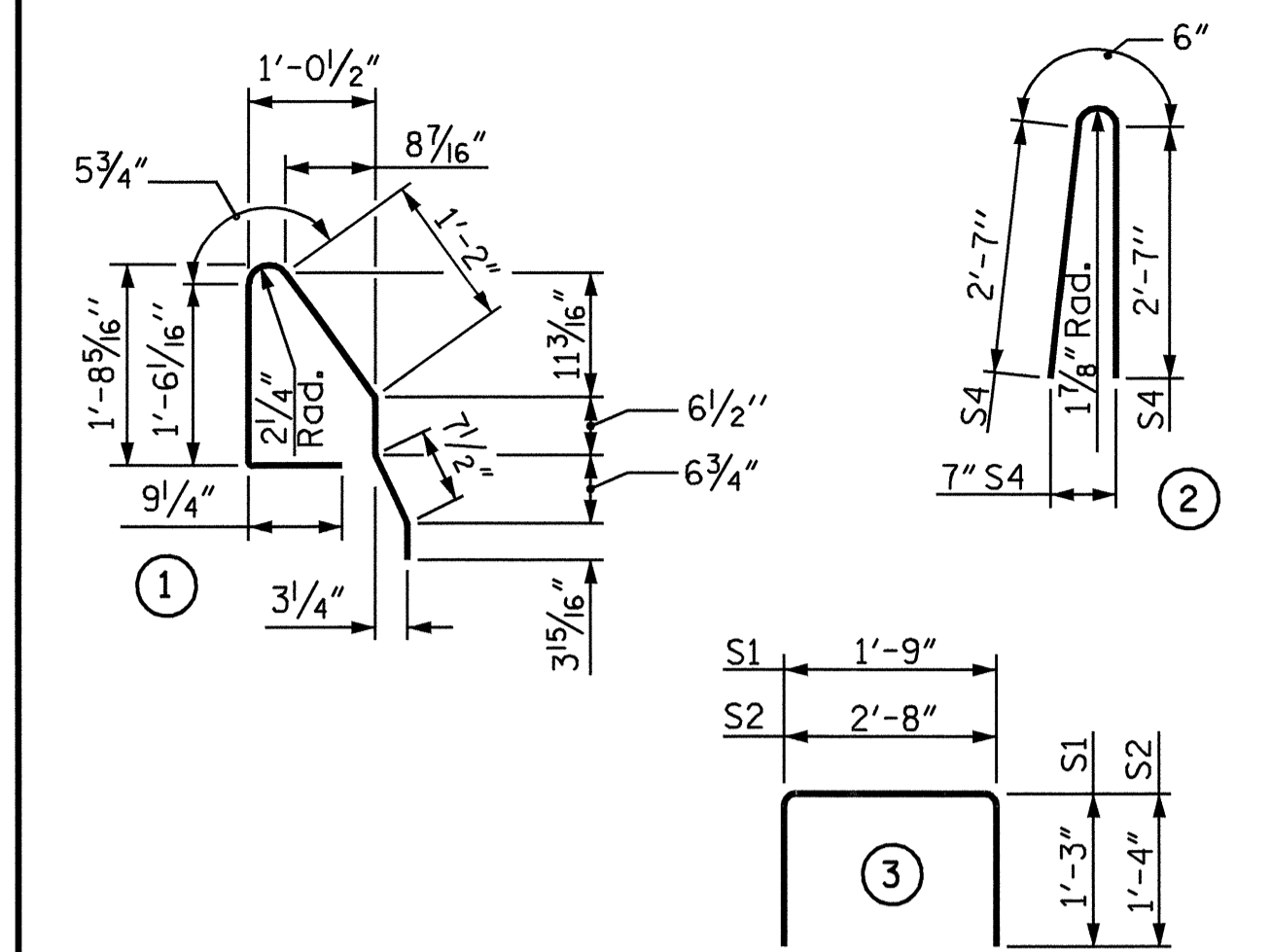


BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT

NOTES

ALL PRESTRESSING STRANDS SHALL BE 7-WIRE LOW RELAXATION GRADE 270 STRANDS AND SHALL CONFORM TO AASHTO M203 EXCEPT FOR SAMPLING REQUIREMENTS WHICH SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

ALL REINFORCING STEEL CAST WITH THE CORED SLAB SECTIONS SHALL BE GRADE 60 AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PRESTRESSED CONCRETE CORED SLABS.

RECESSES FOR TRANSVERSE STRANDS SHALL BE GROUTED AFTER THE TENSIONING OF THE STRANDS.

THE 2 1/2" Ø DOWEL HOLES AT FIXED ENDS OF SLAB SECTIONS SHALL BE FILLED WITH GROUT. THE 2 1/2" Ø DOWEL HOLES AT EXPANSION ENDS OF SLAB SECTIONS SHALL BE FILLED WITH JOINT SEALER MATERIAL TO 1 1/2" ABOVE THE TOP OF DOWELS AND THEN FILLED WITH GROUT.

THE JOINT SEALER MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF TYPE SL LOW MODULUS SILICONE SEALANT. THE 2" Ø BACKER ROD SHALL CONFORM TO THE REQUIREMENTS OF TYPE M BOND BREAKER. SEE SECTION 1028 OF THE STANDARD SPECIFICATIONS.

FOR ELASTOMERIC BEARINGS, SEE SPECIAL PROVISIONS.

WHEN CORED SLABS ARE CAST, A POSITIVE HOLD-DOWN SYSTEM SHALL BE EMPLOYED TO PREVENT VOIDS FROM RISING OR MOVING SIDEWAYS. THIS SYSTEM SHALL BE DESIGNED TO BE LEFT IN PLACE UNTIL THE CONCRETE HAS REACHED RELEASE STRENGTH. AT LEAST THREE WEEKS PRIOR TO CASTING CORED SLABS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR REVIEW AND COMMENT, DETAILED DRAWINGS OF THE PROPOSED HOLD-DOWN SYSTEM. IN ADDITION TO STRUCTURAL DETAILS, LOCATION AND SPACING OF THE HOLD-DOWNS SHALL BE INDICATED.

THE TRANSFER OF LOAD FROM THE ANCHORAGES TO THE CORED SLAB UNIT SHALL BE DONE WHEN THE CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF NOT LESS THAN 4000 PSI.

ALL REINFORCING STEEL IN BARRIER RAILS SHALL BE EPOXY COATED.

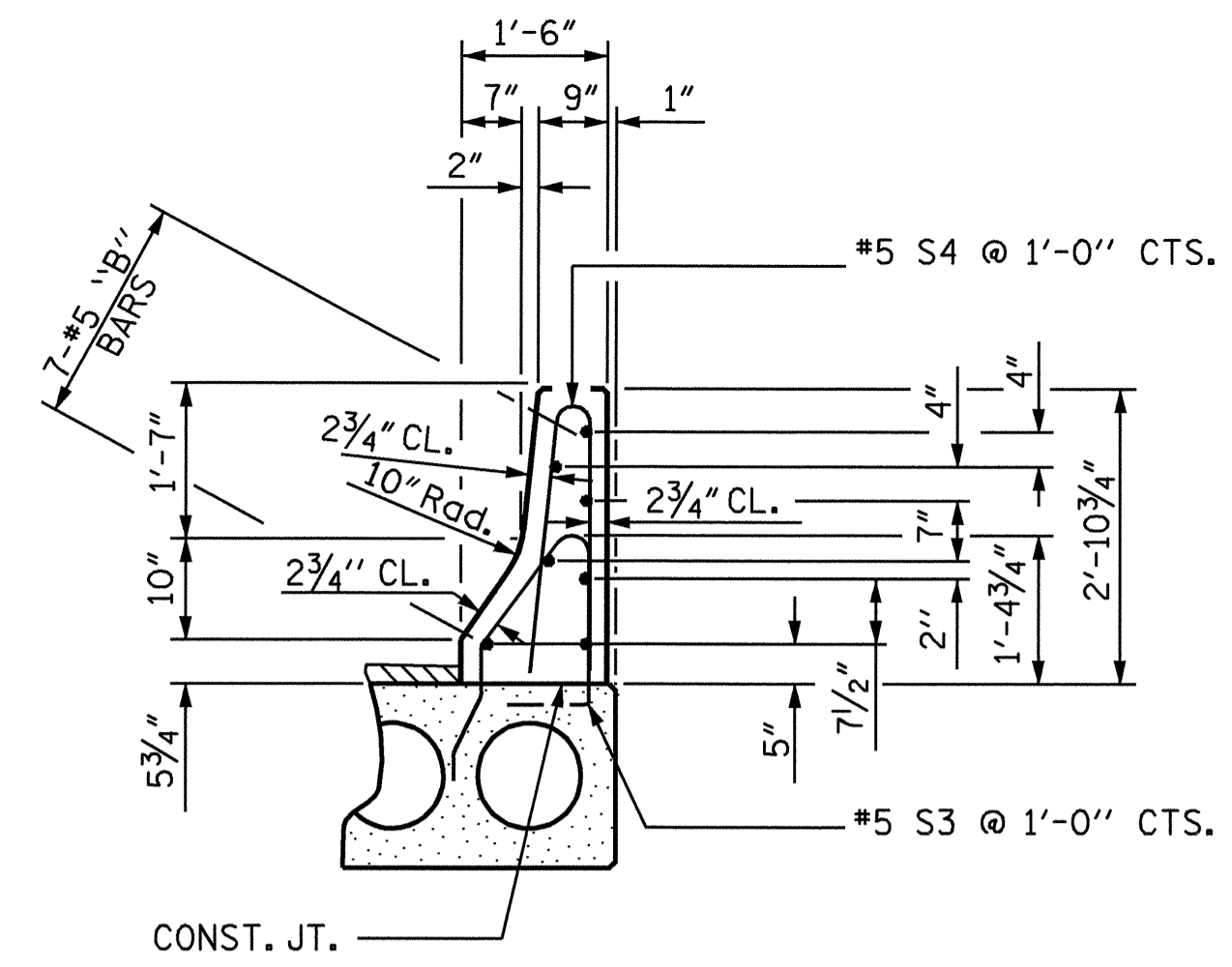
PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH THE CORED SLAB UNIT ENDS.

APPLY EPOXY PROTECTIVE COATING TO CORED SLAB UNIT ENDS. FOR EPOXY PROTECTIVE COATING, SEE SPECIAL PROVISIONS.

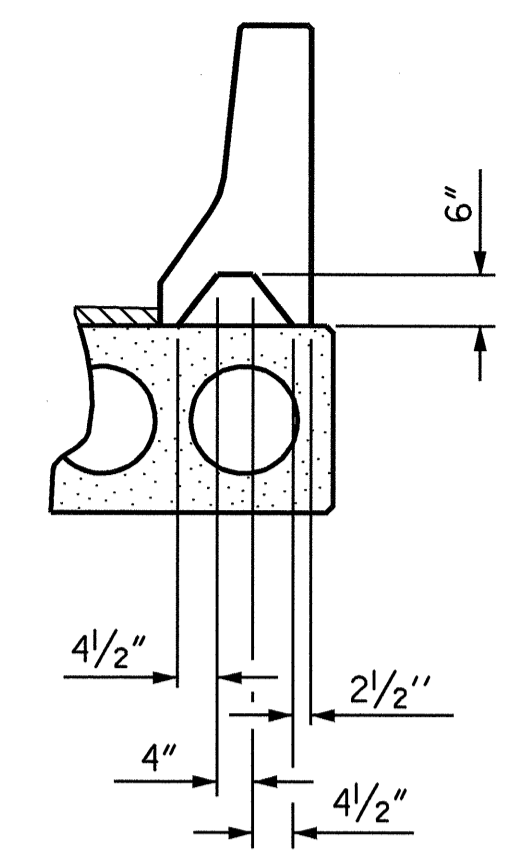
VERTICAL GROOVED CONTRACTION JOINTS, 1/2" IN DEPTH, SHALL BE TOOLED IN ALL EXPOSED FACES OF THE BARRIER RAIL AND IN ACCORDANCE WITH ARTICLE 825-10(B) OF THE STANDARD SPECIFICATIONS. A VERTICAL CONTRACTION JOINT SHALL BE LOCATED AT EACH THIRD POINT BETWEEN BARRIER EXPANSION JOINTS. ONLY ONE CONTRACTION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

FOR PRESTRESSED CONCRETE MEMBERS, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC BEARINGS, SEE SPECIAL PROVISIONS.

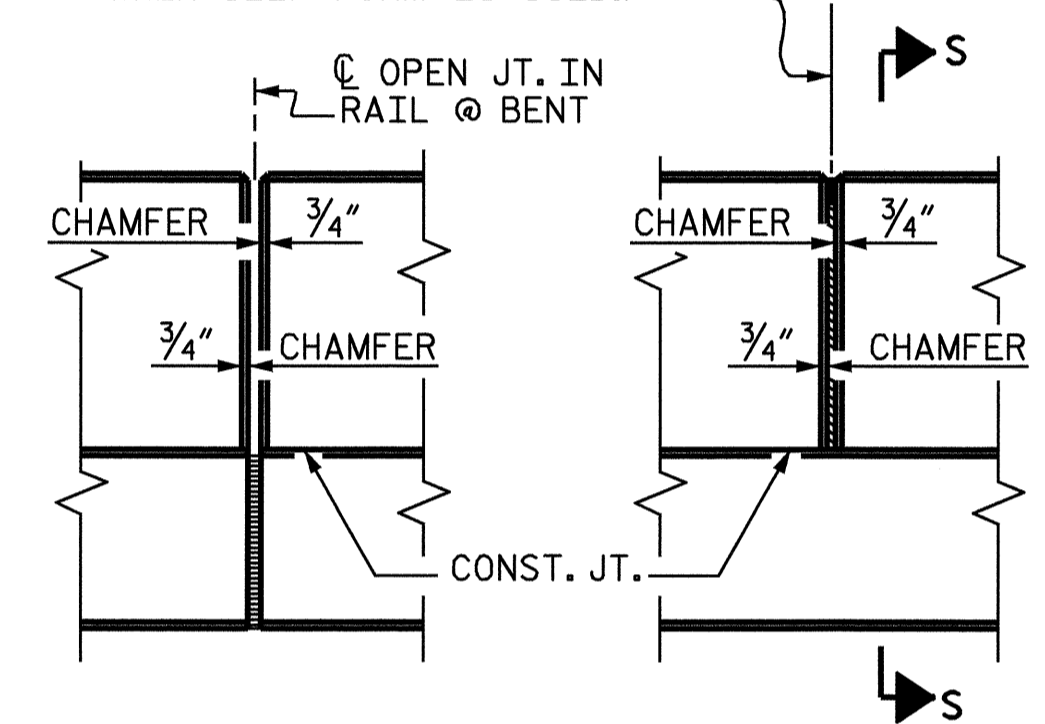


SECTION THRU RAIL



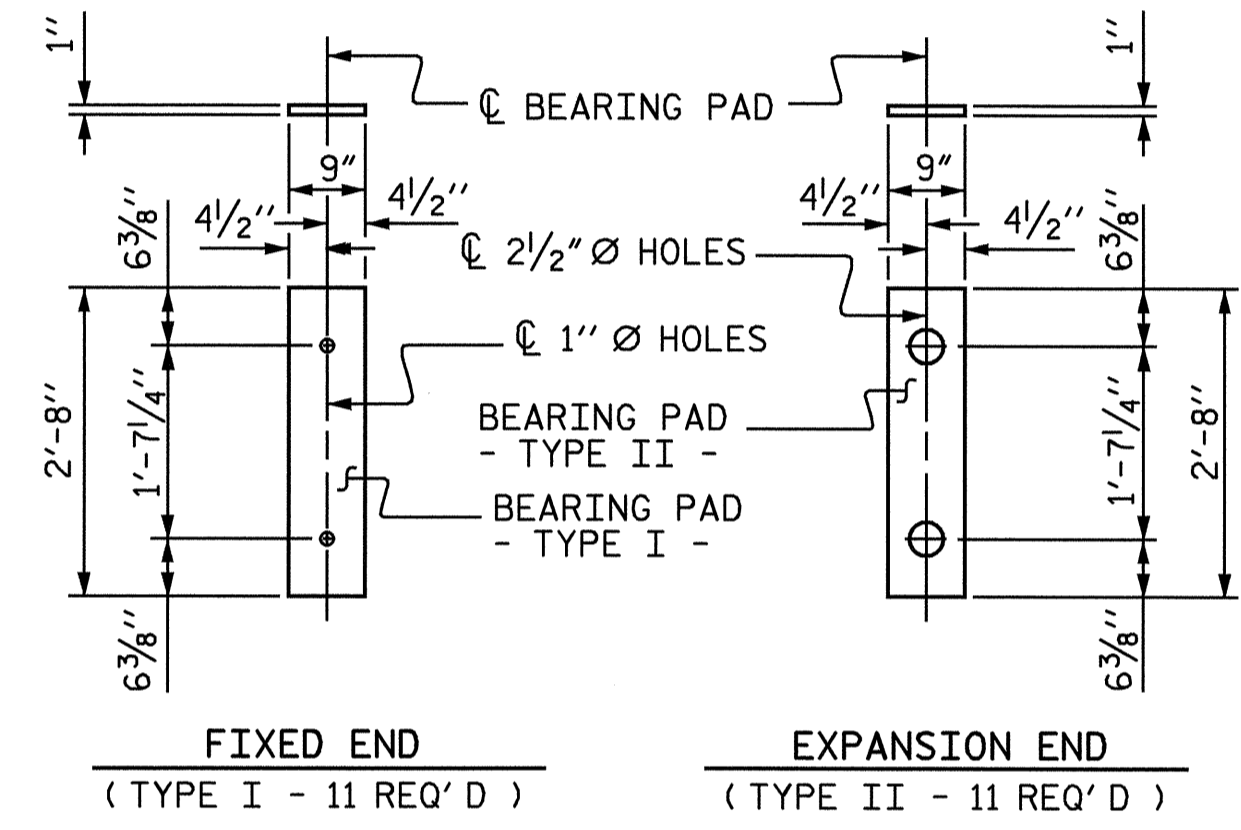
SECTION S-S
AT DAM IN OPEN JOINT
(THIS IS TO BE USED ONLY WHEN SLIP FORM IS USED)

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



ELASTOMERIC BEARING DETAILS
FIXED END (TYPE I - 11 REQ'D)
EXPANSION END (TYPE II - 11 REQ'D)

| DEAD LOAD DEFLECTION AND CAMBER | |
|--|----------|
| CAMBER (SLAB ALONE IN PLACE) | 1 3/8" ↑ |
| DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD *** | 1/4" ↓ |
| FINAL CAMBER | 1 1/8" ↑ |

*** INCLUDES FUTURE WEARING SURFACE

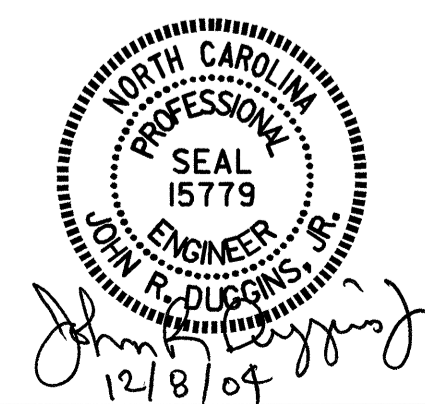
| GRADE 270 STRANDS | |
|-------------------------------------|--------|
| AREA (SQUARE INCHES) | 0.153 |
| ULTIMATE STRENGTH (LBS. PER STRAND) | 41,300 |
| APPLIED PRESTRESS (LBS. PER STRAND) | 30,980 |

| CORED SLABS REQUIRED | | | |
|----------------------|--------|-------------|---------------|
| UNIT TYPE | NUMBER | LENGTH | TOTAL LENGTH |
| INTERIOR C.S. | 9 | 47'-8 9/16" | 429'-5 1/16" |
| EXTERIOR C.S. | 2 | 47'-8 9/16" | 95'-5 1/8" |
| TOTAL | 11 | 47'-8 9/16" | 524'-10 3/16" |

| BILL OF MATERIAL FOR ONE CORED SLAB SECTION | | | | | | | |
|---|--------|------|------|---------------|--------|---------------|--------|
| BAR | NUMBER | SIZE | TYPE | EXTERIOR UNIT | | INTERIOR UNIT | |
| | | | | LENGTH | WEIGHT | LENGTH | WEIGHT |
| B1 | 4 | 4 | STR | 24'-7" | 66 | 24'-7" | 66 |
| S1 | 8 | 4 | 3 | 4'-3" | 23 | 4'-3" | 23 |
| S2 | 94 | 4 | 3 | 5'-4" | 335 | 5'-4" | 335 |
| * S3 | 49 | 5 | 1 | 5'-5" | 277 | | |
| REINFORCING STEEL | | | | LBS. | 424 | | 424 |
| * EPOXY COATED REINFORCING STEEL | | | | LBS. | 277 | | |
| 5,000 P.S.I. CONCRETE | | | | CU. YDS. | 6.6 | | 6.6 |
| 1/2" Ø L.R. STRANDS | | | | No. | 18 | | 18 |

| BILL OF MATERIAL FOR CONCRETE BARRIER RAIL | | | | | |
|--|-----|------|------|----------|--------|
| BAR | NO. | SIZE | TYPE | LENGTH | WEIGHT |
| * B2 | 28 | 5 | STR | 23'-4" | 681 |
| * S4 | 98 | 5 | 2 | 5'-8" | 579 |
| * EPOXY COATED REINFORCING STEEL | | | | LBS. | 1260 |
| CLASS AA CONCRETE | | | | CU. YDS. | 10.8 |
| TOTAL CONCRETE BARRIER RAIL | | | | LN. FT. | 95.30 |

ASSEMBLED BY : M. POOLE DATE : 11/03
 CHECKED BY : J. LAMBERT DATE : 08/04
 DRAWN BY : WJH 4/89 REV. 2/6/97 EEM/RCW
 CHECKED BY : FCJ 5/89 REV. 8/16/99 RWW/LES
 REV. 10/17/00 RWW/LES



PROJECT NO. B-3914
TRANSYLVANIA COUNTY
 STATION: 14+59.00 -L-

SHEET 3 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUPERSTRUCTURE
 3'-0" X 1'-9"
 PRESTRESSED CONCRETE
 CORED SLAB UNIT

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

TOTAL SHEETS 18