

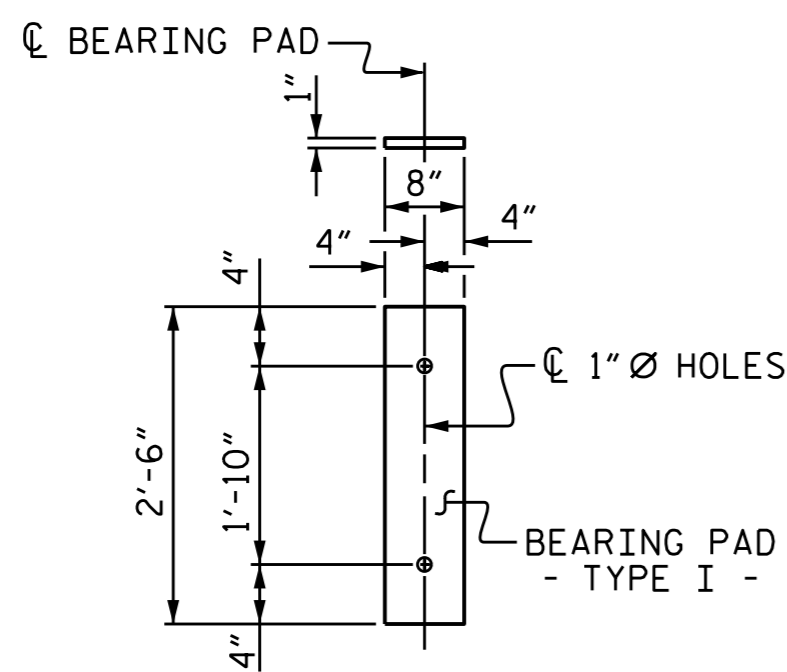
GRADE 270 STRANDS	
	0.6" Ø L.R.
AREA (SQ. INCHES)	0.217
ULTIMATE STRENGTH (LBS. PER STRAND)	58,600
APPLIED PRESTRESS (LBS. PER STRAND)	43,950

CONCRETE RELEASE STRENGTH	
UNIT	PSI
35' UNITS (SPANS A & C)	4,000
65' UNITS (SPAN B)	4,800

DEAD LOAD DEFLECTION AND CAMBER			
	SPAN A	SPAN B	SPAN C
ALL UNITS 0.6" Ø L.R. STRANDS	35' - 21" CORED SLAB UNIT 3'-0" x 1'-9"	65' - 24" CORED SLAB UNIT 3'-0" x 2'-0"	35' - 21" CORED SLAB UNIT 3'-0" x 1'-9"
CAMBER (SLAB ALONE IN PLACE)	1/4" ↑	1 7/8" ↑	1/4" ↑
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD **	1/8" ↓	1/2" ↓	1/8" ↓
FINAL CAMBER	1/8" ↑	1 3/8" ↑	1/8" ↑

** INCLUDES FUTURE WEARING SURFACE

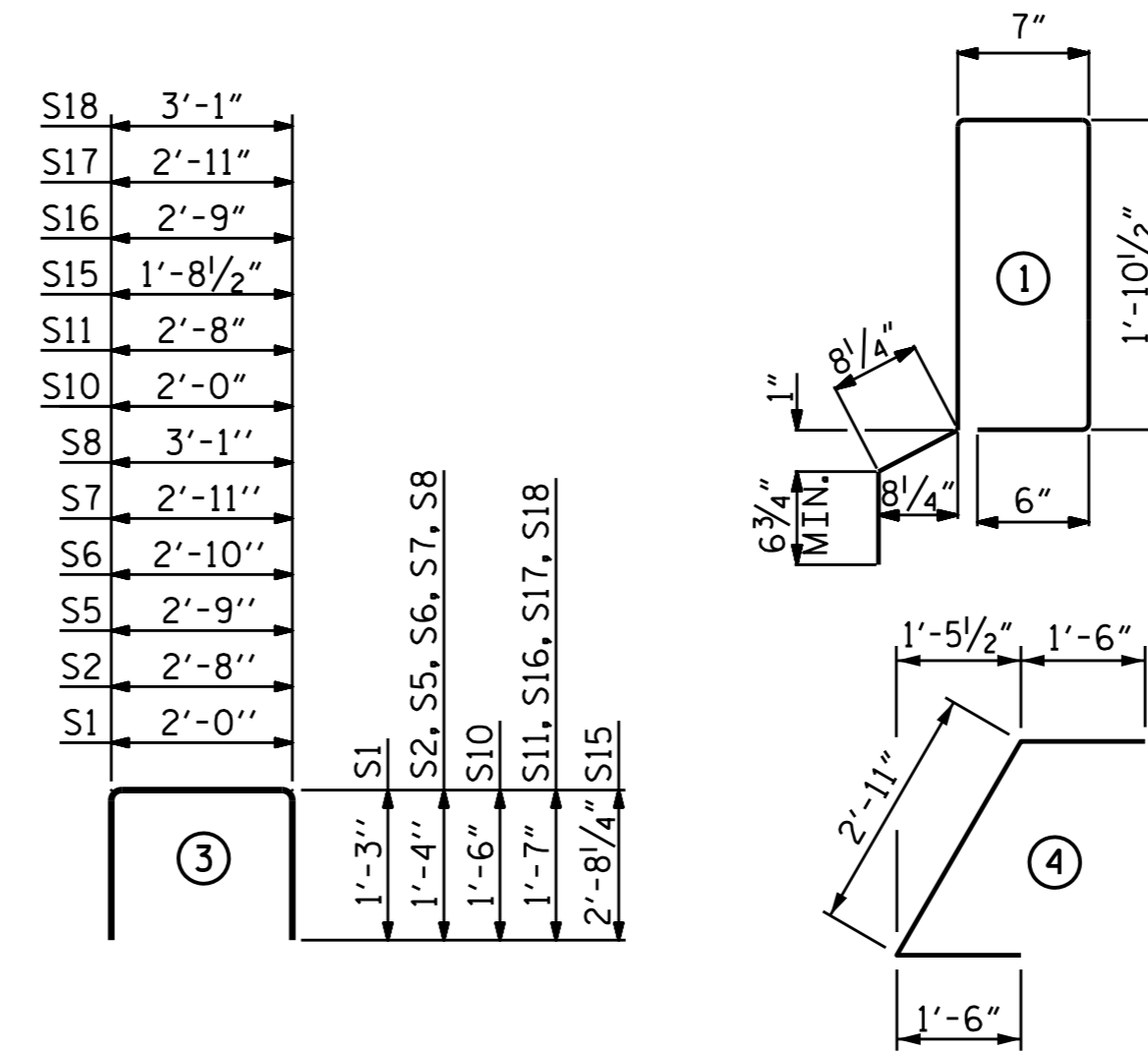
CORED SLABS REQUIRED			
	NUMBER	LENGTH	TOTAL LENGTH
21" C.S. UNITS (SPAN A)			
EXTERIOR C.S.	2	35'-0"	70'-0"
INTERIOR C.S.	10	35'-0"	350'-0"
TOTAL	12		420'-0"
24" C.S. UNITS (SPAN B)			
EXTERIOR C.S.	2	65'-0"	130'-0"
INTERIOR C.S.	10	65'-0"	650'-0"
TOTAL	12		780'-0"
21" C.S. UNITS (SPAN C)			
EXTERIOR C.S.	2	35'-0"	70'-0"
INTERIOR C.S.	10	35'-0"	350'-0"
TOTAL	12		420'-0"



ELASTOMERIC BEARING DETAILS

ELASTOMER IN ALL BEARINGS SHALL BE 60 DUROMETER HARDNESS.

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL FOR ONE CORED SLAB UNIT

SPAN A (35' - 21" CS UNIT)							
BAR	NUMBER	SIZE	TYPE	EXTERIOR UNIT LENGTH	EXTERIOR UNIT WEIGHT	INTERIOR UNIT LENGTH	INTERIOR UNIT WEIGHT
B3	4	#4	STR	18'-3"	49	18'-3"	49
S1	8	#5	3	4'-6"	38	4'-6"	38
S2	72	#4	3	5'-4"	257	5'-4"	257
*S3	44	#5	1	6'-1"	279		
S5	4	#4	3	5'-5"	14	5'-5"	14
S6	4	#4	3	5'-6"	15	5'-6"	15
S7	4	#4	3	5'-7"	15	5'-7"	15
S8	4	#4	3	5'-9"	15	5'-9"	15
REINFORCING STEEL					LBS. 403		403
* EPOXY COATED REINFORCING STEEL					LBS. 279		
5000 P.S.I. CONCRETE					CU. YDS. 5.2		5.2
0.6" Ø L.R. STRANDS					No. 9		9
SPAN B (65' - 24" UNIT)							
BAR	NUMBER	SIZE	TYPE	EXTERIOR UNIT LENGTH	EXTERIOR UNIT WEIGHT	INTERIOR UNIT LENGTH	INTERIOR UNIT WEIGHT
B21	6	#4	STR	22'-10"	92	22'-10"	92
S10	8	#5	3	5'-0"	42	5'-0"	42
S11	158	#4	3	5'-10"	616	5'-10"	616
*S12	67	#5	1	6'-1"	425		
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
REINFORCING STEEL					LBS. 845		845
* EPOXY COATED REINFORCING STEEL					LBS. 425		
6000 P.S.I. CONCRETE					CU. YDS. 11.2		11.2
0.6" Ø L.R. STRANDS					No. 24		24
SPAN C (35' - 21" UNIT)							
BAR	NUMBER	SIZE	TYPE	EXTERIOR UNIT LENGTH	EXTERIOR UNIT WEIGHT	INTERIOR UNIT LENGTH	INTERIOR UNIT WEIGHT
B3	4	#4	STR	18'-3"	49	18'-3"	49
S1	8	#5	3	4'-6"	38	4'-6"	38
S2	72	#4	3	5'-4"	257	5'-4"	257
*S3	44	#5	1	6'-1"	279		
S5	4	#4	3	5'-5"	14	5'-5"	14
S6	4	#4	3	5'-6"	15	5'-6"	15
S7	4	#4	3	5'-7"	15	5'-7"	15
S8	4	#4	3	5'-9"	15	5'-9"	15
REINFORCING STEEL					LBS. 403		403
* EPOXY COATED REINFORCING STEEL					LBS. 279		
5000 P.S.I. CONCRETE					CU. YDS. 5.2		5.2
0.6" Ø L.R. STRANDS					No. 9		9

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 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.

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.

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.

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

APPLY EPOXY PROTECTIVE COATING TO CORED SLAB UNIT ENDS.

MAINTAIN A SYMMETRIC TENSION FORCE BETWEEN EACH PAIR OF TRANSVERSE POST TENSIONING STRANDS IN THE DIAPHRAGM FOR 24" CS UNITS.

THE #4 S11 STIRRUPS MAY BE SHIFTED AS NECESSARY TO MAINTAIN 1" CLEAR TO THE GROUTED RECESS FOR 24" CS UNITS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

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

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 RAIL SEGMENTS LESS THAN 20 FEET IN LENGTH AND NO CONTRACTION JOINTS ARE REQUIRED FOR THOSE SEGMENTS LESS THAN 10 FEET IN LENGTH.

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

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-4461
 CHATHAM COUNTY
 STATION: 19+12.00 -L-

SHEET 5 OF 6



DocuSigned by:
Ting Fang
E720840097435

4/11/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 BILL OF MATERIAL FOR
 3'-0" X 1'-9" (SPAN A & C)
 3'-0" X 2'-0" (SPAN B)
 PRESTRESSED CONCRETE
 CORED SLAB UNITS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-10
1			3			TOTAL SHEETS
2			4			23

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

ASSEMBLED BY :	S. WANCE	DATE :	06/14
CHECKED BY :	T. H. FANG	DATE :	3/11/16
DRAWN BY :	MAA 6/10	REV. 12/11	MAA/AAC
CHECKED BY :	MKT 7/10		