

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.

WHEN CORED SLABS ARE CAST, AN INTERNAL HOLD-DOWN SYSTEM SHALL BE EMPLOYED TO PREVENT VOIDS FROM RISING OR MOVING SIDWAYS. 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 CLASSIC CONCRETE BRIDGE RAILS, SIDEWALK, AND CONCRETE WEARING SURFACE 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 SIDEWALK IN ACCORDANCE WITH ARTICLE 825-10(B) OF THE STANDARD SPECIFICATIONS. THE CONTRACTION JOINTS SHALL BE LOCATED AT A SPACING OF 8 FEET TO 10 FEET BETWEEN EXPANSION JOINTS. NO CONTRACTION JOINTS WILL BE REQUIRED FOR SEGMENTS LESS THAN 10 FEET IN LENGTH.

TRANSVERSE POST-TENSIONING OF THE CORED SLAB UNITS SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

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

THE #4 S2 & #4 S7 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.

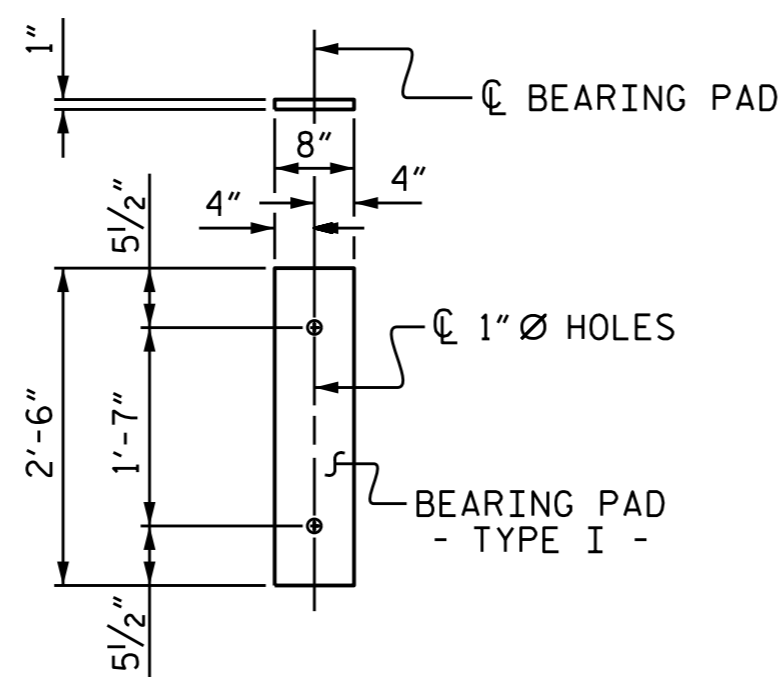
WHEN A CONCRETE WEARING SURFACE IS DETAILED ON THE CORED SLAB BRIDGE TYPICAL SECTION, THE TOP SURFACE OF THE CORED SLAB UNITS SHALL HAVE A 3/8" RAKED FINISH.

GROUT THE SHEAR KEYS BETWEEN THE LEVEL AND SLOPED CORED SLAB UNITS (I.E. SHEAR KEYS AT BREAK POINTS IN THE CAP) PRIOR TO TENSIONING THE TRANSVERSE STRANDS.

PAYMENT FOR SIDEWALK SHALL BE INCLUDED IN THE PAY ITEMS FOR CLASS AA CONCRETE AND EPOXY COATED REINFORCING STEEL.

PRESTRESSED CONCRETE CORED SLAB UNITS ARE DESIGNED FOR 0 PSI TENSION IN THE PRECOMPRESSED TENSILE ZONE UNDER ALL LOADING CONDITIONS.

PRESTRESSED CONCRETE CORED SLAB UNITS SHALL CONTAIN CALCIUM NITRITE CORROSION INHIBITOR IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.



FIXED END
(SPAN A - 28 REQ'D)
(SPAN B - 28 REQ'D)

ELASTOMERIC BEARING DETAILS

ELASTOMERIC BEARINGS FOR SPAN A AND SPAN B SHALL BE 60 DUROMETER HARDNESS.

BILL OF MATERIAL FOR ONE 30' CORED SLAB UNIT

BAR	NUMBER	SIZE	TYPE	TYPE I		TYPE II		TYPE III	
				LENGTH	WEIGHT	LENGTH	WEIGHT	LENGTH	WEIGHT
B1	2	#4	STR	29'-8"	40	29'-8"	40	29'-8"	40
S1	8	#5	3	4'-3"	35	4'-3"	35	4'-3"	35
S2	64	#4	3	5'-4"	228	5'-4"	228	5'-4"	228
* S3	40	#5	1			5'-8"	236		
* S5	6	#4	2			5'-9"	23		
REINFORCING STEEL				LBS.	303	LBS.	303	LBS.	303
* EPOXY COATED REINFORCING STEEL				LBS.		LBS.	23	LBS.	259
5000 P.S.I. CONCRETE				CU. YDS.	4.4	CU. YDS.	4.4	CU. YDS.	4.4
0.6" Ø L.R. STRANDS				No.	9	No.	9	No.	9

BILL OF MATERIAL FOR ONE 65' CORED SLAB UNIT

BAR	NUMBER	SIZE	TYPE	TYPE I		TYPE II		TYPE III	
				LENGTH	WEIGHT	LENGTH	WEIGHT	LENGTH	WEIGHT
B5	6	#4	STR	22'-9"	91	22'-9"	91	22'-9"	91
S6	8	#5	4	4'-9"	40	4'-9"	40	4'-9"	40
S7	134	#4	4	5'-10"	522	5'-10"	522	5'-10"	522
* S3	90	#5	1			5'-8"	532		
* S5	11	#4	2			5'-9"	42		
S8	4	#4	4	5'-7"	15	5'-7"	15	5'-7"	15
S9	4	#5	4	7'-1"	30	7'-1"	30	7'-1"	30
REINFORCING STEEL				LBS.	698	LBS.	698	LBS.	698
* EPOXY COATED REINFORCING STEEL				LBS.		LBS.	42	LBS.	574
6000 P.S.I. CONCRETE				CU. YDS.	11.0	CU. YDS.	11.0	CU. YDS.	11.0
0.6" Ø L.R. STRANDS				No.	24	No.	24	No.	24

CORED SLABS REQUIRED

		NUMBER	LENGTH	TOTAL LENGTH
SPAN A 30' UNIT	TYPE I	10	30'-0"	300
	TYPE II	2	30'-0"	60
	TYPE III	2	30'-0"	60
TOTAL		14	—	420
		NUMBER	LENGTH	TOTAL LENGTH
SPAN B 65' UNIT	TYPE I	10	65'-0"	650
	TYPE II	2	65'-0"	130
	TYPE III	2	65'-0"	130
TOTAL		14	—	910

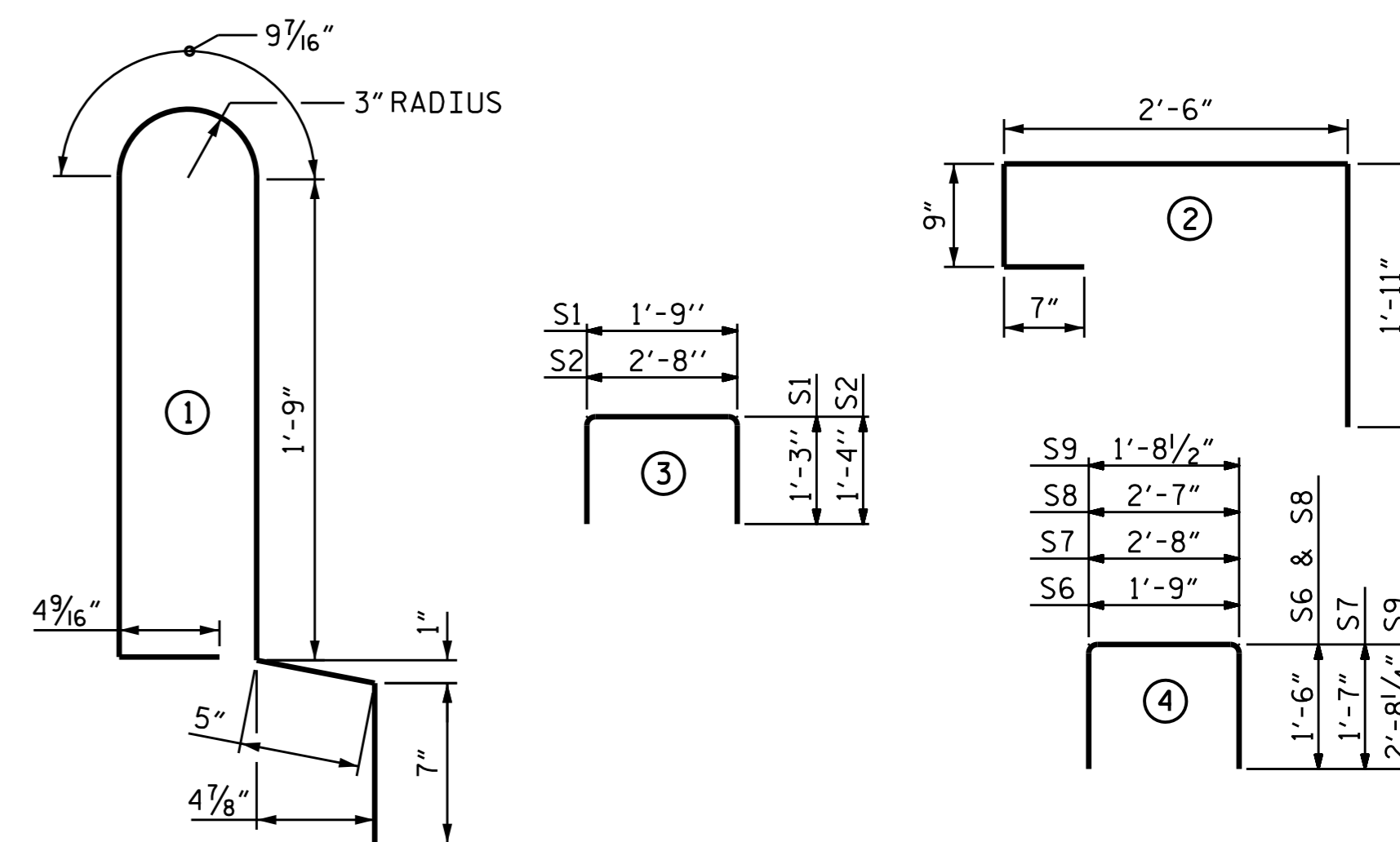
DEAD LOAD DEFLECTION AND CAMBER

	3'-0" x 1'-9"
30' CORED SLAB UNIT (SPAN A)	0.6" Ø L.R. STRAND
CAMBER (SLAB ALONE IN PLACE)	1/4" ↑
DEFLECTION DUE TO CONCRETE WEARING SURFACE	1/16" ↓
FINAL CAMBER	3/16" ↑

DEAD LOAD DEFLECTION AND CAMBER

	3'-0" x 2'-0"
65' CORED SLAB UNIT (SPAN B)	0.6" Ø L.R. STRAND
CAMBER (SLAB ALONE IN PLACE)	1 1/16" ↑
DEFLECTION DUE TO CONCRETE WEARING SURFACE	3/16" ↓
FINAL CAMBER	1 5/8" ↑

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT

CONCRETE RELEASE STRENGTH

UNIT	PSI
30' UNITS	4000
65' UNITS	4800

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-5300
BEAUFORT COUNTY
STATION: 18+77.50 -L-

DocuSigned by:
A. Keith Paschal
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1/19/2016



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE BILL OF MATERIAL

REVISIONS

NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.
1			3			5-17
2			4			TOTAL SHEETS 30

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

ASSEMBLED BY : P.N.HOLDER DATE : 07/15
CHECKED BY : K.P.SEDAI DATE : 08/17/15
DESIGN ENGINEER OF RECORD : P.N.HOLDER DATE : 09/01/15