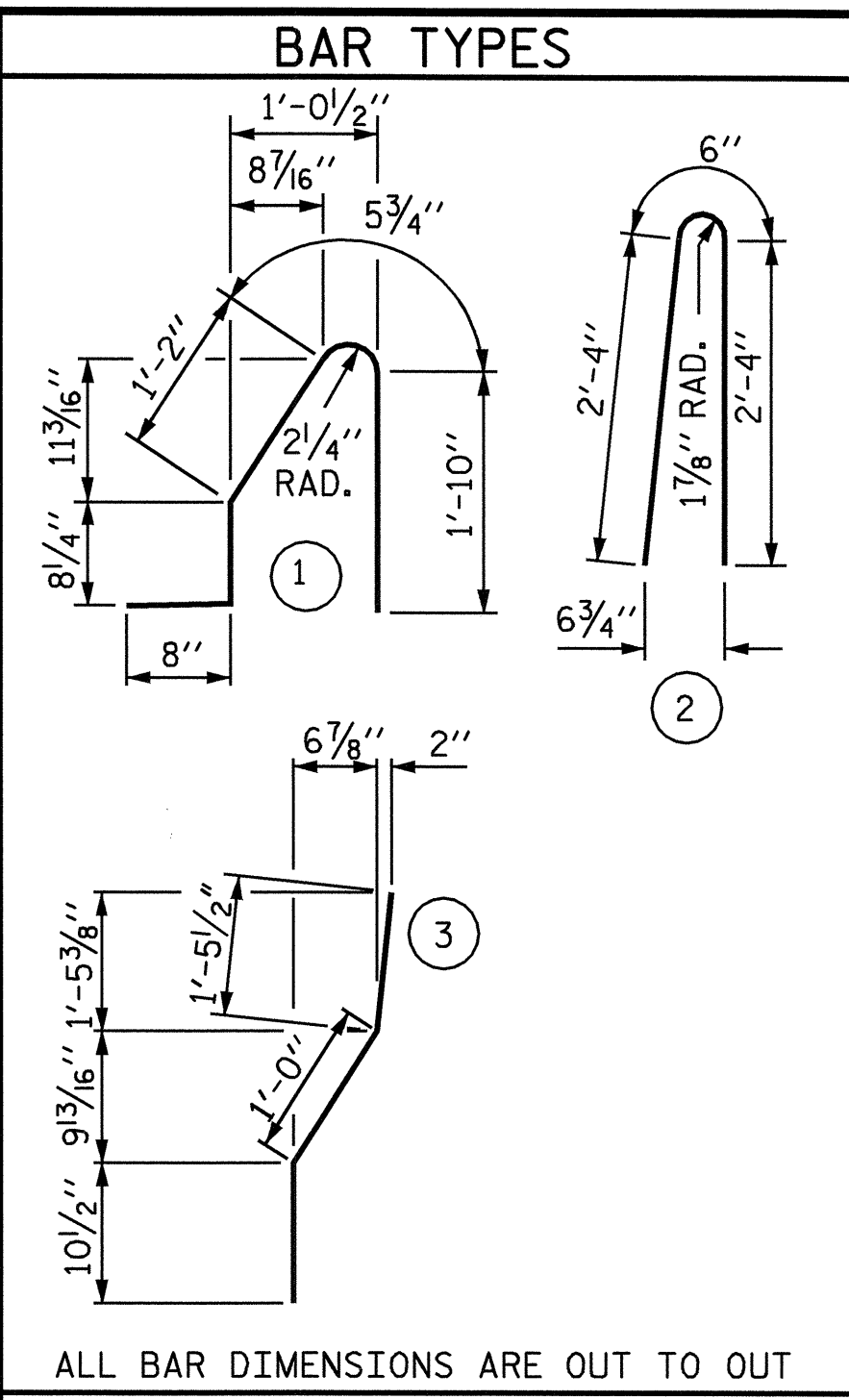
BARRIER RAIL IN EACH SPAN SHALL NOT BE CAST UNTIL ALL SLAB CONCRETE IN THAT SPAN HAS BEEN CAST AND HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.

WHEN COMPRESSION JOINT SEAL OR EVAZOTE JOINT SEAL IS REQUIRED, THE JOINT IN THE DECK SHALL BE SAWED PRIOR TO THE CASTING OF BARRIER RAIL.

ALL REINFORCING STEEL IN BARRIER RAILS SHALL BE EPOXY COATED.

THE #5 S3 AND #5 S4 BARS SHALL BE INSTALLED, USING AN ADHESIVE ANCHORING SYSTEM, AFTER SAWING THE JOINT. FOR ADHESIVELY ANCHORED BOLTS OR DOWELS, SEE SPECIAL PROVISIONS. THE YIELD LOAD FOR THE #5 S3 AND #5 S4 BARS IS 18.6 KIPS. FIELD TESTING FOR THE ADHESIVE BONDING SYSTEM IS NOT REQUIRED.

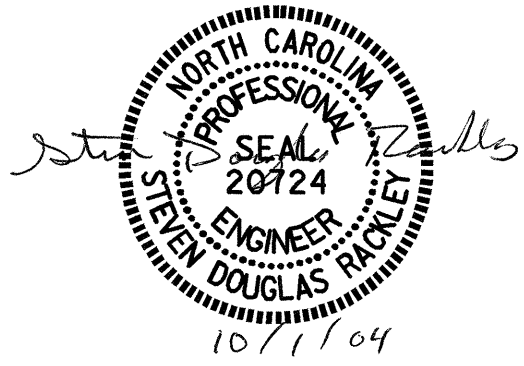
VERTICAL GROOVED CONTRACTION JOINTS, 1/2" IN DEPTH, SHALL BE TOOLED IN ALL EXPOSED FACES OF THE BARRIER RAIL AND IN ACCORDANCE WITH ARTICLE 825-10(B) OF THE STANDARD SPECIFICATIONS. THE CONTRACTION JOINT SHALL BE LOCATED AT EACH THIRD POINT BETWEEN BARRIER RAIL EXPANSION JOINTS. ONLY ONE CONTRACTION JOINT IS REQUIRED AT MIDPOINT OF BARRIER RAIL SEGMENTS LESS THAN 20 FEET IN LENGTH AND NO CONTRACTION JOINTS ARE REQUIRED AT THOSE SEGMENTS LESS THAN 10 FEET IN LENGTH.



BILL OF MATERIAL

FOR CONCRETE BARRIER RAIL ONLY

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
* B1	14	#5	STR	24'-2"	353
* B2	14	#5	STR	21'-8"	316
* B3	56	#5	STR	28'-8"	1674
* S1	314	#5	1	4'-10"	1583
* S2	314	#5	2	5'-2"	1692
* S3	12	#5	3	3'-4"	42
* S4	12	#5	STR	3'-2"	40
				* EPOXY COATED REINFORCING STEEL	5,700 LBS.
				CLASS AA CONCRETE	33.2 CU. YDS.
				CONCRETE BARRIER RAIL	331.81 LIN. FT.



PROJECT NO. R-2911D
ROWAN COUNTY
 STATION: 231+17.87 -L-

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
STANDARD CONCRETE BARRIER RAIL
 (RIGHT LANE)

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-39
1			3			TOTAL SHEETS 120
2			4			

ASSEMBLED BY : M.K. BEARD DATE : 5/20/04
 CHECKED BY : J.P. ADAMS DATE : 05/26/04
 DRAWN BY : ARB 5/87 REV. 8/16/99 RWW/LES
 CHECKED BY : SJD 9/87 REV. 10/17/00 RWW/LES
 REV. 5/7/03R RWW/JTE