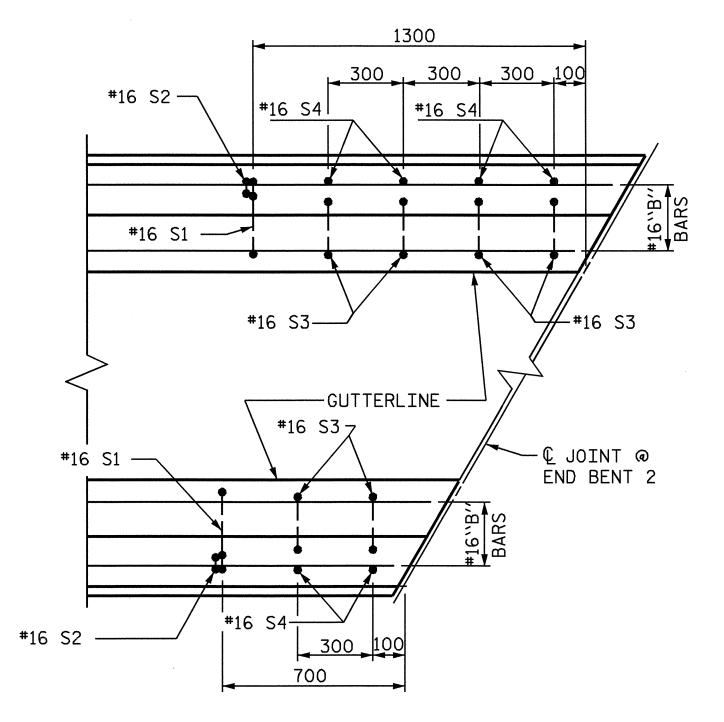
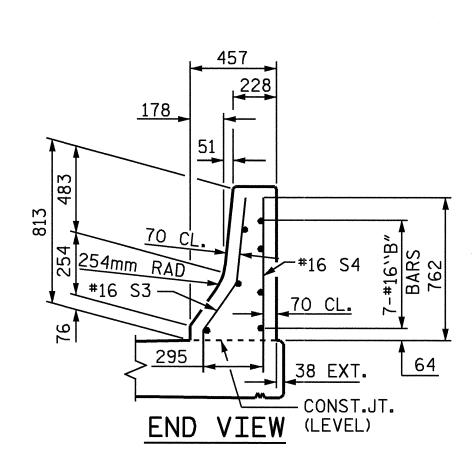
## © JOINT @ END BENT 1 #16 S1 #16 S1 #16 S1 #16 S2

## PLAN @ END BENT 1 (MODULAR EXPANSION JOINT)





## PLAN @ END BENT 2

(EVAZOTE JOINT)

END OF RAIL DETAILS

FOR ADHESIVE ANCHORING AT SAWED JOINTS

ASSEMBLED BY: A.S. CALLAWAY DATE: 1/28/04 CHECKED BY: B.N. BARODAWALA DATE: 6/17/04 DRAWN BY: ARB 5/87 REV. 8/16/99 RWW/LES REV. 10/17/00 RWW/LES REV. 5/7/03R RWW/JTE

## NOTES

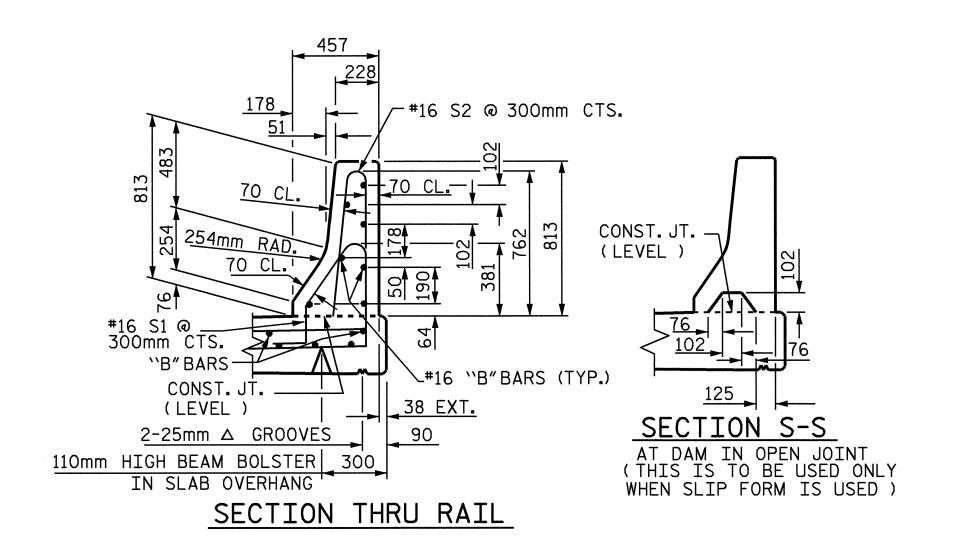
THE BARRIER RAIL IN A CONTINUOUS UNIT SHALL NOT BE CAST UNTIL ALL SLAB CONCRETE IN THAT UNIT HAS BEEN CAST AND HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 20.7 MPd.

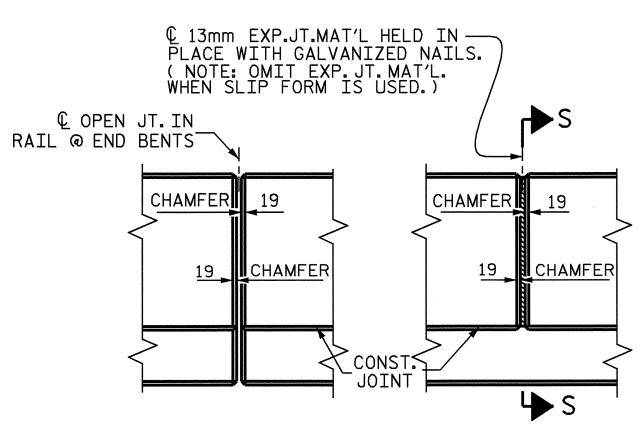
WHEN EVAZOTE JOINT SEAL IS REQUIRED, THE JOINT IN THE DECK SHALL BE SAWED PRIOR TO THE CASTING OF BARRIER RAIL.

ALL REINFORCING STEEL IN BARRIER RAILS SHALL BE EPOXY COATED.

THE #16 S3 AND #16 S4 BARS SHALL BE INSTALLED, USING AN ADHESIVE ANCHORING SYSTEM, AFTER SAWING THE JOINT. FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE SPECIAL PROVISIONS. THE YIELD LOAD FOR THE #16 S3 AND #16 S4 BARS IS 82.7 kN. FIELD TESTING FOR THE ADHESIVE BONDING SYSTEM IS NOT REQUIRED.

VERTICAL GROOVED CONTRACTION JOINTS, 12mm 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 6.1m IN LENGTH AND NO CONTRACTION JOINTS ARE REQUIRED FOR THOSE SEGMENTS LESS THAN 3.5m IN LENGTH.

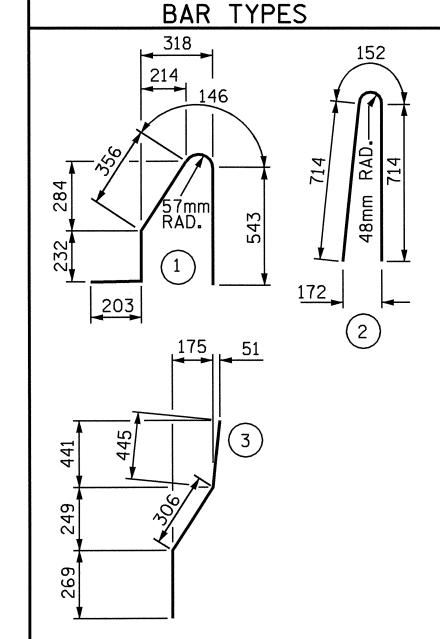




ELEVATION AT EXPANSION JOINTS

BARRIER RAIL DETAILS





ALL	BAR	DIME	NSIONS	ARE	OUT	ΤO	OUT.
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BILL OF MATERIAL						
FOR CONCRETE BARRIER RAIL ONLY						
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	
<b>★</b> B1	56	#16	STR	4340	377	
* B2	168	#16	STR	8580	2237	
<b>★</b> B3	154	#16	STR	8300	1984	
* B4	14	#16	STR	8260	179	
* S1	1464	#16	1	1480	3363	
* S2	1464	#16	2	1580	3590	
* S3	6	#16	3	1020	9	
* S4	6	#16	STR	960	91	
		-				
					1	

\* EPOXY COATED

RETNEORCING STEEL 11748

REINFORCING STEEL 11748 kg
CLASS AA CONCRETE 111.0 CU. METER

CONCRETE BARRIER RAIL 442.192 METERS

PROJECT NO. R-0977A

CHEROKEE county

STATION: 16+02.300-LC1B-

SHEET 4 OF 4

STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD

CONCRETE BARRIER RAIL

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-29
1			3			TOTAL SHEETS
2			4			230