

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 B LOW MODULUS SILICONE SEALANT. THE 2" Ø BACKER ROD SHALL CONFORM TO THE REQUIREMENTS OF TYPE M BOND BREAKER. THE 12" WIDE BOND BREAKING TAPE SHALL BE CENTERED OVER THE JOINT AND CONFORM TO THE REQUIREMENTS OF TYPE N 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.

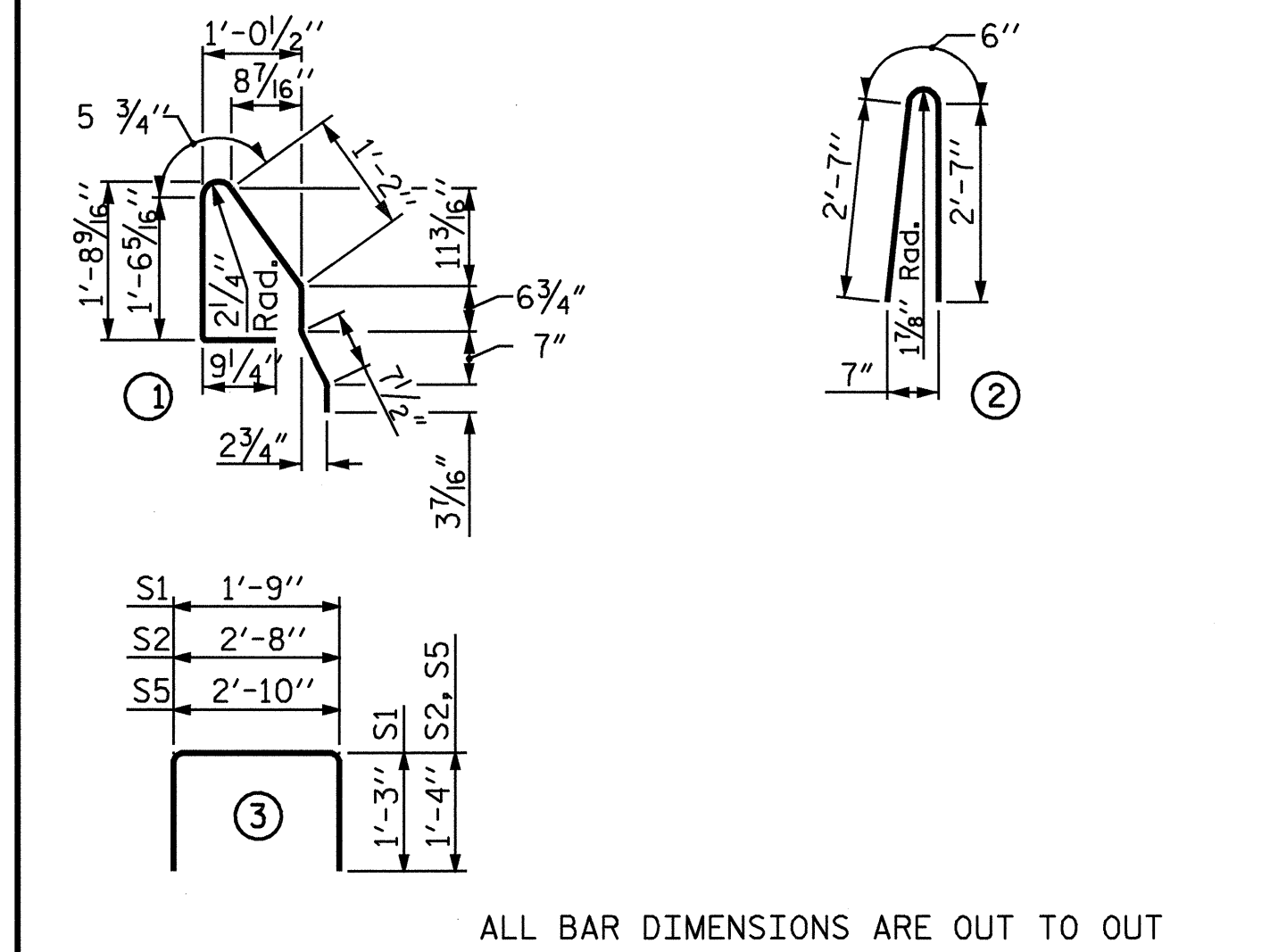
APPLY EPOXY PROTECTIVE COATING TO CORED SLAB UNIT ENDS. FOR EPOXY PROTECTIVE COATING, SEE SPECIAL PROVISIONS.

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 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 20 FEET IN LENGTH AND NO JOINTS ARE REQUIRED FOR THOSE SEGMENTS LESS THAN 10 FEET IN LENGTH.

FOR ELASTOMERIC BEARINGS, SEE SPECIAL PROVISIONS.

FOR PRESTRESSED CONCRETE MEMBERS, SEE SPECIAL PROVISIONS.

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL FOR CONCRETE BARRIER RAIL								
BAR	BARS PER SPAN			TOTAL NO.	SIZE	TYPE	LENGTH	WEIGHT
	SPAN A	SPAN B	SPAN C					
* B2	56	56		112	# 5	STR	14'- 4"	1674
* B4			14	14	# 5	STR	28'- 4"	414
* S4	102	102	60	264	# 5	2	5'- 8"	1560
* EPOXY COATED REINFORCING STEEL							3648 LBS.	
CLASS AA CONCRETE							29.4 CU.YDS.	
TOTAL LIN. FT. OF CONCRETE BARRIER RAIL							257.68 LIN. FT.	

BILL OF MATERIAL FOR ONE CORED SLAB SECTION							
BAR	NUMBER	SIZE	TYPE	EXTERIOR UNIT		INTERIOR UNIT	
				LENGTH	WEIGHT	LENGTH	WEIGHT
B1	4	# 4	STR	25'-10"	69	25'-10"	69
S1	16	# 4	3	4'- 3"	45	4'- 3"	45
S2	102	# 4	3	5'- 4"	363	5'- 4"	363
* S3	51	# 5	1	5'- 5"	288		
S5	4	# 4	3	5'- 6"	15	5'- 6"	15
REINFORCING STEEL				492 LBS.		492 LBS.	
* EPOXY COATED REINFORCING STEEL				288 LBS.			
5,000 P.S.I. CONCRETE				7.1 CU. YDS.		7.1 CU. YDS.	
1/2" Ø L.R. STRANDS				No. 22		No. 22	

SPLICE CHART	
B1, B3	1'-9"
B2, B4	3'-5"

DEAD LOAD DEFLECTION AND CAMBER	
	3'-0" x 1'-9"
	1/2" Ø L.R. STRAND
CAMBER (SLAB ALONE IN PLACE)	1 7/8" ↑
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD **	1/4" ↓
FINAL CAMBER	1 5/8" ↑

\*\* INCLUDES FUTURE WEARING SURFACE

BILL OF MATERIAL FOR ONE CORED SLAB SECTION							
BAR	NUMBER	SIZE	TYPE	EXTERIOR UNIT		INTERIOR UNIT	
				LENGTH	WEIGHT	LENGTH	WEIGHT
B3	2	# 4	STR	28'- 4"	38	28'- 4"	38
S1	16	# 4	3	4'- 3"	45	4'- 3"	45
S2	58	# 4	3	5'- 4"	207	5'- 4"	207
* S3	30	# 5	1	5'- 5"	169		
S5	4	# 4	3	5'- 6"	15	5'- 6"	15
REINFORCING STEEL				305 LBS.		305 LBS.	
* EPOXY COATED REINFORCING STEEL				169 LBS.			
5,000 P.S.I. CONCRETE				4.2 CU. YDS.		4.1 CU. YDS.	
1/2" Ø L.R. STRANDS				No. 12		No. 12	

DEAD LOAD DEFLECTION AND CAMBER	
	3'-0" x 1'-9"
	1/2" Ø L.R. STRAND
CAMBER (SLAB ALONE IN PLACE)	7/16" ↑
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD **	1/32" ↓
FINAL CAMBER	7/16" ↑

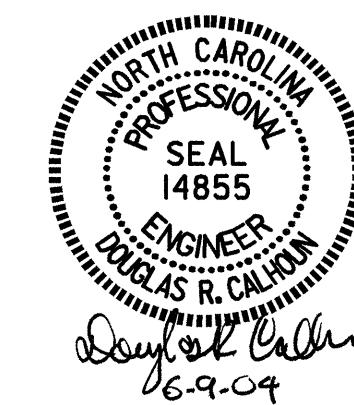
\*\* INCLUDES FUTURE WEARING SURFACE

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				
SPAN	NUMBER	LENGTH	TOTAL LENGTH	
EXTERIOR C.S.	2	50'-0 9/8"	100'-1 1/4"	
INTERIOR C.S.	11	50'-0 5/8"	550'-6 7/8"	
TOTAL	13		650'-8 1/8"	
SPAN B	NUMBER	LENGTH	TOTAL LENGTH	
EXTERIOR C.S.	2	50'-0 9/8"	100'-1 1/4"	
INTERIOR C.S.	11	50'-0 5/8"	550'-6 7/8"	
TOTAL	13		650'-8 1/8"	
SPAN C	NUMBER	LENGTH	TOTAL LENGTH	
EXTERIOR C.S.	2	28'-8 13/16"	57'-5 5/8"	
INTERIOR C.S.	11	28'-8 13/16"	316'-0 15/16"	
TOTAL	13		373'-6 3/16"	

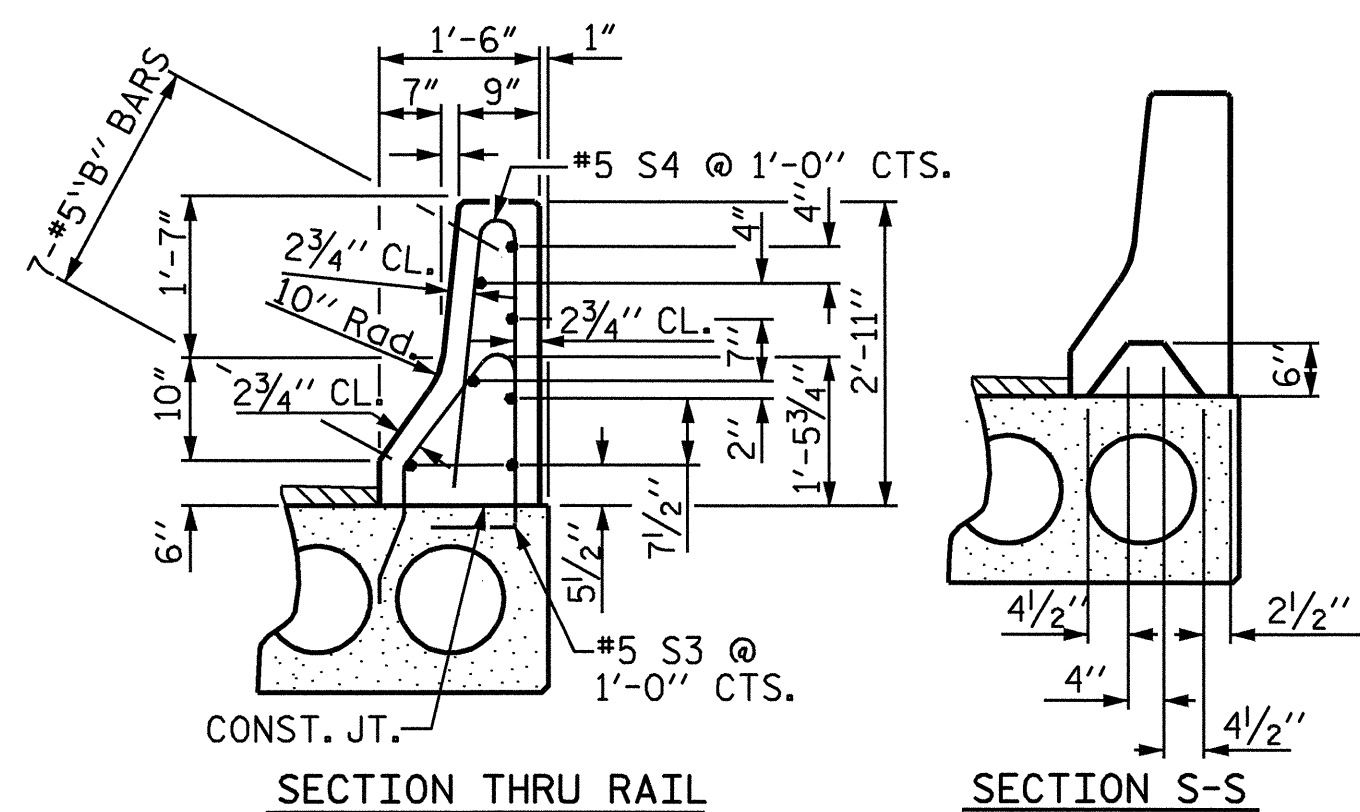
PROJECT NO. B-3884  
 ONSLOW COUNTY  
 STATION: 14+89.75 -L-

SHEET 5 OF 5

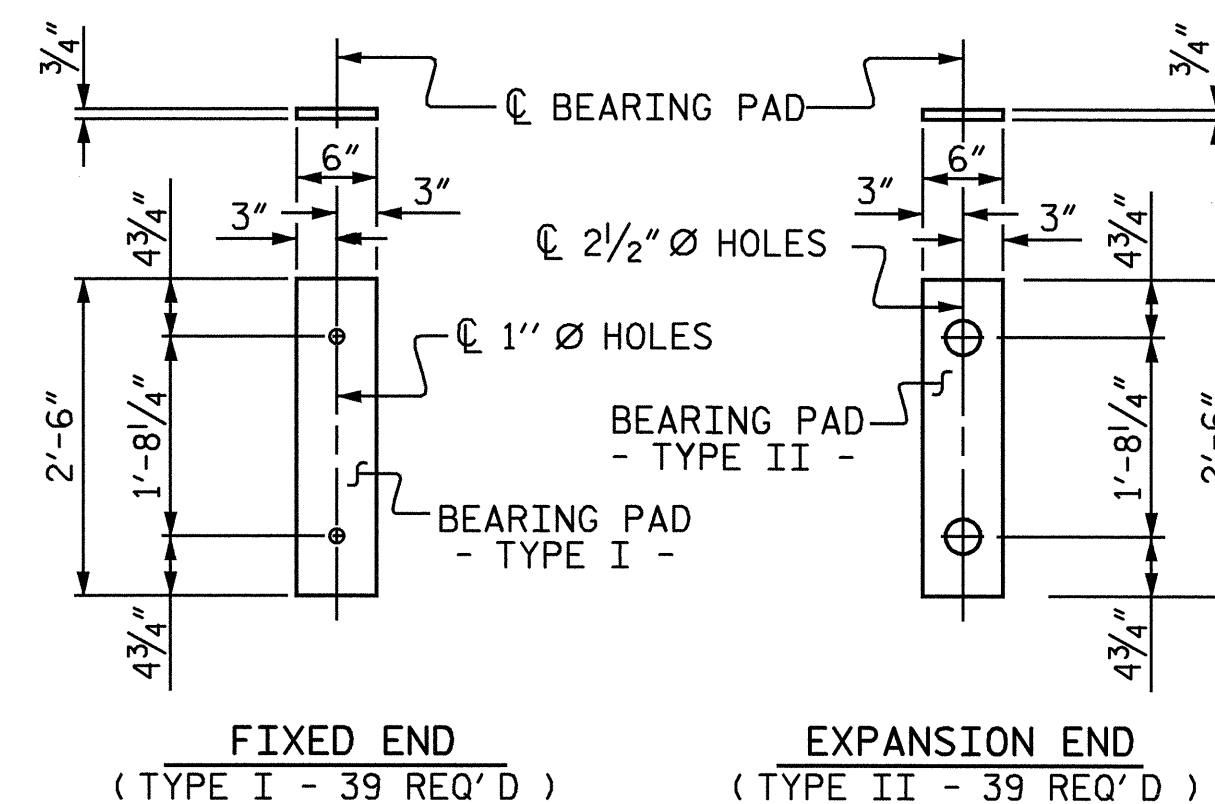
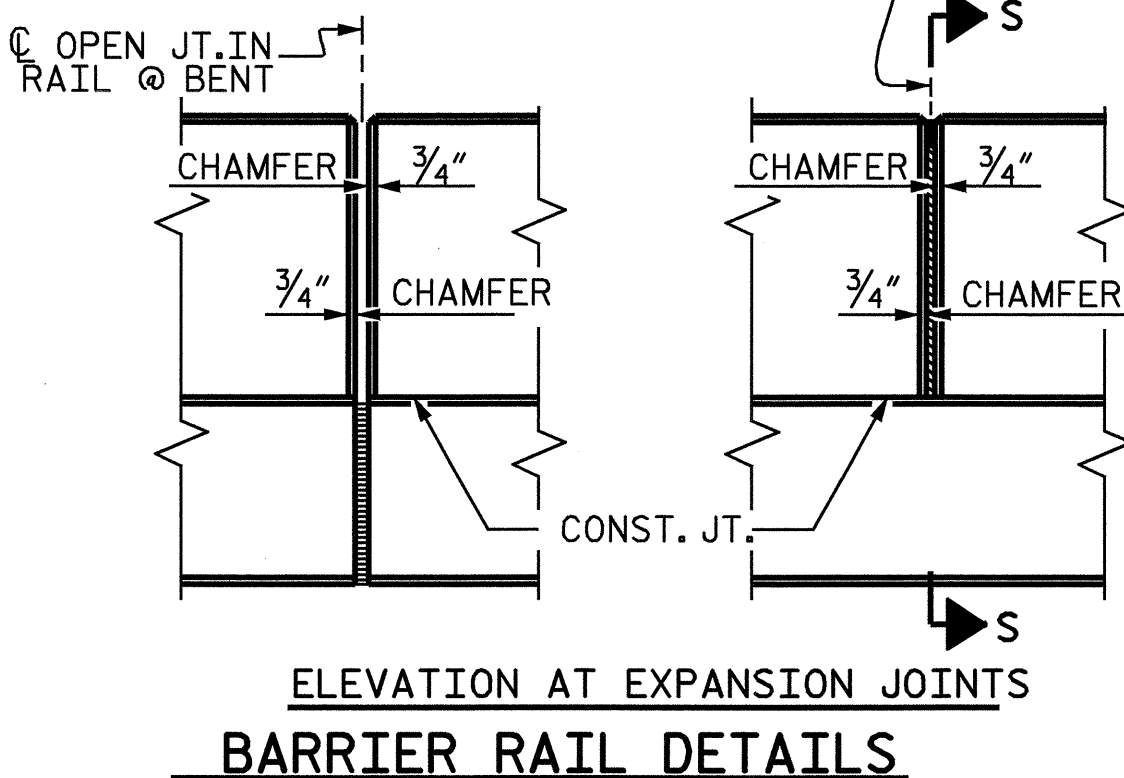


STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION				
STANDARD 3'-0" X 1'-9" PRESTRESSED CONCRETE CORED SLAB UNIT				
REVISIONS				SHEET NO.
NO.	BY:	DATE:	NO.	DATE:
1			3	
2			4	
OCTOBER 1981				S-9
				TOTAL SHEETS 23

STD. NO. PCS3



AT DAM IN OPEN JOINT (THIS IS TO BE USED ONLY WHEN SLIP FORM IS USED)  
 AT OPEN JT. IN RAIL @ BENT  
 1/2" EXP. JT. MAT'L HELD IN PLACE WITH GALVANIZED NAILS. (NOTE: OMIT EXP. JT. MAT'L. WHEN SLIP FORM IS USED.)



ASSEMBLED BY : T.A. HARRIS	DATE : 2/4/03
CHECKED BY : K. MCCAULEY	DATE : 3/5/03
DRAWN BY : WJH 4/89	REV. 8/16/99 RWW/LFS
CHECKED BY : FCJ 5/89	REV. 10/17/00 RWW/LFS
	REV. 7/10/01R RWW/LFS