

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 1/2" 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.

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.

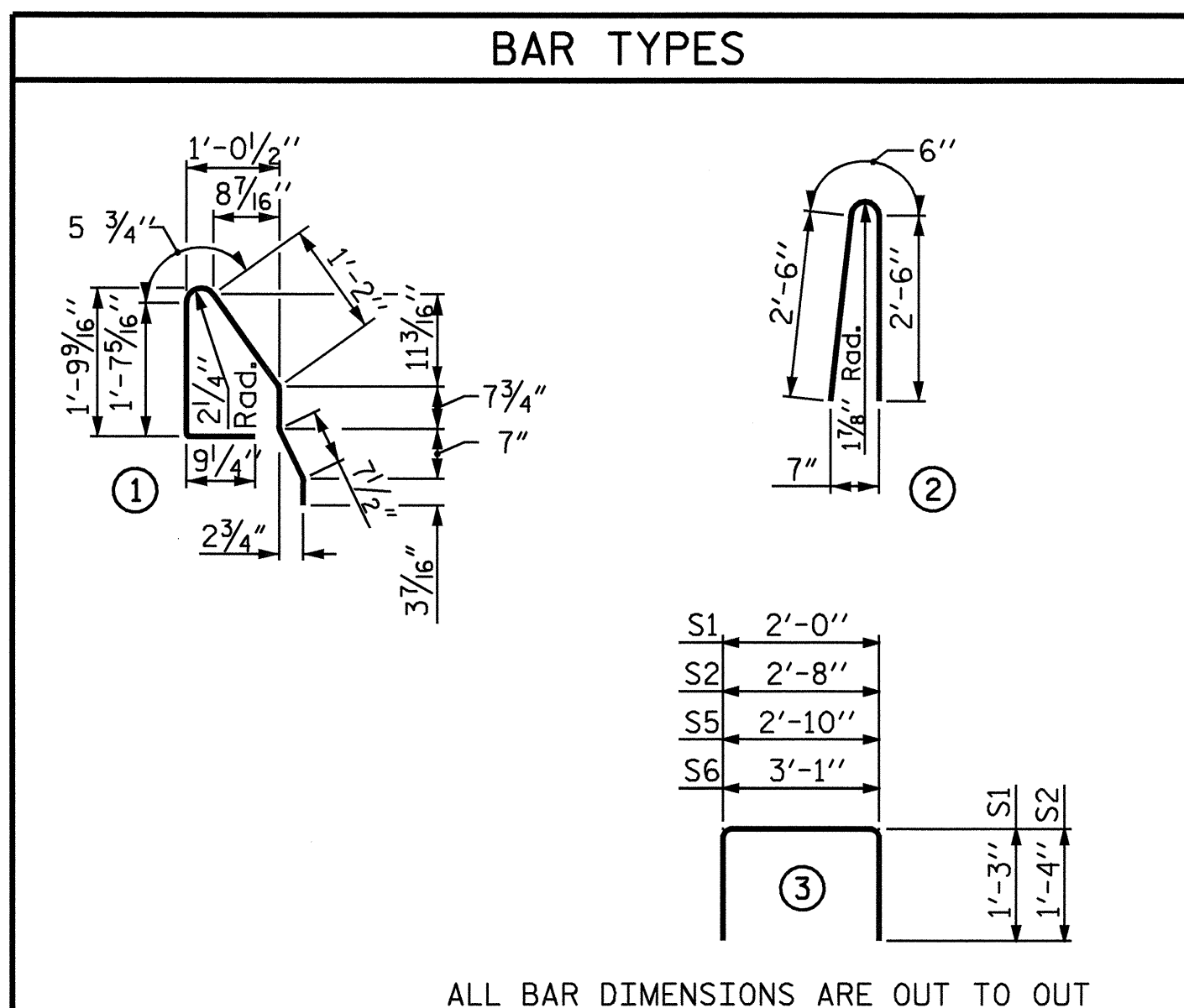
VERTICAL GROOVED CONTRACTION JOINTS, 1/2" IN DEPTH, SHALL BE TOOLED IN ALL EXPOSED FACES OF THE BARRIER RAIL AND IN ACCORDANCE WITH ARTICLE 825-10(B) OF THE STANDARD SPECIFICATIONS. A VERTICAL CONTRACTION JOINT SHALL BE LOCATED AT EACH THIRD POINT BETWEEN BARRIER RAIL EXPANSION JOINTS. ONLY ONE CONTRACTION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

FOR ELASTOMERIC BEARINGS, SEE SPECIAL PROVISIONS.

FOR CONCRETE WEARING SURFACE, SEE SPECIAL PROVISIONS.

THE TOP SURFACE OF THE CORED SLAB UNIT SHALL BE RAKED TO A DEPTH OF 1/4".

GRADE 270 STRANDS	
	1/2" Ø L.R.
AREA (SQUARE INCHES)	0.153
ULTIMATE STRENGTH (LBS. PER STRAND)	41,300
APPLIED PRESTRESS (LBS. PER STRAND)	30,980



BILL OF MATERIAL FOR ONE CORED SLAB SECTION							
BAR	NUMBER	SIZE	TYPE	EXTERIOR UNIT		INTERIOR UNIT	
				LENGTH	WEIGHT	LENGTH	WEIGHT
B1	4	# 4	STR	23'-7"	63	23'-7"	63
S1	8	# 4	3	4'-6"	24	4'-6"	24
S2	84	# 4	3	5'-4"	299	5'-4"	299
* S3	48	# 5	1	5'-7"	280		
S5	4	# 4	3	5'-6"	15	5'-6"	15
S6	4	# 4	3	5'-9"	15	5'-9"	15
REINFORCING STEEL				416 LBS.		416 LBS.	
* EPOXY COATED REINFORCING STEEL				280 LBS.			
5,000 P.S.I. CONCRETE				6.5 CU. YDS.		6.5 CU. YDS.	
1/2" Ø L.R. STRANDS				No. 16		No. 16	

DEAD LOAD DEFLECTION AND CAMBER	
	SPAN A 3'-0" x 1'-6" 1/2" Ø L.R. STRAND
CAMBER (SLAB ALONE IN PLACE)	↑ 1/8"
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD**	↓ 1/4"
FINAL CAMBER	↑ 7/8"

** INCLUDES FUTURE WEARING SURFACE

BILL OF MATERIAL FOR CONCRETE BARRIER RAIL						
BAR	SPAN A	TOTAL NO.	SIZE	TYPE	LENGTH	WEIGHT
* B2	56	56	# 5	STR	13'-2"	769
* S4	96	96	# 5	2	5'-6"	551
* EPOXY COATED REINFORCING STEEL					LBS.	1320
CLASS AA CONCRETE					CU. YDS.	10.7
TOTAL LIN. FT. OF CONCRETE BARRIER RAIL						90.29

CORED SLAB REQUIRED			
	NO.	LENGTH	TOTAL
INTERIOR C. S.	9	45'-0"	405'-0"
EXTERIOR C. S.	2	45'-0"	90'-0"
TOTAL	11	45'-0"	495'-0"

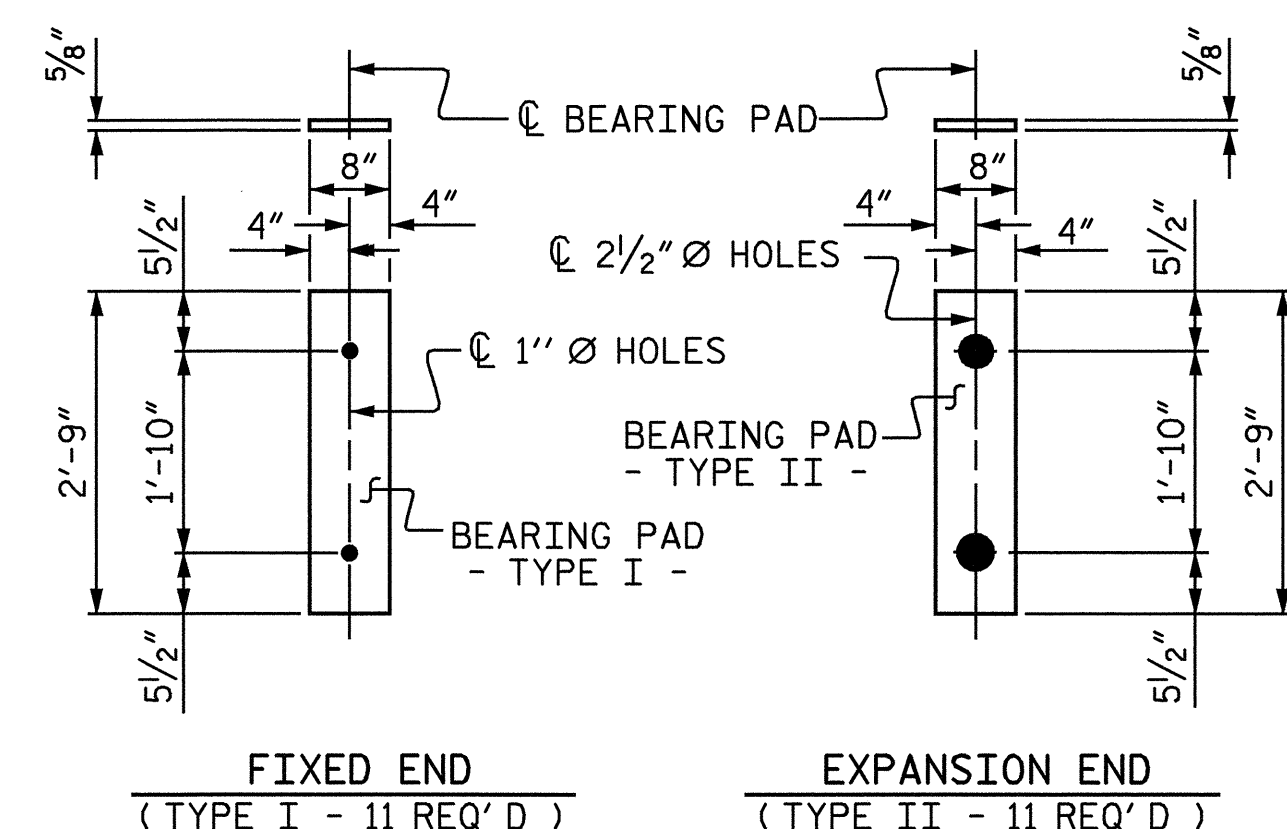
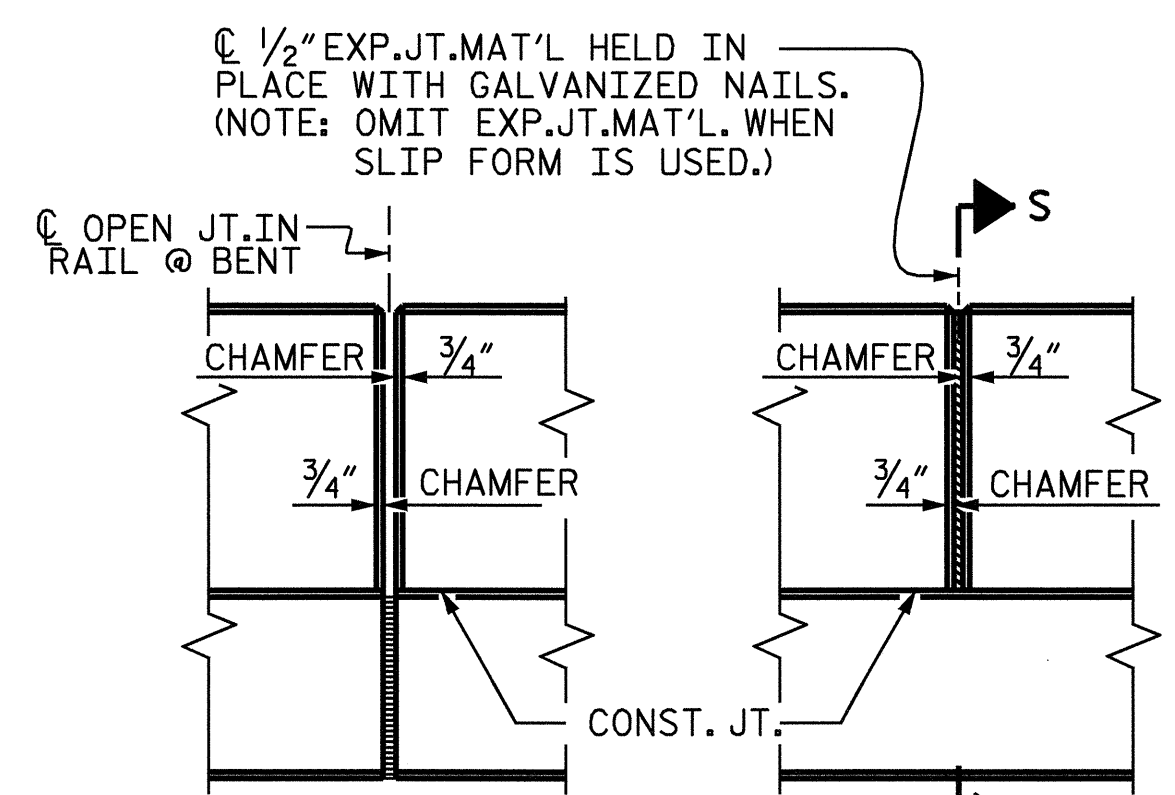
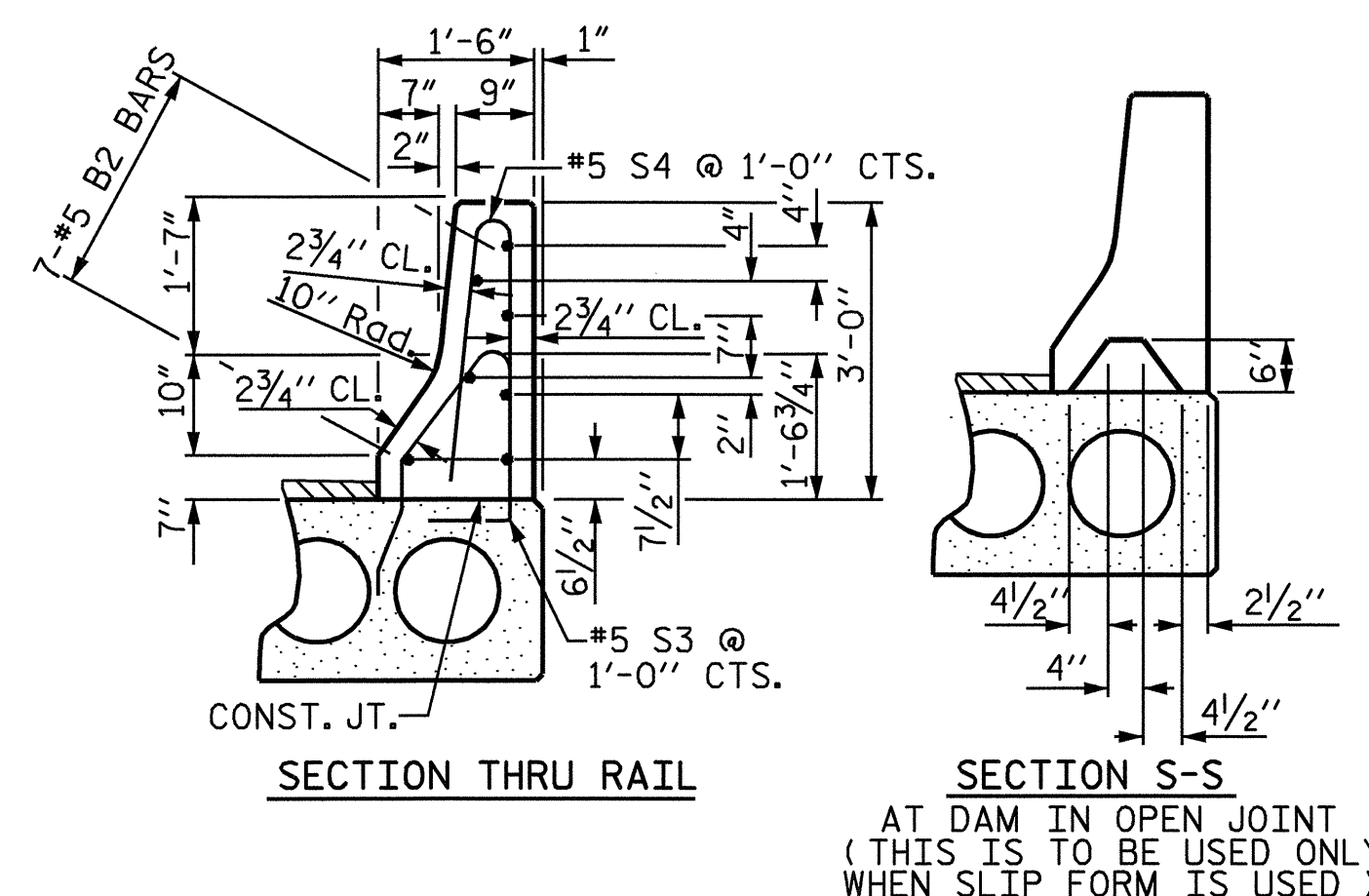
GROOVING BRIDGE FLOORS	
BRIDGE DECK	1211.4 SQ. FT.
APPROACH SLABS	1341.7 SQ. FT.
TOTAL	2553.1 SQ. FT.

PROJECT NO. B-3808
AVERY COUNTY
 STATION: 17+13.50 -L-

SHEET 4 OF 4

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

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-7
2			4			17



ASSEMBLED BY : J.L. WALTON DATE : 11/10/03
 CHECKED BY : B.N. BARODAWALA DATE : 4/5/04
 DRAWN BY : WJH 4/89 REV. 10/17/00 RWW/LES
 CHECKED BY : FCJ 5/89 REV. 7/10/01 RWW/LES
 REV. 5/7/03R RWW/JTE