

## ELASTOMERIC BEARING DETAILS

ELASTOMER IN ALL BEARINGS SHALL BE 60 DUROMETER HARDNESS.

4800

5500

0.6" Ø L.R.

0.217

58,600

43,950

'2″CL. | MIN.

1'-0"

—#5 S13

(TYP.)

23/8" CL.

33/8"

- #5 S12 SEE "PLAN OF UNIT" FOR SPACING

VERTICAL CONCRETE BARRIER RAIL DETAILS

GROUT-

SECTION T-T

AT OPEN JOINT AT BENT

(THIS IS TO BE USED WHERE FOAM JOINT IS NOT USED)

SECTION S-S AT DAM IN OPEN JOINT

(THIS IS TO BE USED ONL)

WHEN SLIP FORM IS USED)

© OPEN JT. IN RAIL @ BENT

HAMFER

↓ ½″EXP. JT. MAT'L HELD IN PLACE WITH GALVANIZED NAILS.

(NOTE: OMIT EXP. JT. MAT'L. WHEN SLIP FORM IS USED)

III CHAMFER

ELEVATION AT EXPANSION JOINTS

CHAMFER

**I**CHAMFER

CONCRETE RELEASE STRENGTH

GRADE 270 STRANDS

UNIT

SQUARE INCHES )

(LBS. PER STRAND

APPLIED PRESTRESS

(LBS.PER STRAND

© € BRG. © MIDSPAN

INE

3'-9/2" CUTTERL: RAIL HEI

> VARIES THICKNE

JLTIMATE STRENGT

60' UNITS

70' UNITS

BI	LL OF MATERIAL FOR VERTI	CAL CONCE	RETE	BARR	ZIER R	AIL
BAR	BARS PER PAIR OF EXTERIOR UNITS	TOTAL NO.	SIZE	TYPE	LENGTH	WEIGHT
	60' UNIT					
<b></b> ₩B23	80	80	#5	STR	16′-11″	1412
<b>*</b> S13	140	140	#5	2	7′-2″	1046
<b>★</b> EP0X	Y COATED REINFORCING STEEL		_	LBS.		2458
CLASS	AA CONCRETE			CU.YDS.	1	15.5
TOTAL	VERTICAL CONCRETE BARRIER RAIL			LN. FT.		120.14
	THE OF MATERIAL FOR MERT				TED D	

BI	LL OF MATERIAL FOR VERTI	CAL CONC	RETE	BARR	IER R	AIL
BAR	BARS PER PAIR OF EXTERIOR UNITS	TOTAL NO.	SIZE	TYPE	LENGTH	WEIGHT
	70' UNIT					
<b></b> ₩B25	120	120	#5	STR	13′-8″	1711
<b>*</b> S13	158	158	#5	2	7′-2″	1181
<b>★</b> EP0X	Y COATED REINFORCING STEEL			LBS.		2892
CLASS	AA CONCRETE			CU.YDS.		18.1
TOTAL	VERTICAL CONCRETE BARRIER RAIL			LN. FT.		140.29

BILL	OF M	1ATER:	IAL F	OR ONE	60' COR	ED SLAB	UNIT
				EXTERI	OR UNIT	INTERI	OR UNIT
BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT	LENGTH	WEIGHT
B20	6	#4	STR	21'-2"	85	21'-2"	85
S10	8	#5	3	5′-0″	42	5′-0″	42
S11	146	#4	3	5′-10″	569	5′-10″	569
*S12	70	#5	1	5′-7″	408		
S14	4	#4	4	5′-11″	16	5′-11″	16
S15	4	#5	3	7′-1″	30	7′-1″	30
S16	4	#4	3	5′-11″	16	5′-11″	16
S17	4	#4	3	6′-1″	16	6'-1"	16
S18	4	#4	3	6′-3″	17	6′-3″	17
REINFO	ORCING S	STEEL	LB:	5.	791		791
₩ EP0X							
REIN	IFORCINC	STEEL	LB:	S	408		
6000 1	P.S.I.CO	NCRETE	CU. YDS	) .	10.4		10.4
0.6" Ø	L.R. STR	ANDS	No	).	24		24

BILL OF MATERIAL FOR ONE 70' CORED SLAB UNIT								
				EXTERI(	OR UNIT	INTERIOR UNIT		
BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT	LENGTH	WEIGHT	
B22	6	#4	STR	24'-6"	98	24'-6"	98	
S10	8	#5	3	5′-0″	42	5′-0″	42	
S11	170	#4	3	5′-10″	662	5′-10″	662	
<b>*</b> S12	79	#5	1	5′-7″	460			
S14	4	#4	4	5′-11″	16	5′-11″	16	
S15	4	#5	3	7′-1″	30	7′-1″	30	
S16	4	#4	3	5′-11″	16	5′-11″	16	
S17	4	#4	3	6′-1″	16	6'-1"	16	
S18	4	#4	3	6′-3″	17	6′-3″	17	
REINFO	RCING S	STEEL	LBS	<b>.</b>	897		897	
₩ EPOX								
REIN	FORCINO	STEEL	LB:	S	460			
7000 F	7000 P.S.I. CONCRETE CU. YDS. 12.0 12.0				12.0			
0.6"Ø	L.R. STR	ANDS	No	),	28		28	

<u> </u>		
GUT	TERLINE ASPHALT THICKNESS 8	& RAIL HEIGHT
·	ASPHALT OVERLAY THICKNESS @ MID-SPAN	RAIL HEIGHT @ MID-SPAN
60'UNITS	21/8"	3′-81/8″
70'UNITS	2"	3′-8″

FIELD CUT-#5 S13

#5 S12

## 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,  $\frac{1}{2}$ " 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.

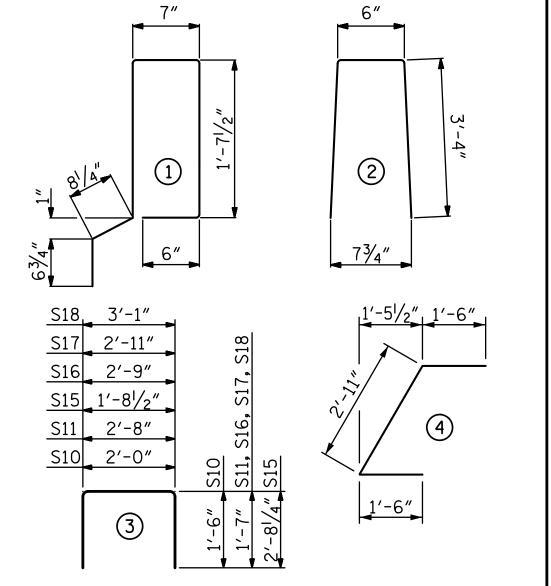
THE PERMITTED THREADED INSERTS ARE DETAILED AS AN OPTION FOR THE CONTRACTOR TO ATTACH FALSEWORK AND FORMWORK DURING CONSTRUCTION.

THE PERMITTED THREADED INSERTS IN THE EXTERIOR UNITS SHALL BE SIZED BY THE CONTRACTOR, SPACED AT 4'-O" 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.

SHEET 4 OF 4



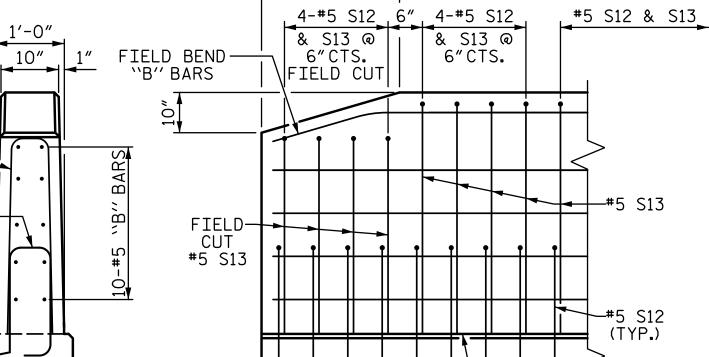
BAR TYPES

## DEAD LOAD DEFLECTION AND CAMBER 3'-0" x 2'-0" 70' CORED SLAB UNIT CAMBER (SLAB ALONE IN PLACE) DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD \*\*\* INCLUDES FUTURE WEARING SURFACE

ALL BAR DIMENSIONS ARE OUT TO OUT

DEAD LOAD DEFLECTION AN	ND CAMBER
	3'-0" × 2'-0"
60'CORED SLAB UNIT	0.6″Ø L.R. STRAND
CAMBER (SLAB ALONE IN PLACE)	17⁄8″ ▮
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD**	1/2″ ♦
FINAL CAMBER	13⁄8″ ♦
** INCLUDES FUTURE WEARING SURF	ACE

CORED SLABS REQUIRED					
	NUMBER	LENGTH	TOTAL LENGTH		
60'UNIT					
EXTERIOR C.S.	2	60'-0"	120'-0"		
INTERIOR C.S.	9	60'-0"	540′-0″		
TOTAL	11		660′-0″		



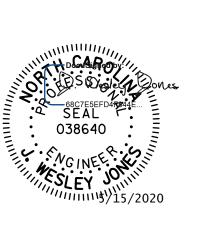
2'-0"

CONST. JT.—

SIDE VIEW

SIDE VIEW

END OF RAIL DETAILS



STV ENGINEERS, INC.
900 West Trade St., Suite 715
Charlotte, NC 28202
NC License Number F-0991

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT NO. BR-0125

WILKES COUNTY

STATION: 15+36.00 -L-

DEPARTMENT OF TRANSPORTATION

RALEIGH

STANDARD

3'-0" X 2'-0"

PRESTRESSED CONCRETE

CORED SLAB UNIT

(SPANS B & C)

REVISIONS

NO. BY: DATE: NO. BY: DATE: S-12

TOTAL SHEETS
23

DRAWN BY: WAW DATE: 10-19

CHECKED BY: JWJ DATE: 11-19

DESIGN ENGINEER OF RECORD: JWJ DATE: 04-20

DRAWN BY: MAA 6/10

CHECKED BY: MKT 7/10

REV. 5/18

MAA/THC

SECTION THRU RAIL

CONST. JT. —

STD. NO. 24PCS3\_33\_60&120S