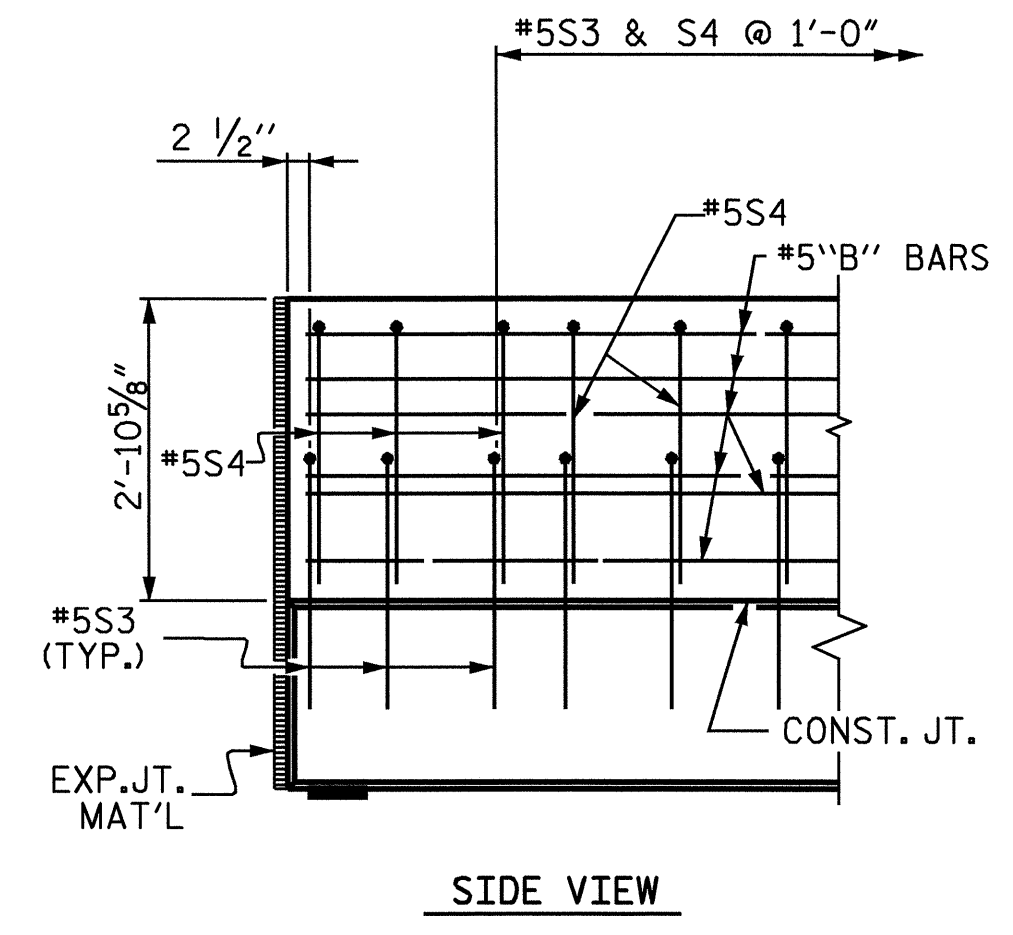
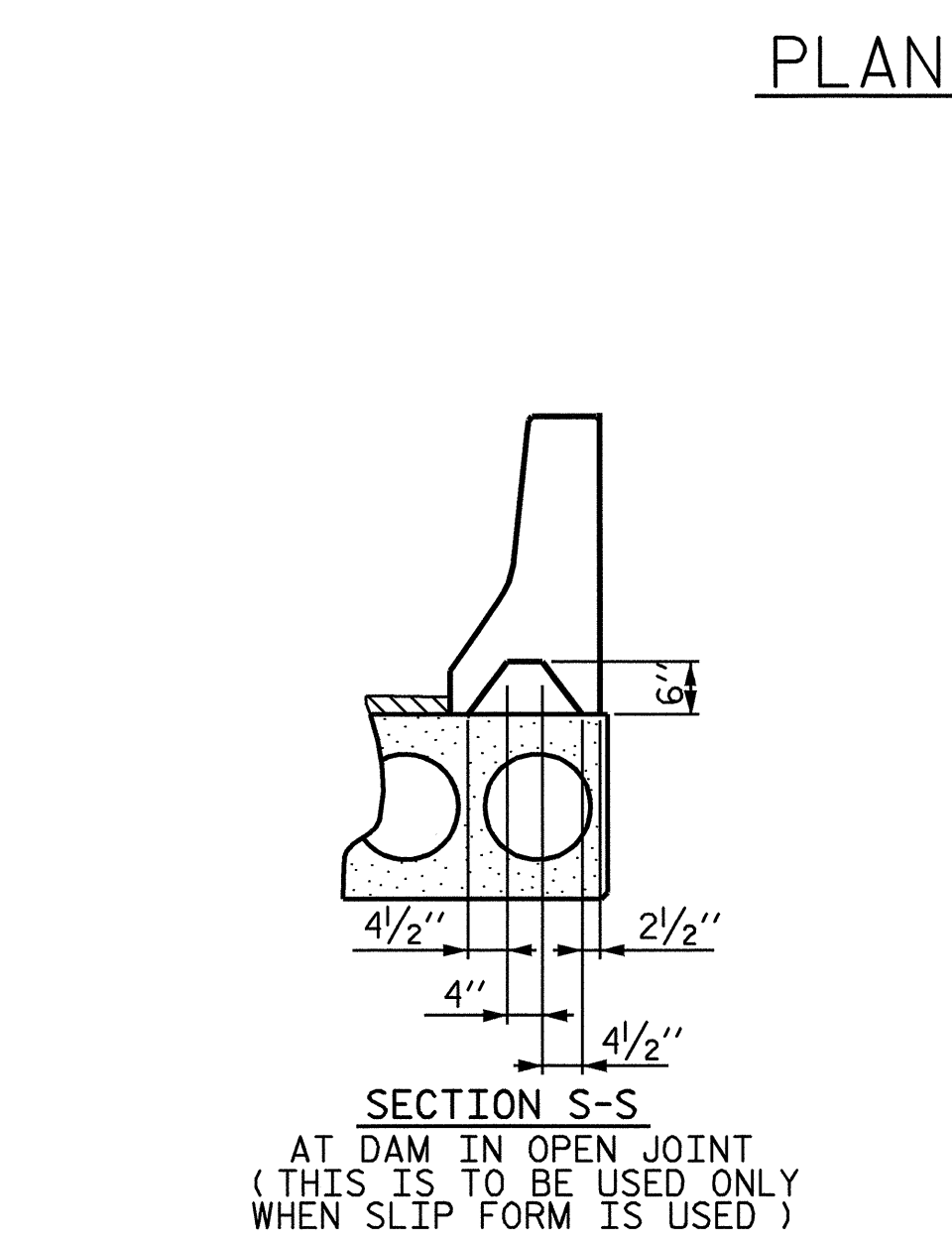
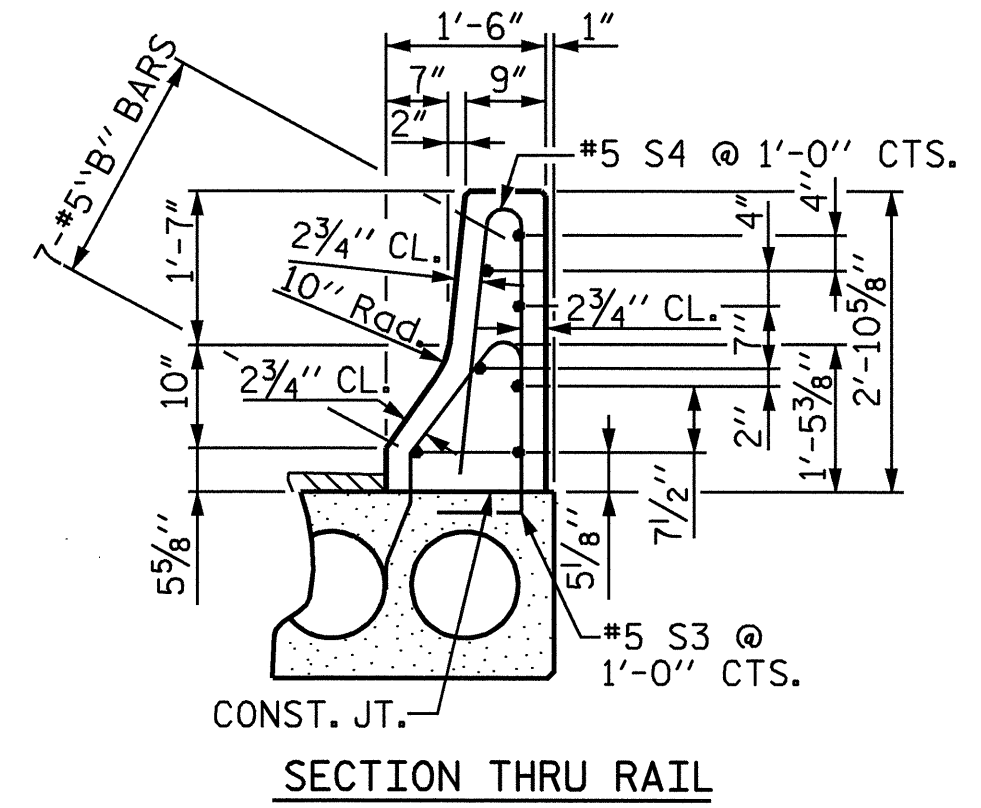
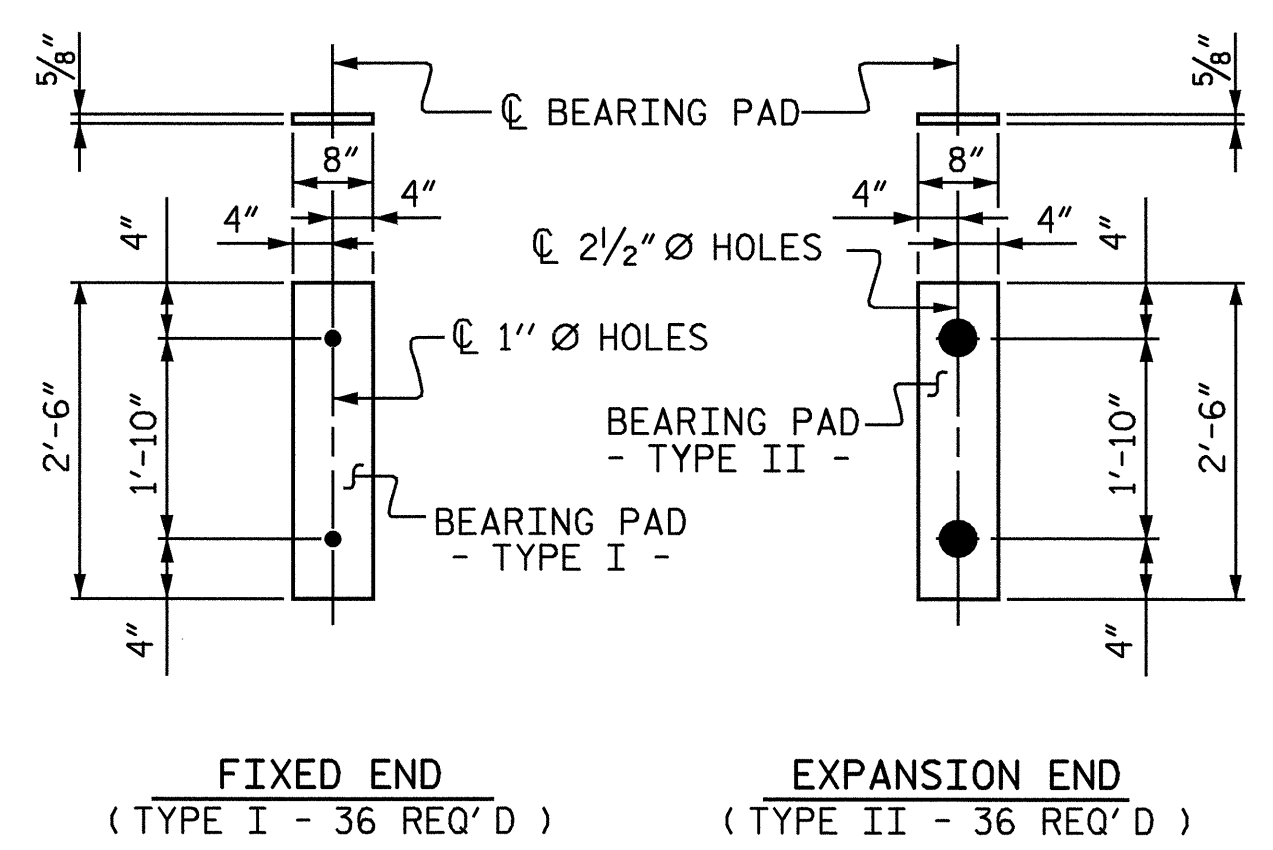
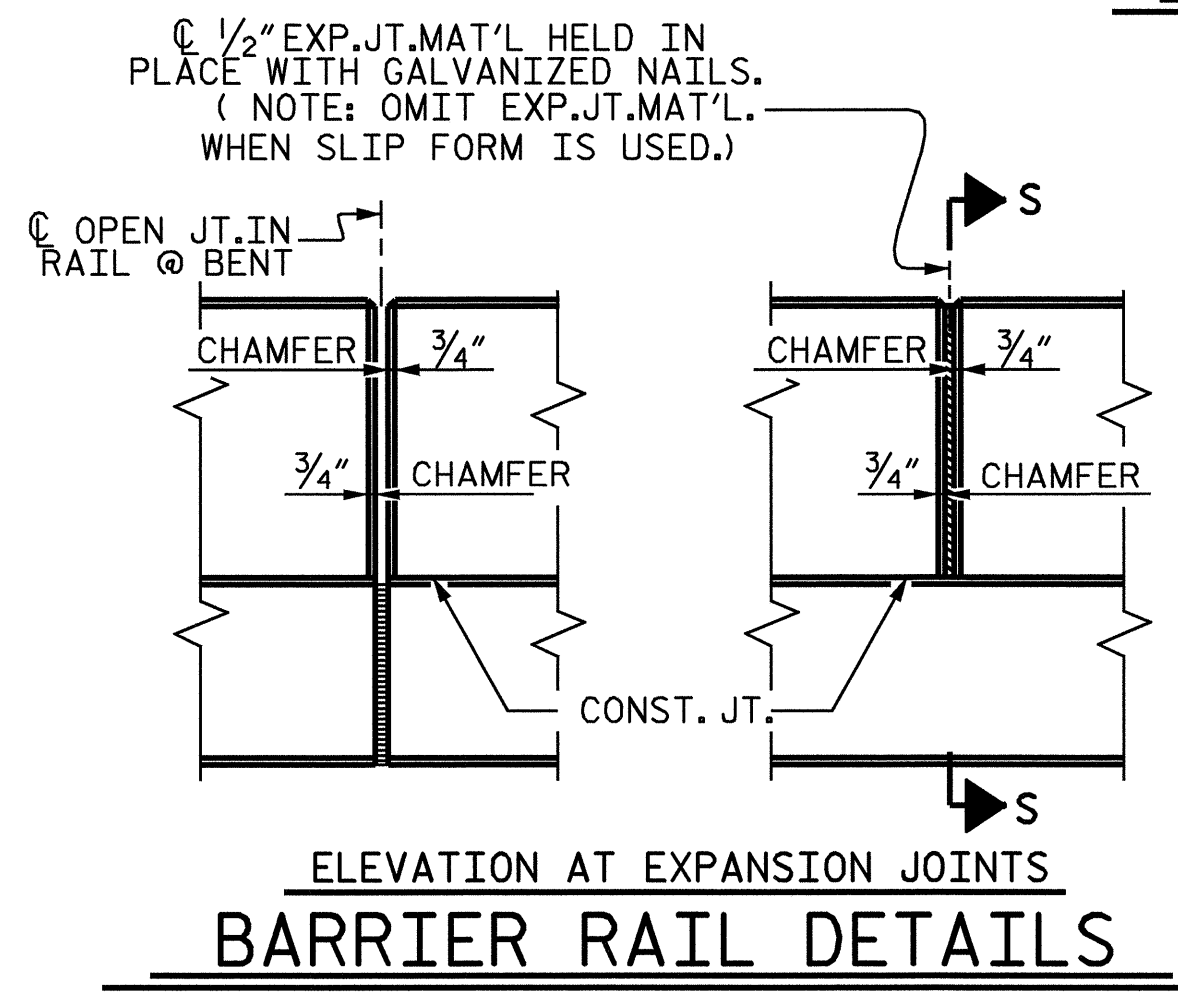


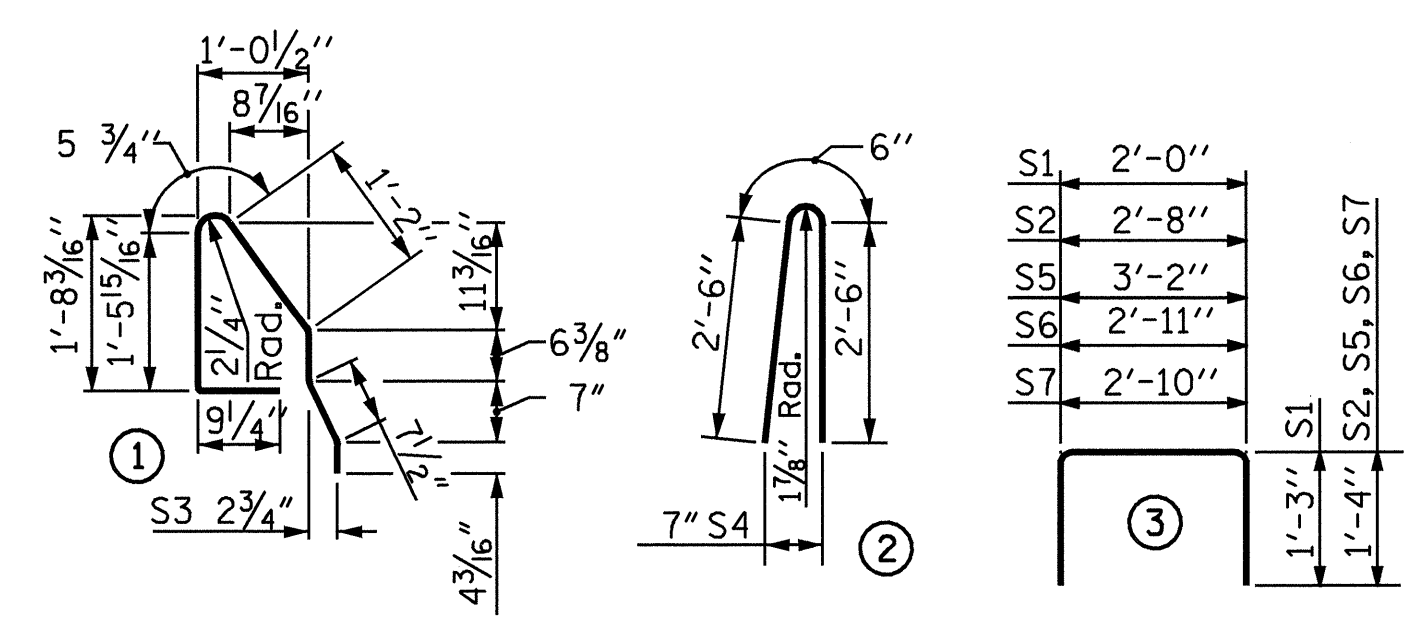
GRADE 270 STRANDS	
AREA (SQUARE INCHES)	1/2" Ø L.R. 0.153
ULTIMATE STRENGTH (LBS. PER STRAND)	41,300
APPLIED PRESTRESS (LBS. PER STRAND)	30,980



BARRIER RAIL - END OF RAIL DETAILS



BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL FOR ONE CORED SLAB SECTION- SPANS A & C

BAR	NUMBER	SIZE	TYPE	EXTERIOR UNIT LENGTH	EXTERIOR UNIT WEIGHT	INTERIOR UNIT LENGTH	INTERIOR UNIT WEIGHT
B1	4	#4	STR	17'-7"	47	17'-7"	47
S1	8	#4	3	4'-6"	24	4'-6"	24
S2	58	#4	3	5'-4"	207	5'-4"	207
*S3	34	#5	1	5'-5"	192		
S5	4	#4	3	5'-10"	16	5'-10"	16
S6	4	#4	3	5'-7"	15	5'-7"	15
S7	4	#4	3	5'-6"	15	5'-6"	15
REINFORCING STEEL				LBS.	324		324
* EPOXY COATED REINFORCING STEEL				LBS.	192		
5,000 P.S.I. CONCRETE				CU. YDS.	4.9		4.9
1/2" Ø L.R. STRANDS				No.	12		12

BILL OF MATERIAL FOR ONE CORED SLAB SECTION- SPAN B

BAR	NUMBER	SIZE	TYPE	EXTERIOR UNIT LENGTH	EXTERIOR UNIT WEIGHT	INTERIOR UNIT LENGTH	INTERIOR UNIT WEIGHT
B3	4	#4	STR	23'-2"	62	23'-2"	62
S1	8	#4	3	4'-6"	24	4'-6"	24
S2	80	#4	3	5'-4"	285	5'-4"	285
*S3	45	#5	1	5'-5"	254		
S5	4	#4	3	5'-10"	16	5'-10"	16
S6	4	#4	3	5'-7"	15	5'-7"	15
S7	4	#4	3	5'-6"	15	5'-6"	15
REINFORCING STEEL				LBS.	417		417
* EPOXY COATED REINFORCING STEEL				LBS.	254		
5,000 P.S.I. CONCRETE				CU. YDS.	6.4		6.4
1/2" Ø L.R. STRANDS				No.	18		18

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 CONSTRUCTION OF SUPERSTRUCTURE.

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

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

FOR ELASTOMERIC BEARING, SEE SPECIAL PROVISIONS.

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 PRESTRESSED CONCRETE MEMBERS, SEE SPECIAL PROVISIONS.

CORED SLABS REQUIRED

	NUMBER PER SPAN	LENGTH			TOTAL LENGTH
		SPAN A	SPAN B	SPAN C	
EXTERIOR C.S.	2	33'-7 1/2"	44'-10 1/4"	33'-7 1/2"	224'-2 1/2"
INTERIOR C.S.	10	33'-7 1/2"	44'-10 1/4"	33'-7 1/2"	1121'-0 1/2"
TOTAL	12	403'-6"	538'-3"	403'-6"	1345'-3"

DEAD LOAD DEFLECTION AND CAMBER

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

** INCLUDES FUTURE WEARING SURFACE

BILL OF MATERIAL FOR CONCRETE BARRIER RAIL

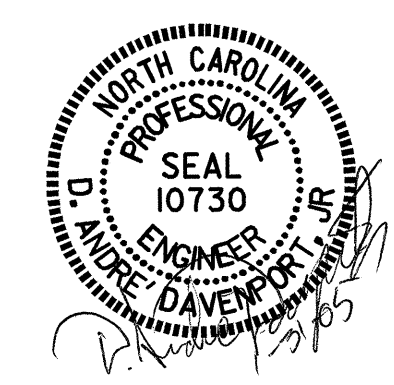
BAR	BARS PER SPAN			TOTAL NO.	SIZE	TYPE	LENGTH	WEIGHT
	SPAN A	SPAN B	SPAN C					
*B2	56	56	56	112	#5	STR	10'-3"	1197
*B4		56		56	#5	STR	13'-1"	764
*S4	68	90	68	226	#5	2	5'-6"	1296
* EPOXY COATED REINFORCING STEEL				LBS.				3257
CLASS AA CONCRETE				CU. YDS.				25.2
TOTAL LIN. FT. OF CONCRETE BARRIER RAIL								224.80

PROJECT NO. B-4320
WAYNE/DUPLIN COUNTY
STATION: 16+47.50-L-

SHEET 5 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

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



REVISIONS				SHEET NO.
NO.	BY:	DATE:	NO.	
1			3	5-8
2			4	TOTAL SHEETS 22

ASSEMBLED BY : H.T. BARBOUR DATE : 3-17-04
CHECKED BY : D. A. DAVENPORT DATE : 3-04
DRAWN BY : WJH 4/89
CHECKED BY : FCJ 5/89

REV. 6/16/95 EEM/RGW
REV. 2/6/97 EEM/RGW
REV. 8/16/99 RWW/LES