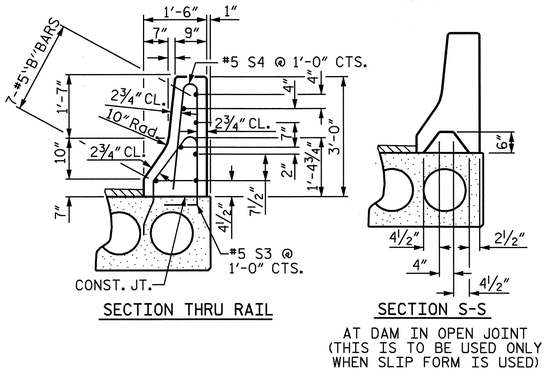


SECTION THRU RAIL

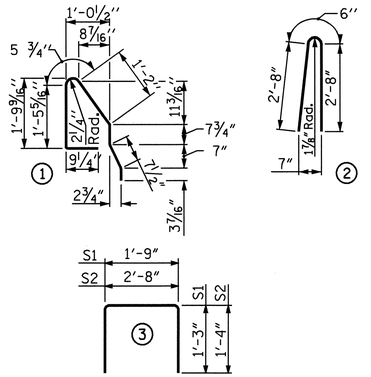
SECTION S-S

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

CORED SLABS REQUIRED

		NUMBER	LENGTH	TOTAL LENGTH
STAGE 1	TYPE I	1	59'-9"	59'-9"
	TYPE II	4	59'-9"	239'-0"
	TYPE III	1	59'-9"	59'-9"
	STAGE 1 TOTAL	6	59'-9"	358'-6"
STAGE 2	TYPE I	1	59'-9"	59'-9"
	TYPE II	2	59'-9"	119'-6"
	STAGE 2 TOTAL	3	59'-9"	179'-3"
	TOTAL	9	59'-9"	537'-9"

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 2½" Ø DOWEL HOLES AT FIXED ENDS OF SLAB SECTIONS SHALL BE FILLED WITH GROUT. THE 2½" Ø DOWEL HOLES AT EXPANSION ENDS OF SLAB SECTIONS SHALL BE FILLED WITH JOINT SEALER MATERIAL TO 1½" 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 4500 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, ½" 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.

ALL ELASTOMERIC BEARING SHALL BE 60 DUROMETER HARDNESS.

FOR PRESTRESSED CONCRETE MEMBERS, SEE SPECIAL PROVISIONS.

BILL OF MATERIAL FOR ONE CORED SLAB SECTION
SPAN A

				STAGE 1						STAGE 2			
				TYPE I UNIT		TYPE II UNIT		TYPE III UNIT		TYPE I UNIT		TYPE II UNIT	
BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT	LENGTH	WEIGHT	LENGTH	WEIGHT	LENGTH	WEIGHT	LENGTH	WEIGHT
B1	6	#4	STR	21'-0"	84	21'-0"	84	21'-0"	84	21'-0"	84	21'-0"	84
✱ B3	18	#3	STR	———	———	———	———	1'-11"	13	———	———	———	———
S1	8	#5	3	4'-3"	35	4'-3"	35	4'-3"	35	4'-3"	35	4'-3"	35
S2	118	#4	3	5'-4"	420	5'-4"	420	5'-4"	420	5'-4"	420	5'-4"	420
✱ S3	61	#5	1	———	———	———	———	5'-7"	355	5'-7"	334	———	———
REINFORCING STEEL			LBS.		539		539		539		539		539
✱ EPOXY COATED REINFORCING STEEL			LBS.		———		———		355		355		———
7,500 P.S.I. CONCRETE			CU. YDS.		8.0		8.0		8.0		8.0		8.0
0.6" Ø L.R. STRANDS			No.		21		21		23		21		21

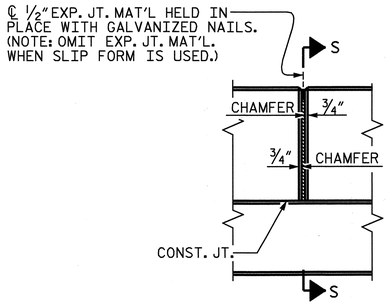
DEAD LOAD DEFLECTION AND CAMBER

	STAGE 1			STAGE 2	
	TYPE I	TYPE II	TYPE III	TYPE I	TYPE II
	0.6" Ø L.R. STRAND	0.6" Ø L.R. STRAND	0.6" Ø L.R. STRAND	0.6" Ø L.R. STRAND	0.6" Ø L.R. STRAND
CAMBER (SLAB ALONE IN PLACE)	3¼" ↑	3¼" ↑	3⅜" ↑	3¼" ↑	3¼" ↑
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD ✱✱	⅝" ↓	⅝" ↓	⅝" ↓	½" ↓	½" ↓
FINAL CAMBER	2⅞" ↑	2⅞" ↑	2¾" ↑	2¾" ↑	2¾" ↑

✱✱ INCLUDES FUTURE WEARING SURFACE

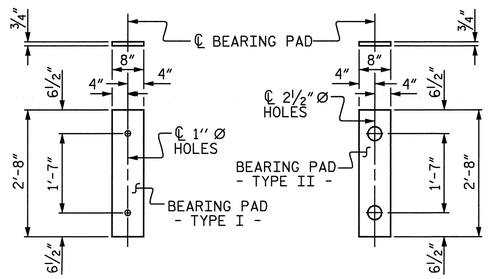
SUPERSTRUCTURE REINFORCING STEEL LENGTHS ARE BASED ON THE FOLLOWING MINIMUM SPLICE LENGTHS

BAR SIZE	SUPERSTRUCTURE EXCEPT APPROACH SLABS, PARAPET, AND BARRIER RAIL		APPROACH SLABS		PARAPET AND BARRIER RAIL
	EPOXY COATED	UNCOATED	EPOXY COATED	UNCOATED	
#4	2'-0"	1'-9"	2'-0"	1'-9"	2'-9"
#5	2'-6"	2'-2"	2'-6"	2'-2"	3'-5"
#6	3'-0"	2'-7"	3'-10"	2'-7"	4'-4"
#7	5'-3"	3'-6"			
#8	6'-10"	4'-7"			



ELEVATION AT EXPANSION JOINTS

BARRIER RAIL DETAILS



FIXED END
(TYPE I - 9 REQ'D)

EXPANSION END
(TYPE II - 9 REQ'D)

ELASTOMERIC BEARING DETAILS

BILL OF MATERIAL FOR CONCRETE BARRIER RAIL

				STAGE 1		STAGE 2		TOTAL
BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT	LENGTH	WEIGHT	WEIGHT
✱ B2	14	#5	STR	29'-6"	431	29'-6"	431	862
✱ S4	61	#5	2	5'-10"	371	5'-10"	371	742
✱ EPOXY COATED REINFORCING STEEL			LBS.		802		802	1604
CLASS AA CONCRETE			CU. YDS.		7.2		7.2	14.4
TOTAL LIN. FT. OF CONCRETE BARRIER RAIL					59.75		59.75	119.50

GRADE 270 STRANDS

	0.6" Ø L.R.
AREA (SQUARE INCHES)	0.217
ULTIMATE STRENGTH (LBS. PER STRAND)	58,600
APPLIED PRESTRESS (LBS. PER STRAND)	43,950

PROJECT NO. B-3667
JACKSON COUNTY
STATION: 12+52.50 -L-

SHEET 5 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

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

OCTOBER 1981

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-9
1			3			TOTAL SHEETS
2			4			37

ASSEMBLED BY : K. McCAULEY	DATE : 2/9/04
CHECKED BY : A. MEADOWS	DATE : 7/12/04
DRAWN BY : WJH 4/89	REV. 10/17/00 RWW/LES
CHECKED BY : FCJ 5/89	REV. 7/10/01 RWW/LES
	REV. 5/7/03 RWW/JTE

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STR. #1