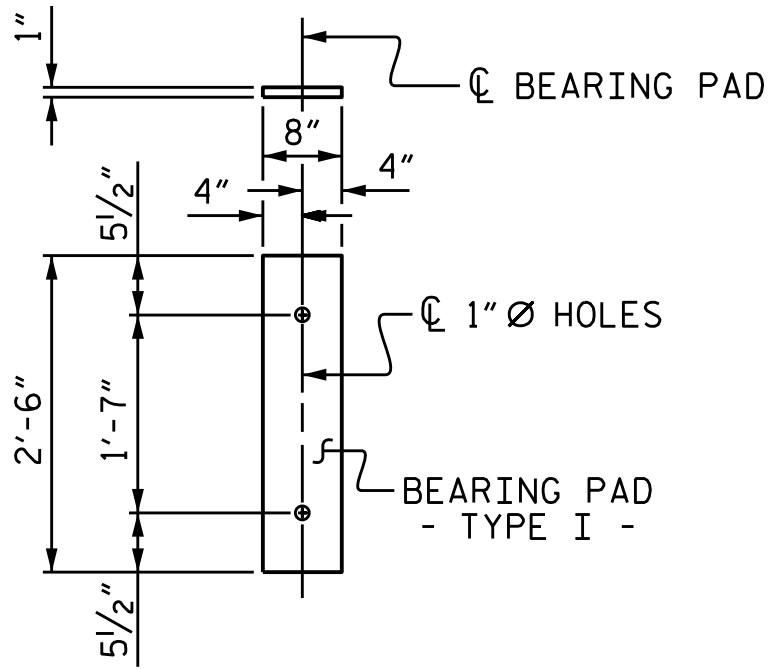




FIXED END
(TYPE I - 44 REQ'D)

ELASTOMERIC BEARING DETAILS

ELASTOMER IN ALL BEARINGS SHALL BE 60 DUROMETER HARDNESS.

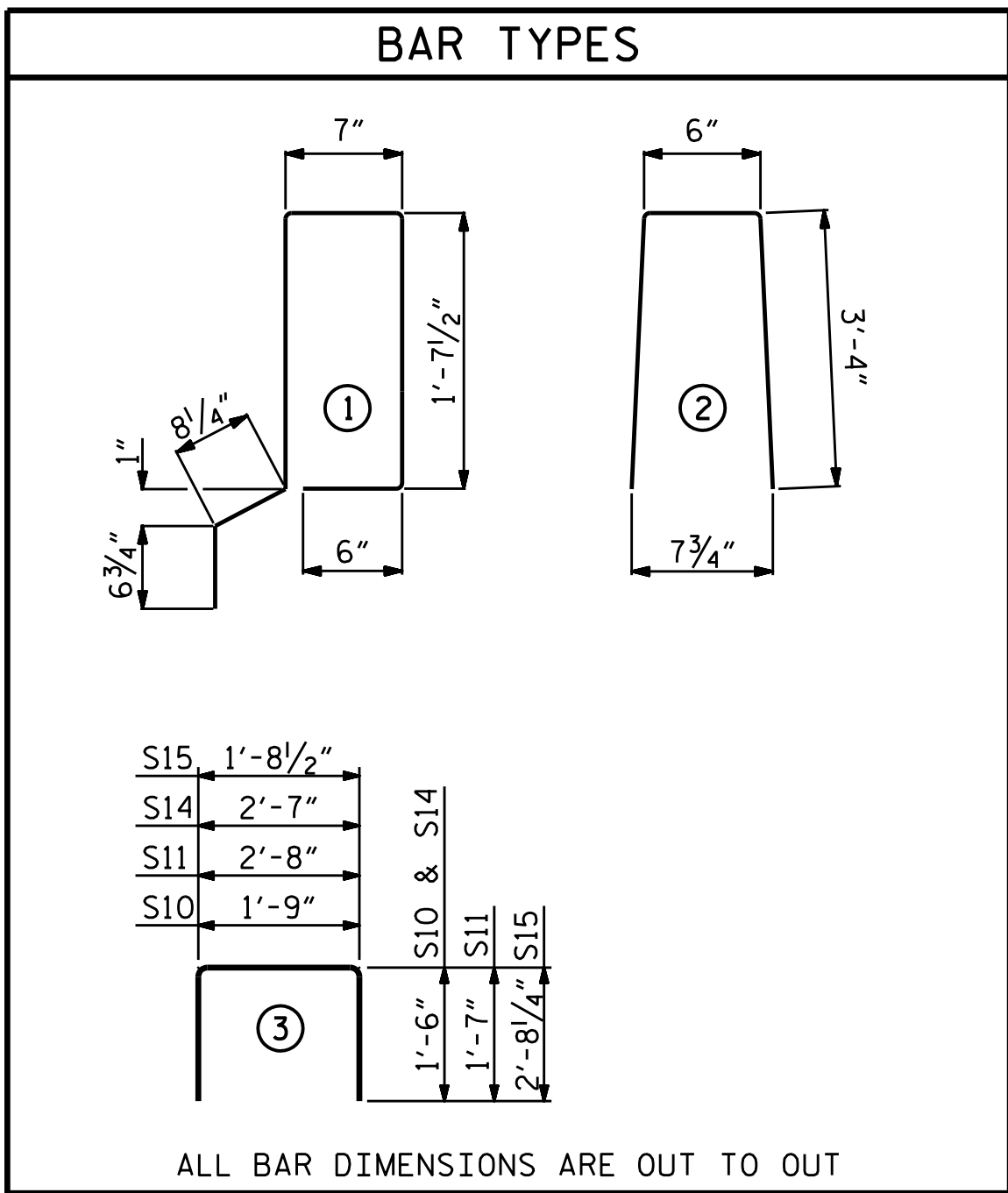
GUTTERLINE ASPHALT THICKNESS & RAIL HEIGHT

	ASPHALT OVERLAY THICKNESS @ MID-SPAN	RAIL HEIGHT @ MID-SPAN
55' UNITS	2"	3'-8"

BILL OF MATERIAL FOR ONE 55' CORED SLAB UNIT							
				EXTERIOR UNIT		INTERIOR UNIT	
BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT	LENGTH	WEIGHT
B31	4	#4	STR	28'-3"	75	28'-3"	75
S10	8	#5	3	4'-9"	40	4'-9"	40
S11	114	#4	3	5'-10"	444	5'-10"	444
*S12	64	#5	1	5'-7"	373		
S14	4	#4	3	5'-7"	15	5'-7"	15
S15	4	#5	3	7'-1"	30	7'-1"	30
REINFORCING STEEL				LBS.	604	LBS.	604
* EPOXY COATED REINFORCING STEEL				LBS.	373		
8500 P.S.I. CONCRETE				CU. YDS.	9.4		9.4
0.6" Ø L.R. STRANDS				No.	31		31

CONCRETE RELEASE STRENGTH

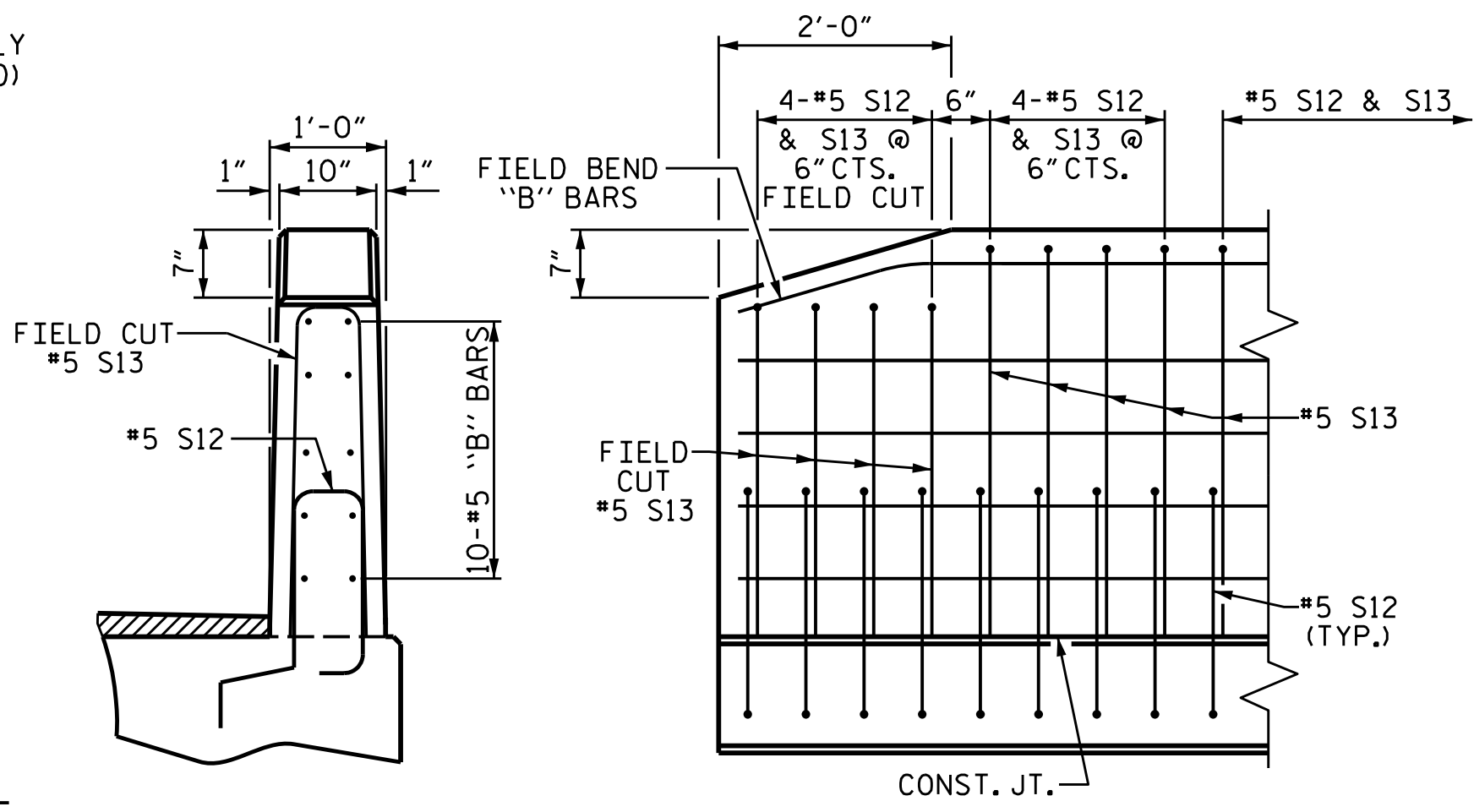
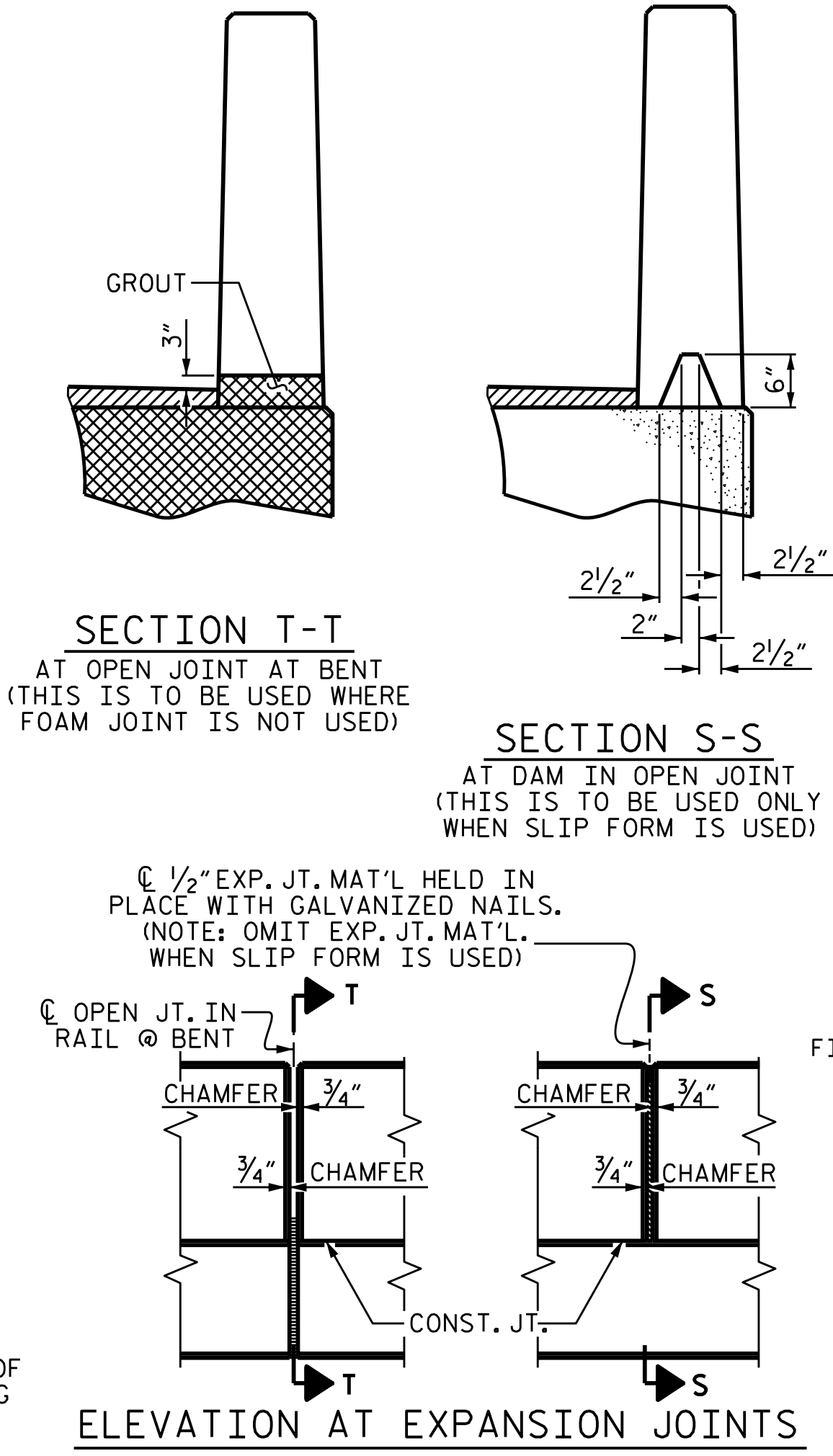
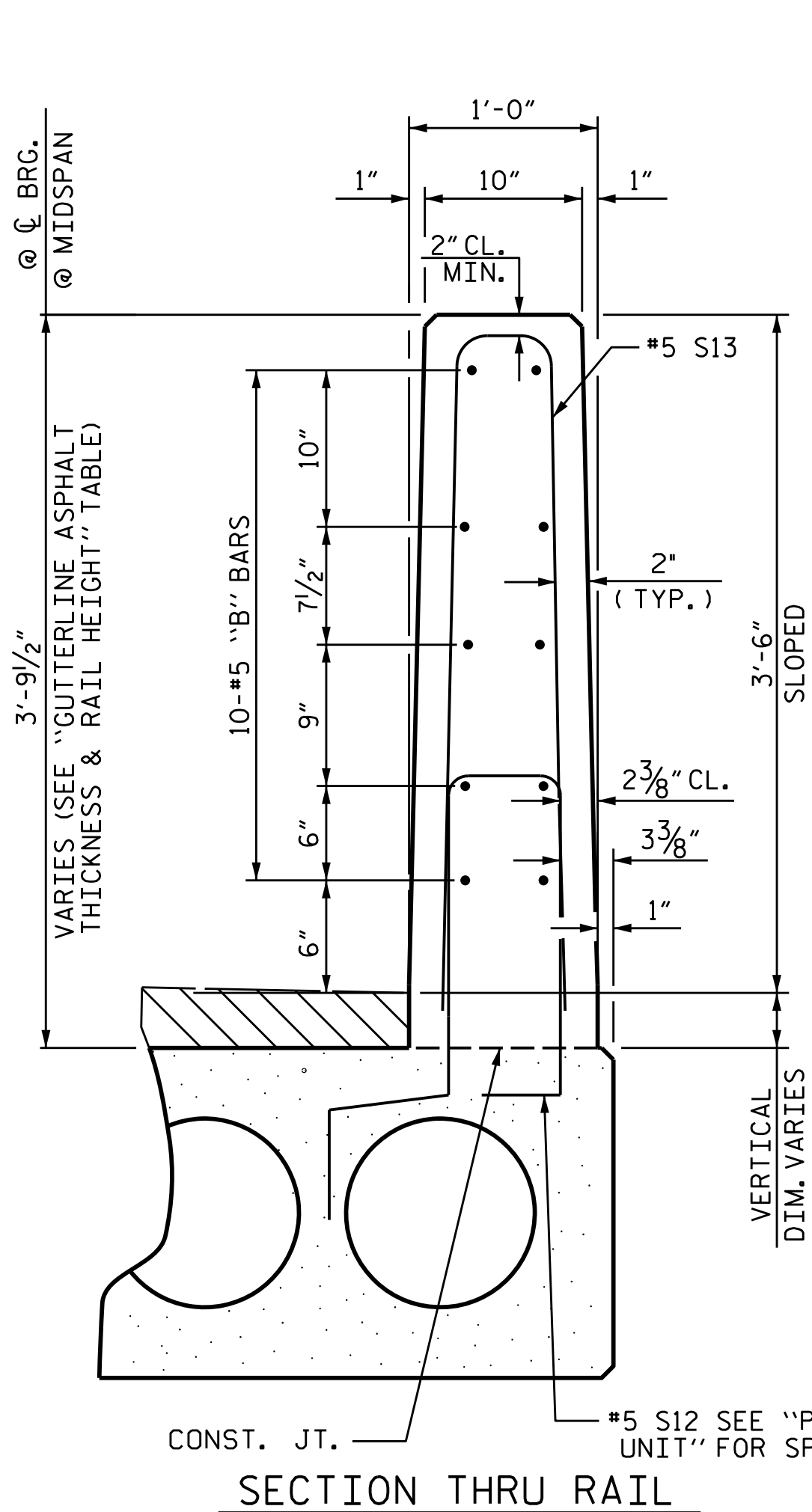
UNIT	PSI
55' UNITS	6200



BILL OF MATERIAL FOR VERTICAL CONCRETE BARRIER RAIL						
BAR	BARS PER PAIR OF EXTERIOR UNITS 55' UNIT	TOTAL NO.	SIZE	TYPE	LENGTH	WEIGHT
*B37	40	80	#5	STR	27'-1"	2260
*S13	128	256	#5	2	7'-2"	1914
* EPOXY COATED REINFORCING STEEL					LBS.	4174
CLASS AA CONCRETE					CU.YDS.	28.6
TOTAL VERTICAL CONCRETE BARRIER RAIL					LN. FT.	220.50

DEAD LOAD DEFLECTION AND CAMBER	
55' CORED SLAB UNIT	3'-0" x 2'-0"
CAMBER (SLAB ALONE IN PLACE)	0.6" Ø L.R. STRAND
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD **	1 3/4" ↑
FINAL CAMBER	1/4" ↓
** INCLUDES FUTURE WEARING SURFACE	

CORED SLABS REQUIRED			
55' UNIT	NUMBER	LENGTH	TOTAL LENGTH
EXTERIOR C.S.	4	55'-0"	220'-0"
INTERIOR C.S.	18	55'-0"	990'-0"
TOTAL	22		1210'-0"



GRADE 270 STRANDS	
AREA (SQUARE INCHES)	0.6" Ø L.R.
ULTIMATE STRENGTH (LBS. PER STRAND)	58,600
APPLIED PRESTRESS (LBS. PER STRAND)	43,950

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.

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 THE REQUIRED STRENGTH SHOWN IN THE "CONCRETE RELEASE STRENGTH" TABLE.

ALL REINFORCING STEEL IN VERTICAL CONCRETE 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.

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.

FLAME CUTTING OF THE TRANSVERSE POST-TENSIONING STRAND IS NOT ALLOWED.

MAINTAIN A SYMMETRIC TENSION FORCE BETWEEN EACH PAIR OF TRANSVERSE POST TENSIONING STRANDS IN THE DIAPHRAGM.

THE #4 S11 STIRRUPS MAY BE SHIFTED AS NECESSARY TO MAINTAIN 1" CLEAR TO THE GROUTED RECESS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

THE PERMITTED THREADED INSERTS ARE DETAILED AS AN OPTION FOR THE CONTRACTOR TO ATTACH FALSEWORK AND FORMWORK DURING CONSTRUCTION.

THE PERMITTED THREADED INSERTS IN THE EXTERIOR UNITS SHALL BE SIZED BY THE CONTRACTOR, SPACED AT 4'-0" CENTERS AND GALVANIZED IN ACCORDANCE WITH SECTION 1076 OF THE STANDARD SPECIFICATIONS. STAINLESS STEEL THREADED INSERTS MAY BE USED AS AN ALTERNATE.

THE PERMITTED THREADED INSERTS SHALL BE GROUTED BY THE CONTRACTOR IMMEDIATELY FOLLOWING REMOVAL OF THE FALSEWORK.

THE COST OF THE PERMITTED THREADED INSERTS SHALL BE INCLUDED IN THE PRICE BID FOR THE PRECAST UNITS.

PROJECT NO. B-4950

CUMBERLAND/SAMPSON COUNTY

STATION: 18+27.50 -L-

SHEET 3 OF 3

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH STANDARD 3'-0" X 2'-0" PRESTRESSED CONCRETE CORED SLAB UNIT 90° SKEW (SPAN B & SPAN C)						REVISIONS		SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:			S2-14
1			3					TOTAL SHEETS
2			4					27

ASSEMBLED BY : J.M. KEPICH	DATE : 10/16
CHECKED BY : L.M. SAMPLES	DATE : 11/16
DRAWN BY : MAA 6/10	REV. 11/14
CHECKED BY : MKT 8/10	MAA/TMG

VERTICAL CONCRETE
BARRIER RAIL DETAILS

END VIEW

END OF RAIL DETAILS

SIDE VIEW



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Suite 430
Raleigh, NC 27606
NC License Number : C-3239



DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

STR. 2 STD. NO. 24PCS3-33-90S (TOP DOWN)