

BILL OF MATERIAL FOR ONE 25' CORED SLAB UNIT							
BAR	NUMBER	SIZE	TYPE	EXTERIOR UNIT		INTERIOR UNIT	
				LENGTH	WEIGHT	LENGTH	WEIGHT
B1	2	#4	STR	24'-8"	33	24'-8"	33
S1	8	#5	3	4'-3"	35	4'-3"	35
S2	54	#4	3	5'-4"	192	5'-4"	192
* S3	34	#5	1	5'-7"	198		
REINFORCING STEEL LBS.				260		260	
* EPOXY COATED REINFORCING STEEL LBS.				198		3.7	
5000 P.S.I. CONCRETE CU. YDS.				3.7		3.7	
0.6" Ø L.R. STRANDS No.				9		9	

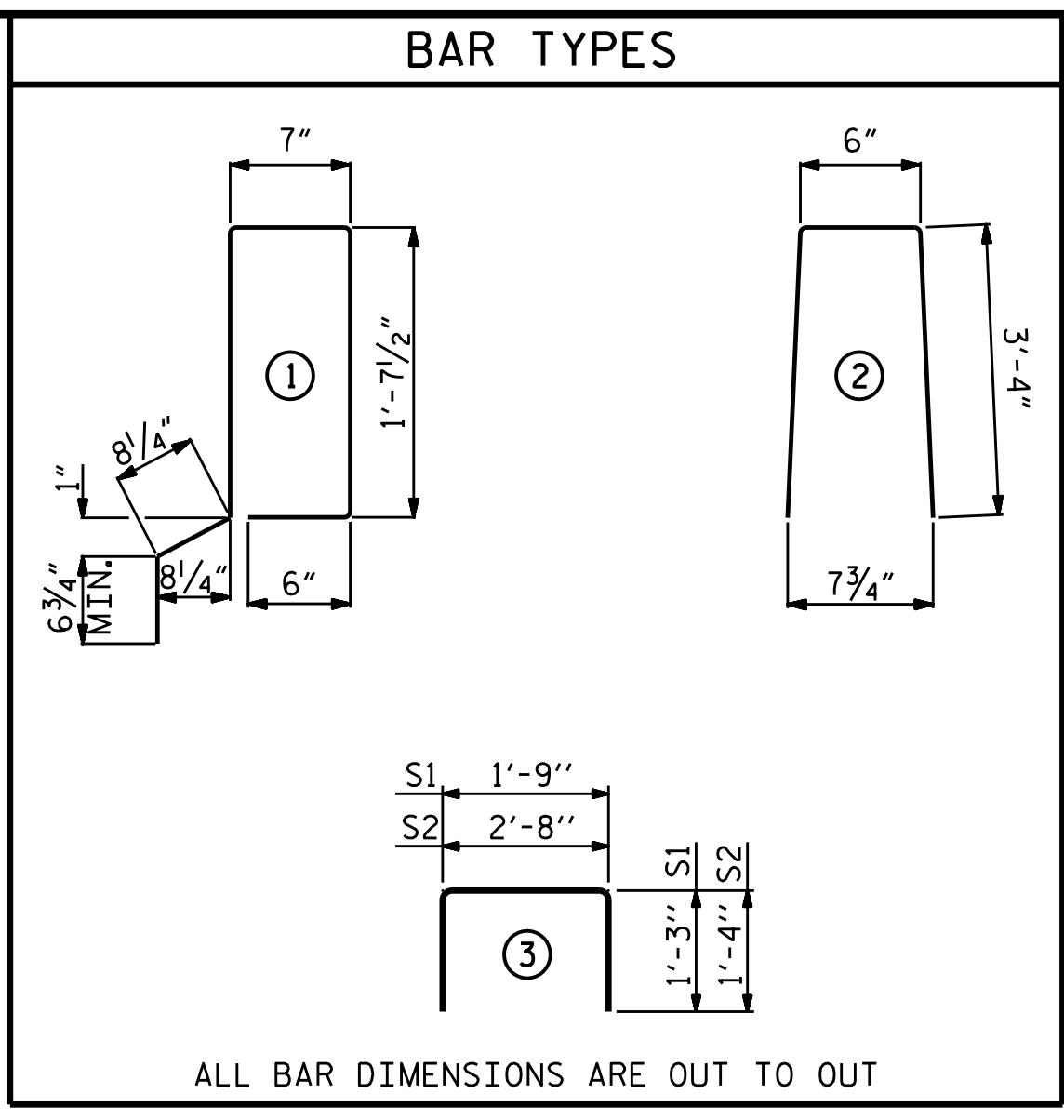
BILL OF MATERIAL FOR ONE 40' CORED SLAB UNIT							
BAR	NUMBER	SIZE	TYPE	EXTERIOR UNIT		INTERIOR UNIT	
				LENGTH	WEIGHT	LENGTH	WEIGHT
B4	4	#4	STR	20'-9"	55	20'-9"	55
S1	8	#5	3	4'-3"	35	4'-3"	35
S2	84	#4	3	5'-4"	299	5'-4"	299
* S3	48	#5	1	5'-7"	280		
REINFORCING STEEL LBS.				389		389	
* EPOXY COATED REINFORCING STEEL LBS.				280		5.8	
5000 P.S.I. CONCRETE CU. YDS.				5.8		5.8	
0.6" Ø L.R. STRANDS No.				13		13	

	GUTTERLINE ASPHALT THICKNESS & RAIL HEIGHT	
	ASPHALT OVERLAY THICKNESS	RAIL HEIGHT
25' UNIT	@ MID-SPAN 2 5/8"	@ MID-SPAN 3'-8 5/8"
40' UNIT	2 1/16"	3'-8 1/16"

DEAD LOAD DEFLECTION AND CAMBER	
25' CORED SLAB UNIT	0.6" Ø L.R. STRAND
CAMBER (SLAB ALONE IN PLACE)	1/4" ↓
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD**	1/8" ↓
FINAL CAMBER	1/8" ↓

DEAD LOAD DEFLECTION AND CAMBER	
40' CORED SLAB UNIT	0.6" Ø L.R. STRAND
CAMBER (SLAB ALONE IN PLACE)	1/8" ↓
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD**	1/8" ↓
FINAL CAMBER	3/4" ↓

GRADE 270 STRANDS	
AREA (SQUARE INCHES)	0.217
ULTIMATE STRENGTH (LBS. PER STRAND)	58,600
APPLIED PRESTRESS (LBS. PER STRAND)	43,950



CONCRETE RELEASE STRENGTH	
UNIT	PSI
25' UNITS	4000
40' UNITS	4000

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 NON-SHRINK GROUT.

THE BACKER RODS SHALL CONFORM TO THE REQUIREMENTS OF TYPE M BOND BREAKER, SEE SECTION 1028 OF THE STANDARD SPECIFICATIONS.

WHEN CORED SLABS ARE CAST, AN INTERNAL HOLD-DOWN SYSTEM SHALL BE EMPLOYED TO PREVENT VOIDS FROM RISING OR MOVING SIDEWAYS. AT LEAST SIX 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.

ALL REINFORCING STEEL IN THE VERTICAL CONCRETE BARRIER RAIL SHALL BE EPOXY COATED.

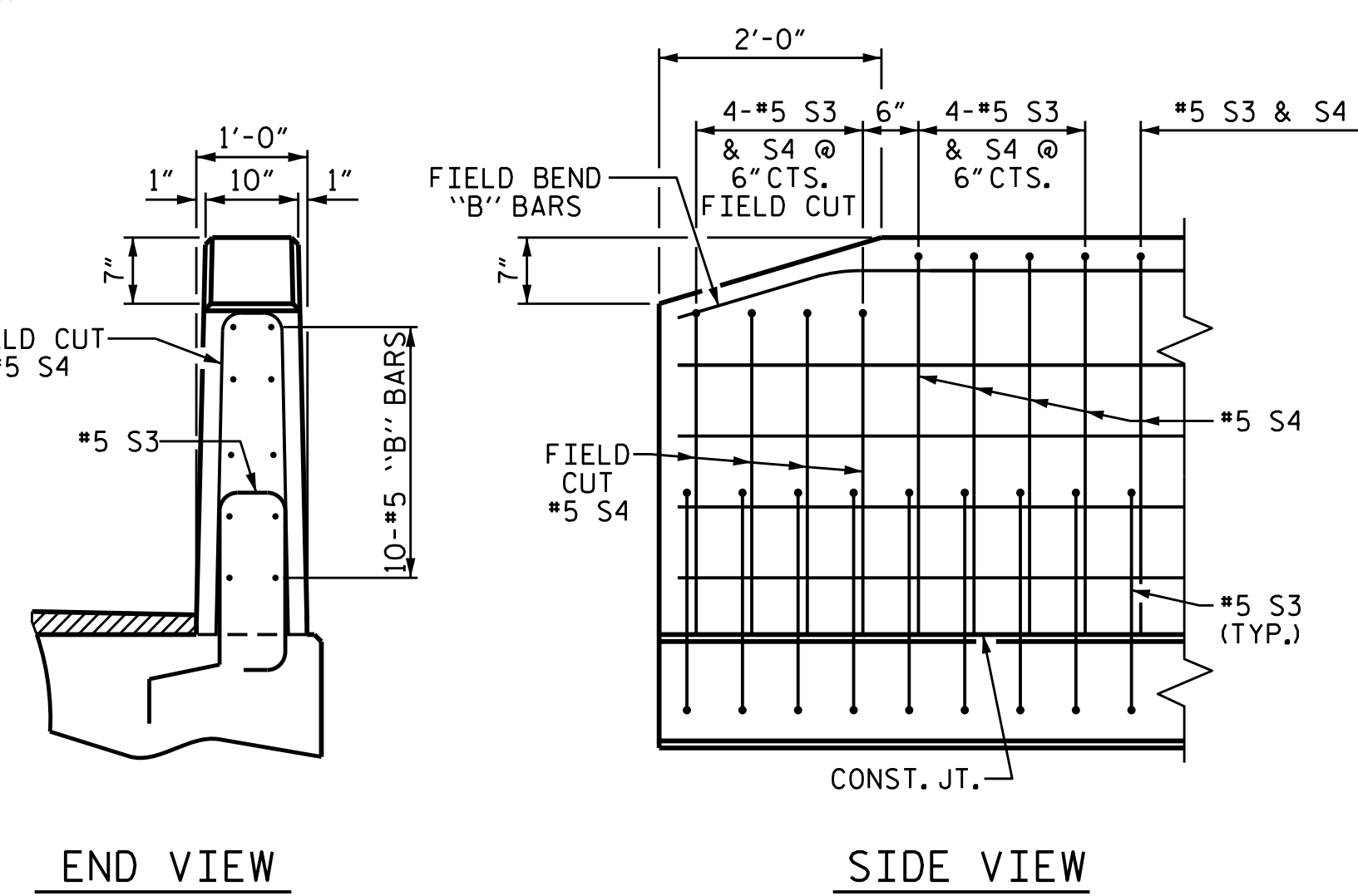
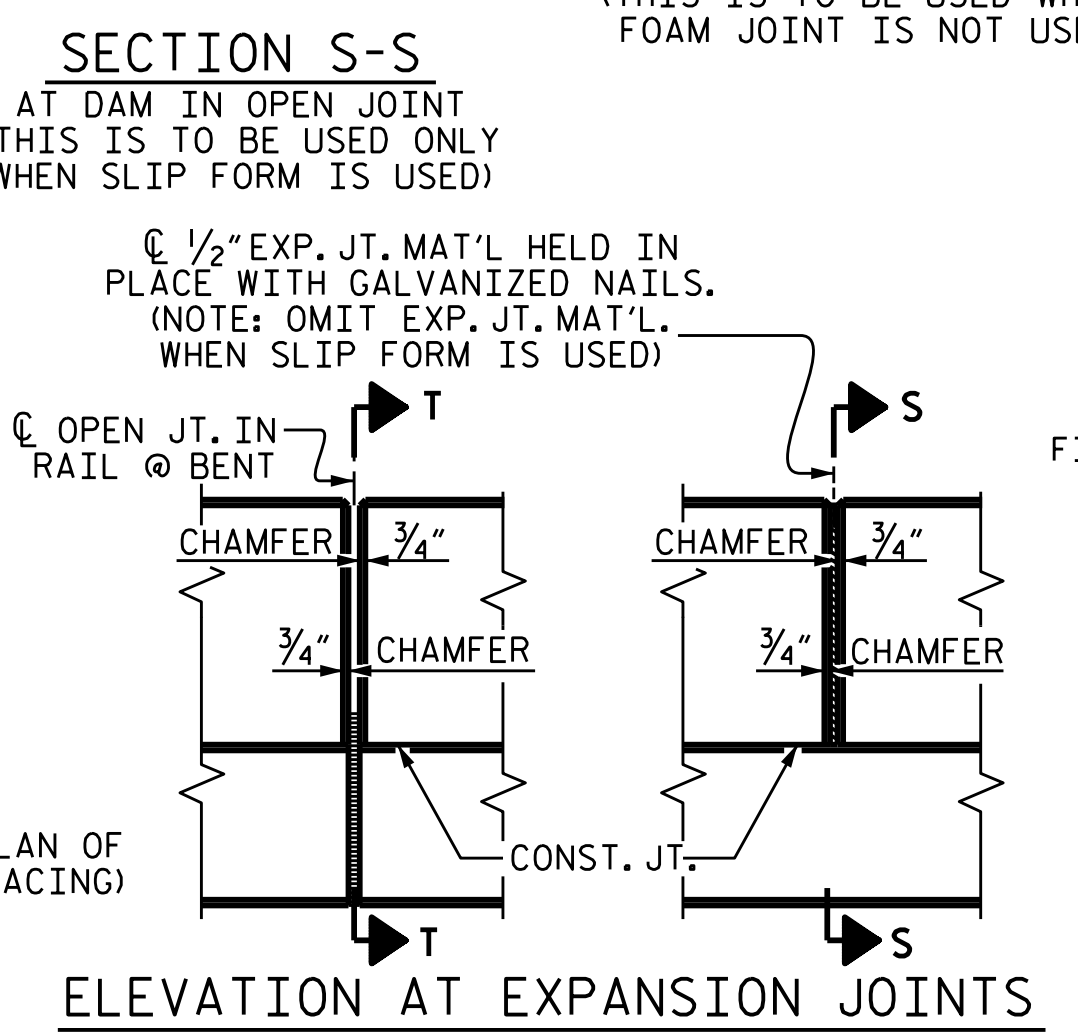
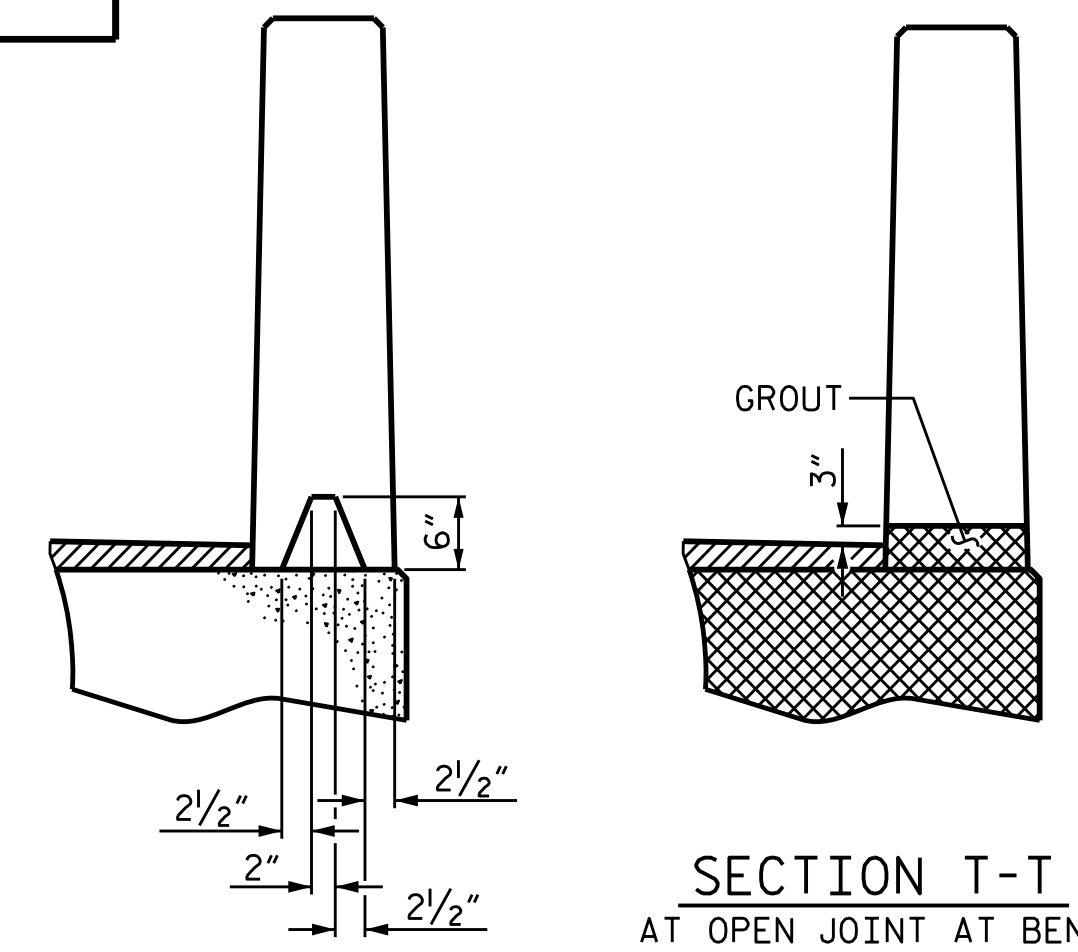
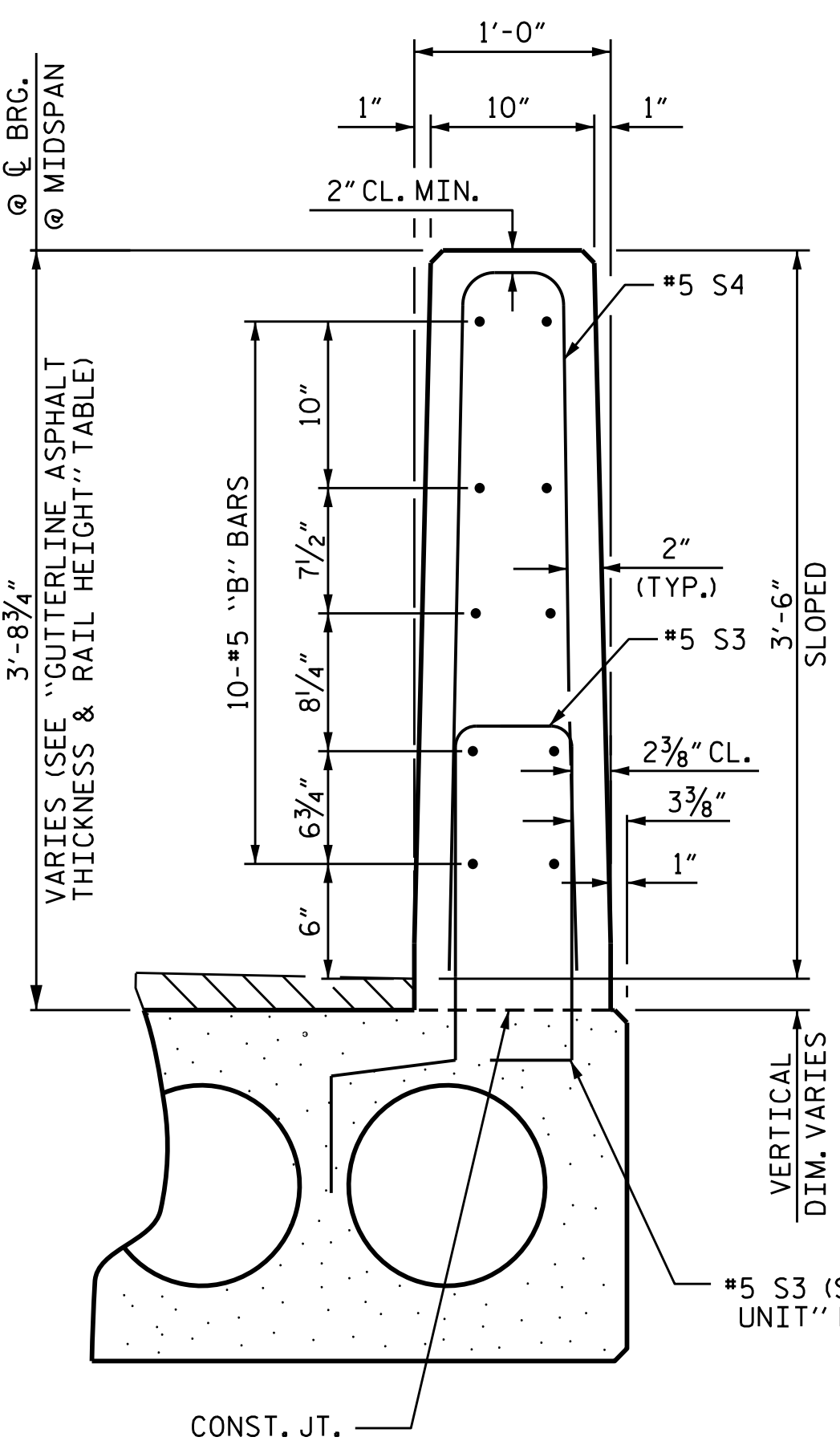
PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH THE CORED SLAB UNIT ENDS.

APPLY EPOXY PROTECTIVE COATING TO CORED SLAB UNIT ENDS.

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 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.

BILL OF MATERIAL FOR VERTICAL CONCRETE BARRIER RAIL						
BAR	BARS PER PAIR OF EXTERIOR UNITS	TOTAL NO.	SIZE	TYPE	LENGTH	WEIGHT
40' UNIT						
* B11	40	40	#5	STR	19'-7"	817
* S4	96	96	#5	2	7'-2"	718
* EPOXY COATED REINFORCING STEEL				LBS.	1535	
CLASS AA CONCRETE				CU. YDS.	10.2	
TOTAL VERTICAL CONCRETE BARRIER RAIL				LN. FT.	80.25	

BILL OF MATERIAL FOR VERTICAL CONCRETE BARRIER RAIL						
BAR	BARS PER PAIR OF EXTERIOR UNITS	TOTAL NO.	SIZE	TYPE	LENGTH	WEIGHT
25' UNIT						
* B8	20	40	#5	STR	24'-7"	1026
* S4	68	136	#5	2	7'-2"	1017
* EPOXY COATED REINFORCING STEEL				LBS.	2043	
CLASS AA CONCRETE				CU. YDS.	12.8	
TOTAL VERTICAL CONCRETE BARRIER RAIL				LN. FT.	100.50	



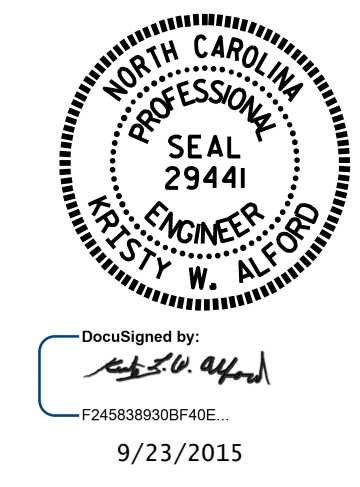
CORED SLABS REQUIRED			
25' UNIT	NUMBER	LENGTH	TOTAL LENGTH
EXTERIOR C.S.	4	25'-0"	100'-0"
INTERIOR C.S.	18	25'-0"	450'-0"
TOTAL	22		550'-0"

CORED SLABS REQUIRED			
40' UNIT	NUMBER	LENGTH	TOTAL LENGTH
EXTERIOR C.S.	2	40'-0"	80'-0"
INTERIOR C.S.	9	40'-0"	360'-0"
TOTAL	11		440'-0"

PROJECT NO. B-5331
COLUMBUS COUNTY
 STATION: 15+20.00 -L-

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 STANDARD
 3'-0" X 1'-9"
 PRESTRESSED CONCRETE
 CORED SLAB UNIT
 90° SKEW

REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	DATE:	S-8
1			3		TOTAL SHEETS 18
2			4		



ASSEMBLED BY: D. SHACKELFORD DATE: 01/15
 CHECKED BY: J. P. ADAMS DATE: 02/15
 DRAWN BY: DGE 5/09
 CHECKED BY: BCH 6/09
 REV. 11/14 MAA/TMG