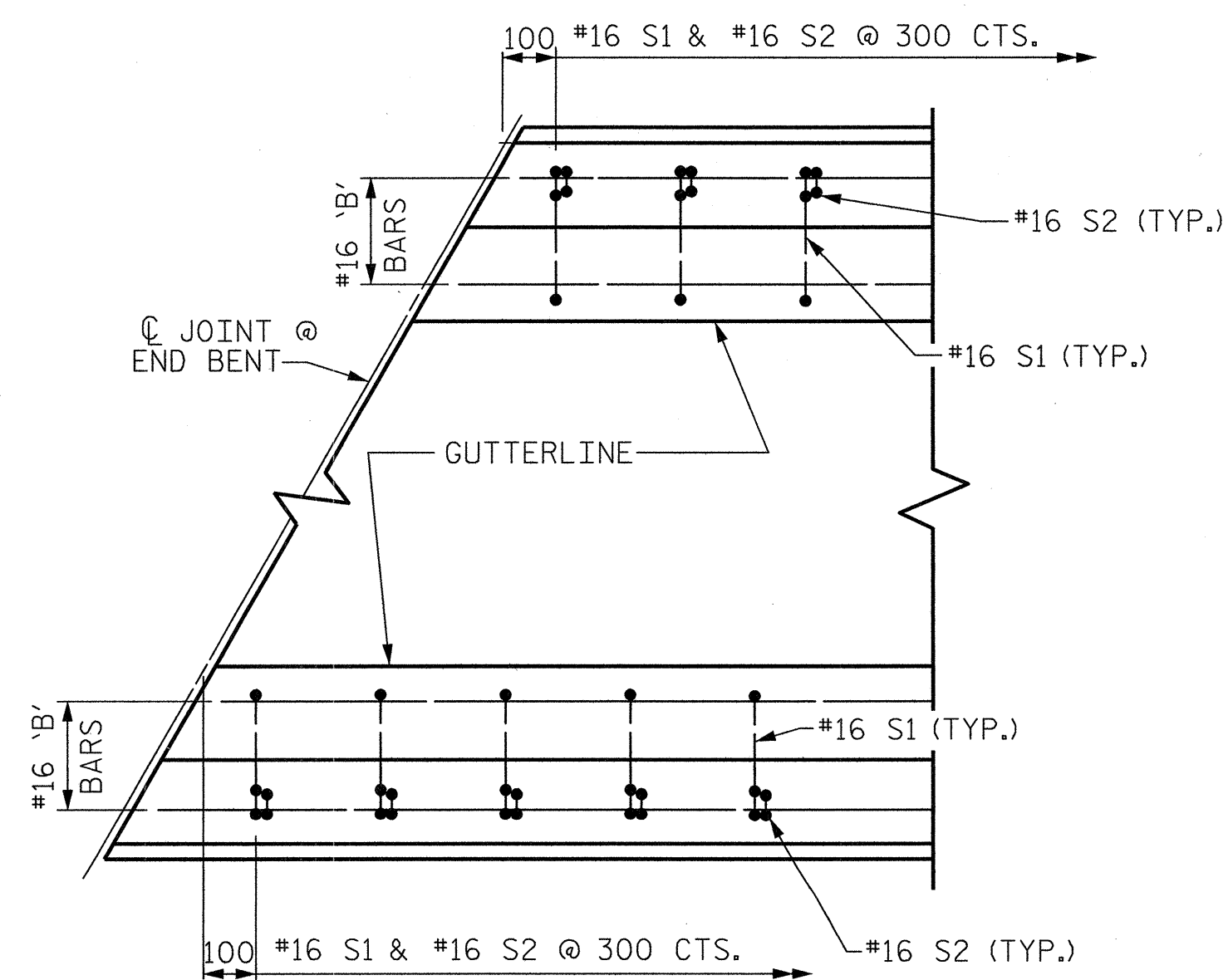
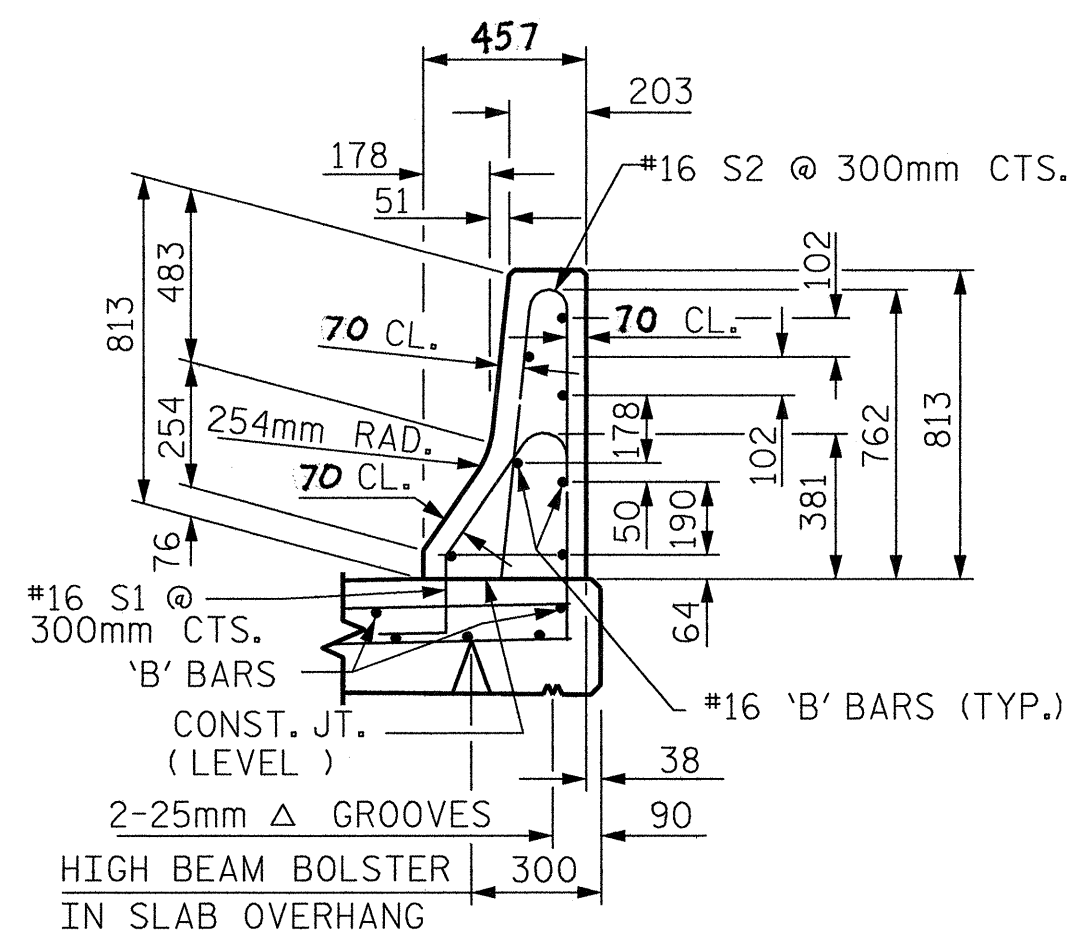


PLAN OF CONCRETE BARRIER RAIL

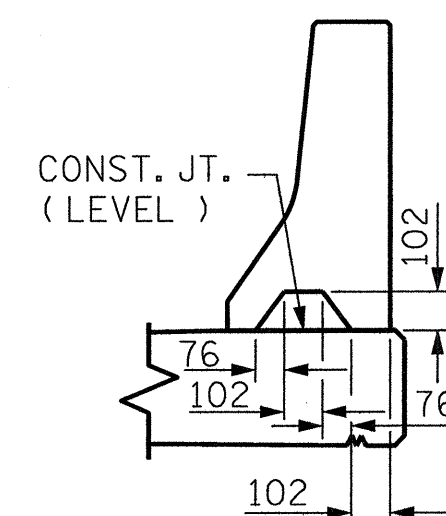
*16 'S' BARS MAY BE SHIFTED SLIGHTLY IN ORDER TO MAINTAIN 50mm MIN. CLEARANCE TO EXPANSION JOINT IN RAILS



PLAN
END OF RAIL DETAILS



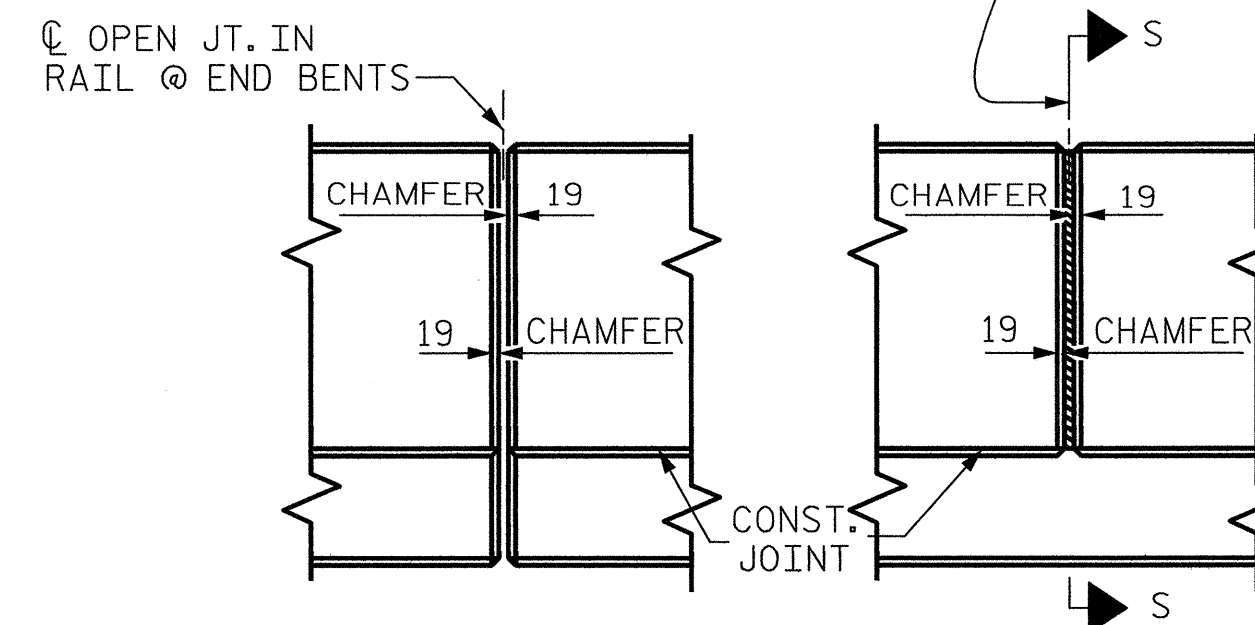
SECTION THRU RAIL



SECTION S-S

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

13mm 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

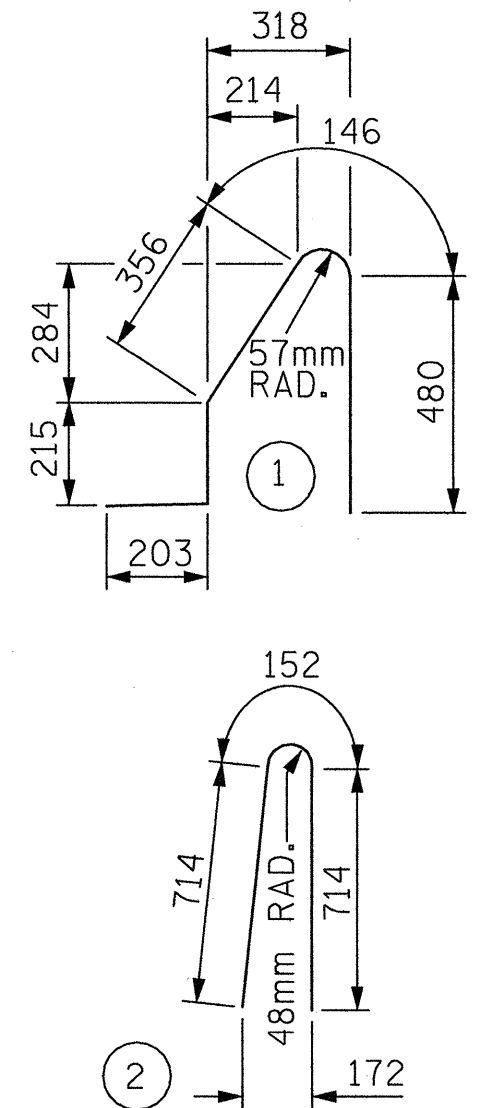
THE BARRIER RAIL IN A CONTINUOUS UNIT SHALL NOT BE CAST UNTIL ALL SLAB CONCRETE IN THAT SPAN HAS BEEN CAST AND HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 20.7 MPa.

WHEN USING ARMORED EVAZOTE JOINT SEAL, THE JOINT IN THE DECK SHALL BE FORMED PRIOR TO THE CASTING OF BARRIER RAIL.

ALL REINFORCING STEEL IN BARRIER RAILS SHALL BE EPOXY COATED.

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. A JOINT SHALL BE LOCATED AT EACH THIRD POINT BETWEEN BARRIER RAIL EXPANSION JOINTS. ONLY ONE JOINT IS REQUIRED AT MIDPOINT OF BARRIER RAIL SEGMENTS LESS THAN 6.1m IN LENGTH AND NO JOINTS ARE REQUIRED FOR THOSE SEGMENTS LESS THAN 3.5m IN LENGTH.

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL

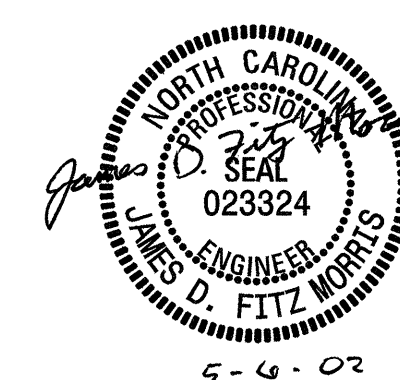
| FOR CONCRETE BARRIER RAIL ONLY | | | | | |
|----------------------------------|-----|------|------|--------|----------------|
| BAR | NO. | SIZE | TYPE | LENGTH | WEIGHT |
| * B1 | 28 | #16 | STR | 3580 | 156 |
| * B2 | 84 | #16 | STR | 7080 | 923 |
| * B3 | 28 | #16 | STR | 4120 | 179 |
| * S1 | 374 | #16 | 1 | 1400 | 813 |
| * S2 | 374 | #16 | 2 | 1580 | 917 |
| * EPOXY COATED REINFORCING STEEL | | | | | 2988 kg |
| CLASS AA CONCRETE | | | | 28.2 | CU. METER |
| CONCRETE BARRIER RAIL | | | | | 112.318 METERS |

* DENOTES EPOXY COATED REINFORCING STEEL

PROJECT NO. **R-2552B**

JOHNSTON COUNTY

STATION: **97+59.319-L-LT POC**



CTE ENGINEERS
CONSOER TOWNSEND ENVIRONMENTAL ENGINEERS, INC.
13325 SOUTH POINT BOULEVARD, SUITE 400
CHARLOTTE, NORTH CAROLINA 28273-5820
(704) 583-0902

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD
CONCRETE BARRIER RAIL

| | |
|-----------------------|------------------------|
| ASSEMBLED BY : MHF | DATE : 05/01/02 |
| CHECKED BY : MSB | DATE : 05/01/02 |
| DRAWN BY : ARB 5/87 | REV. 7/17/98 RWW/LES |
| CHECKED BY : SJD 9/87 | REV. 8/16/99 RWW/LES |
| | REV. 10/17/00R RWW/LES |

| REVISIONS | | | | SHEET NO. |
|-----------|-----|-------|-----|-----------|
| NO. | BY: | DATE: | NO. | DATE: |
| 1 | | | 3 | |
| 2 | | | 4 | |

TOTAL SHEETS 431