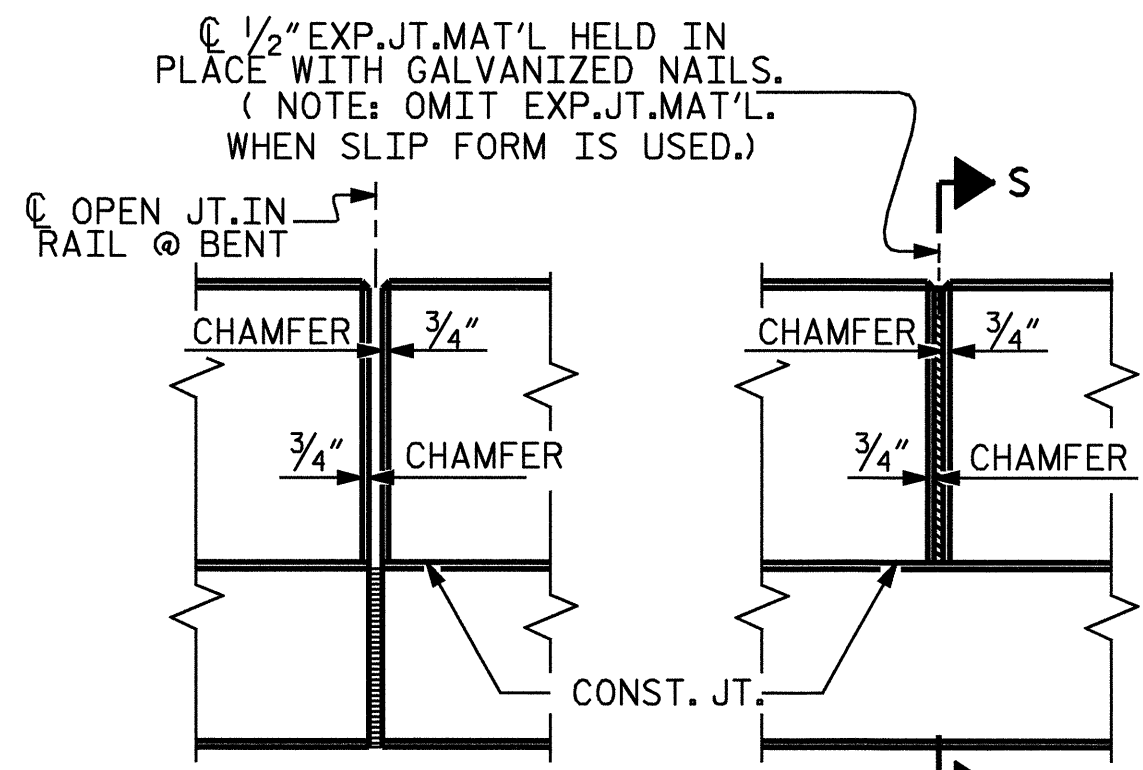


SECTION THRU RAIL

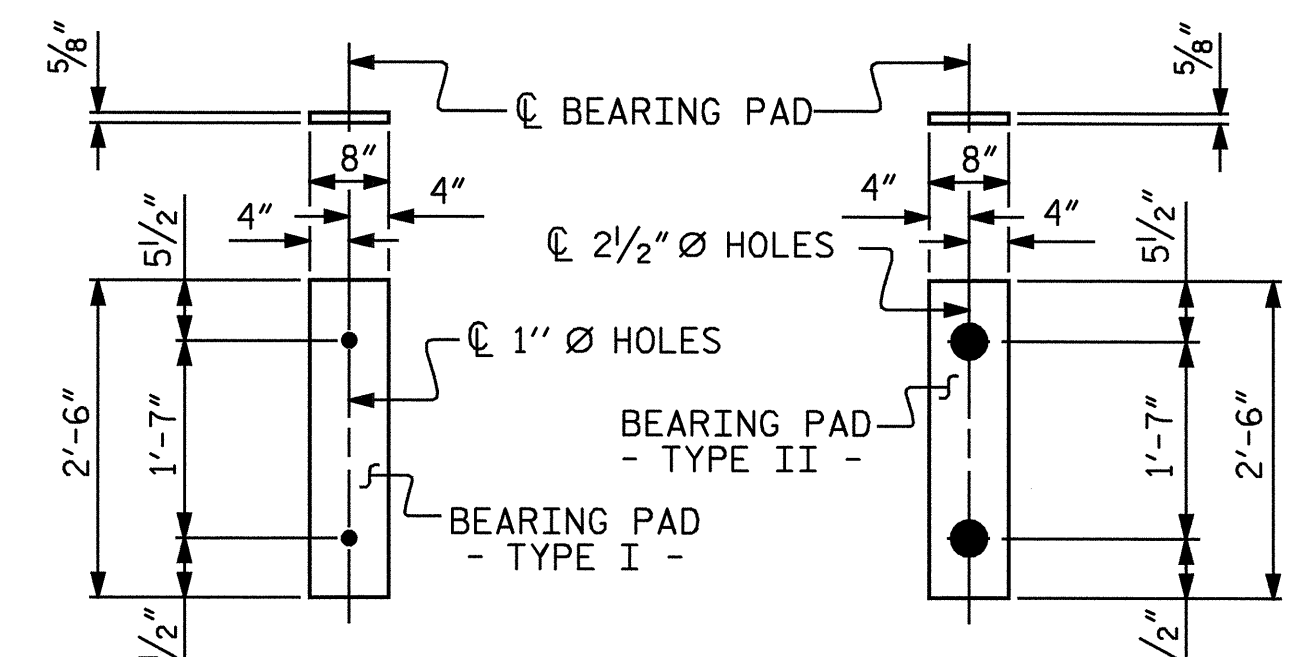
SECTION S-S

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



ELEVATION AT EXPANSION JOINTS

BARRIER RAIL DETAILS



FIXED END
(TYPE I - 36 REQ'D)

EXPANSION END
(TYPE II - 36 REQ'D)

ELASTOMERIC BEARING DETAILS

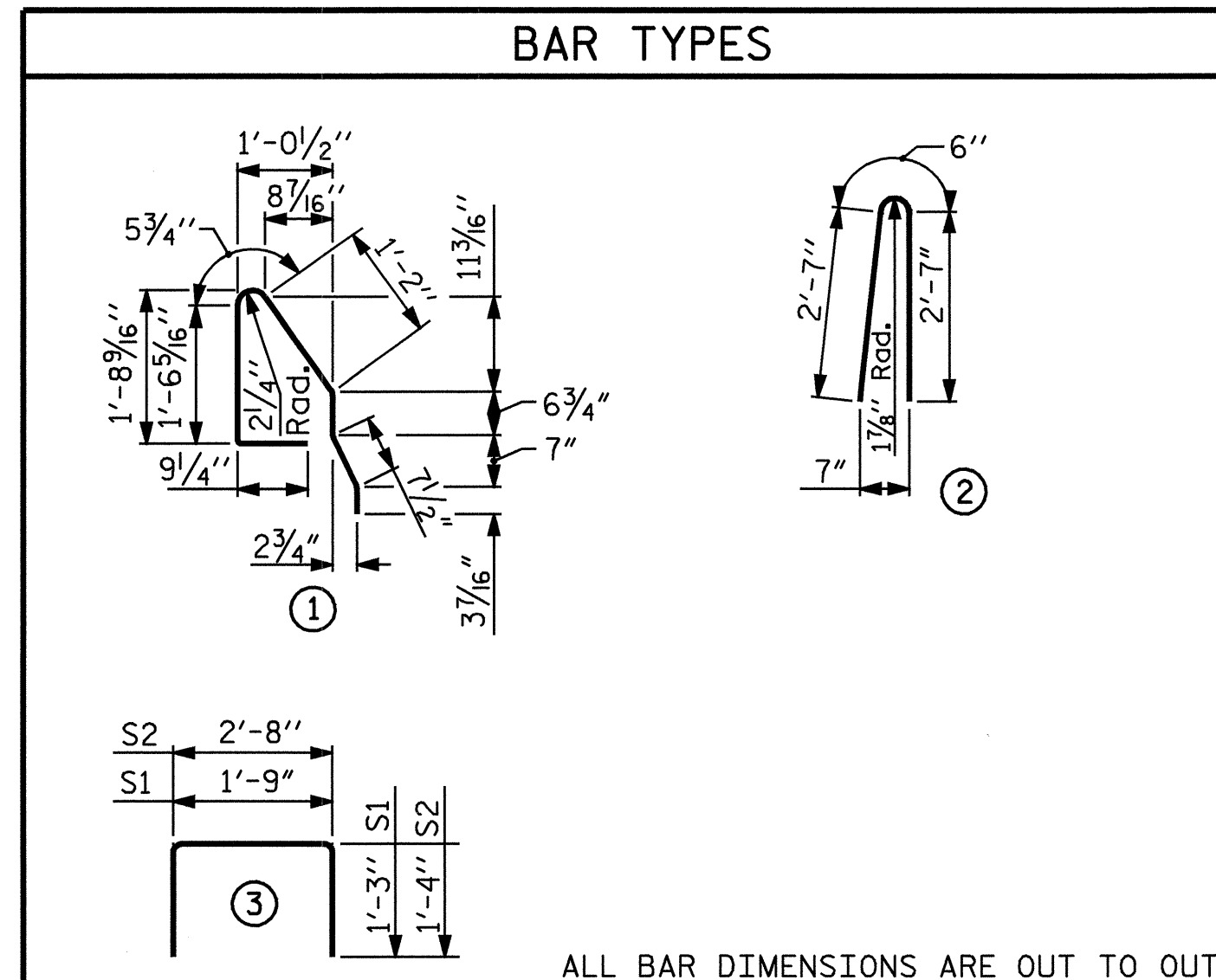
DEAD LOAD DEFLECTION AND CAMBER			
	SPAN A 3'-0" x 1'-9"	SPAN B 3'-0" x 1'-9"	SPAN C 3'-0" x 1'-9"
	1/2" Ø L.R. STRAND	1/2" Ø L.R. STRAND	1/2" Ø L.R. STRAND
CAMBER (SLAB ALONE IN PLACE)	↑ 1/2"	↑ 2 1/8"	↑ 1 5/16"
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD **	↓ 1/16"	↓ 3/8"	↓ 1/4"
FINAL CAMBER	↑ 7/16"	↑ 1 3/4"	↑ 1 1/16"

** INCLUDES FUTURE WEARING SURFACE

BILL OF MATERIAL FOR CONCRETE BARRIER RAIL								
BAR	BARS PER SPAN			TOTAL NO.	SIZE	TYPE	LENGTH	WEIGHT
	SPAN A	SPAN B	SPAN C					
* B4	14			14	#5	STR	29'-7"	432
* B5		28		28	#5	STR	24'-7"	718
* B6			28	28	#5	STR	22'-1"	645
* S4	62	102	92	256	#5	2	5'-8"	1513
* EPOXY COATED REINFORCING STEEL LBS.								3308
CLASS AA CONCRETE CU.YDS.								28.6
TOTAL LIN. FT. OF CONCRETE BARRIER RAIL								250.75

CORED SLABS REQUIRED			
	NO.	LENGTH	TOTAL
SPAN A EXTERIOR C.S.	2	30'-0"	60'-0"
SPAN A INTERIOR C.S.	10	30'-0"	300'-0"
SPAN B EXTERIOR C.S.	2	50'-0"	100'-0"
SPAN B INTERIOR C.S.	10	50'-0"	500'-0"
SPAN C EXTERIOR C.S.	2	45'-0"	90'-0"
SPAN C INTERIOR C.S.	10	45'-0"	450'-0"
TOTAL	36		1500'-0"

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



ALL BAR DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL FOR ONE CORED SLAB SECTION

SPAN A							
BAR NUMBER	SIZE	TYPE	EXTERIOR UNIT		INTERIOR UNIT		
			LENGTH	WEIGHT	LENGTH	WEIGHT	
B1	2	#4	STR	29'-8"	40	29'-8"	40
S1	8	#5	3	4'-3"	35	4'-3"	35
S2	58	#4	3	5'-4"	207	5'-4"	207
* S3	31	#5	1	5'-5"	175		
REINFORCING STEEL				282 LBS.		282 LBS.	
* EPOXY COATED REINFORCING STEEL				175 LBS.			
5,000 P.S.I. CONCRETE				4.2 CU. YDS.		4.2 CU. YDS.	
1/2" Ø L.R. STRANDS				No. 12		No. 12	

BILL OF MATERIAL FOR ONE CORED SLAB SECTION							
SPAN B							
BAR NUMBER	SIZE	TYPE	EXTERIOR UNIT		INTERIOR UNIT		
			LENGTH	WEIGHT	LENGTH	WEIGHT	
B2	4	#4	STR	26'-1"	70	26'-1"	70
S1	8	#5	3	4'-3"	35	4'-3"	35
S2	98	#4	3	5'-4"	349	5'-4"	349
* S3	51	#5	1	5'-5"	288		
REINFORCING STEEL				454 LBS.		454 LBS.	
* EPOXY COATED REINFORCING STEEL				288 LBS.			
5,500 P.S.I. CONCRETE				7.0 CU. YDS.		7.0 CU. YDS.	
1/2" Ø L.R. STRANDS				No. 23		No. 23	

BILL OF MATERIAL FOR ONE CORED SLAB SECTION							
SPAN C							
BAR NUMBER	SIZE	TYPE	EXTERIOR UNIT		INTERIOR UNIT		
			LENGTH	WEIGHT	LENGTH	WEIGHT	
B3	4	#4	STR	23'-7"	63	23'-7"	63
S1	8	#5	3	4'-3"	35	4'-3"	35
S2	88	#4	3	5'-4"	314	5'-4"	314
* S3	46	#5	1	5'-5"	260		
REINFORCING STEEL				412 LBS.		412 LBS.	
* EPOXY COATED REINFORCING STEEL				260 LBS.			
5,500 P.S.I. CONCRETE				6.3 CU. YDS.		6.3 CU. YDS.	
1/2" Ø L.R. STRANDS				No. 23		No. 23	

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 LUMP SUM PRICE BID FOR CONSTRUCTION OF SUPERSTRUCTURE.

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 PRESTRESSED CONCRETE MEMBERS, SEE SPECIAL PROVISIONS.

PROJECT NO. B-4248
ROBESON COUNTY
 STATION: 16+67.50 -L-

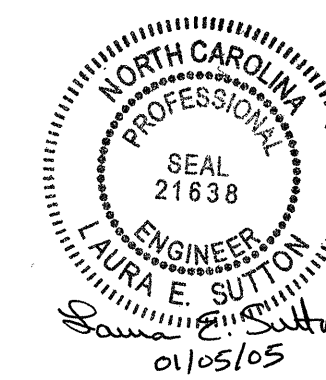
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

STANDARD
 3'-0" X 1'-9"
 PRESTRESSED
 CONCRETE CORED
 SLAB UNIT

OCTOBER 1981

NO.		BY:		DATE:		NO.		BY:		DATE:	
1						3					
2						4					

SHEET NO. S-11
 TOTAL SHEETS 25



ASSEMBLED BY: A.S. CALLAWAY DATE: 5/14/04
 CHECKED BY: L.E. SUTTON DATE: 10/8/04
 DRAWN BY: WJH 4/89 REV. 10/17/00 RWW/LES
 CHECKED BY: FCJ 5/89 REV. 7/10/01 RWW/LES
 REV. 5/1/03R RWW/JTE