

ELASTOMERIC BEARING DETAILS

ELASTOMER IN ALL BEARINGS SHALL BE 60 DUROMETER HARDNESS.

GUTTERLINE CONCRETE THICKNESS & RAIL HEIGHT				
SPAN A	1'-4" X 2'-11 1/2" CONC. PARAPET	VERT. CONC. BARRIER RAIL		1'-4" X 3'-3 1/2" CONC. PARAPET
		LEFT	RIGHT	
CONCRETE OVERLAY THICKNESS @ MID-SPAN	4 13/16"	4 13/16"	5 1/16"	8 11/16"
RAIL HEIGHT @ MID-SPAN	2'-10 13/16"	3'-11 13/16"		3'-2 13/16"

GUTTERLINE CONCRETE THICKNESS & RAIL HEIGHT				
SPAN B & C	1'-4" X 2'-11 1/2" CONC. PARAPET	VERT. CONC. BARRIER RAIL		1'-4" X 3'-3 1/2" CONC. PARAPET
		LEFT	RIGHT	
CONCRETE OVERLAY THICKNESS @ MID-SPAN	4 1/8"	4 1/8"	5"	8"
RAIL HEIGHT @ MID-SPAN	2'-10 1/8"	3'-11 1/8"		3'-2 1/8"

GUTTERLINE CONCRETE THICKNESS & RAIL HEIGHT				
SPAN D	1'-4" X 2'-11 1/2" CONC. PARAPET	VERT. CONC. BARRIER RAIL		1'-4" X 3'-3 1/2" CONC. PARAPET
		LEFT	RIGHT	
CONCRETE OVERLAY THICKNESS @ MID-SPAN	4 9/16"	4 9/16"	5 7/16"	8 7/16"
RAIL HEIGHT @ MID-SPAN	2'-10 9/16"	3'-11 9/16"		3'-2 9/16"

DEAD LOAD DEFLECTION AND CAMBER	
40' CORED SLAB UNIT	3'-0" x 1'-9" 0.6" Ø L.R. STRAND
CAMBER (SLAB ALONE IN PLACE)	7/8" ↑
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD	3/16" ↓
FINAL CAMBER	1 1/16" ↑

DEAD LOAD DEFLECTION AND CAMBER	
75' CORED SLAB UNIT	3'-0" x 2'-0" 0.6" Ø L.R. STRAND
CAMBER (SLAB ALONE IN PLACE)	2 9/16" ↑
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD	1 3/16" ↓
FINAL CAMBER	1 3/8" ↑

DEAD LOAD DEFLECTION AND CAMBER	
60' CORED SLAB UNIT	3'-0" x 2'-0" 0.6" Ø L.R. STRAND
CAMBER (SLAB ALONE IN PLACE)	1 5/8" ↑
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD	1 1/16" ↓
FINAL CAMBER	1 5/16" ↑

ASSEMBLED BY : D. HODGE DATE : 12/15
 CHECKED BY : M.G. CHEEK DATE : 4/30/16
 DRAWN BY : DGE 5/09 REV. 11/14 MAA/TMG
 CHECKED BY : BCH 6/09

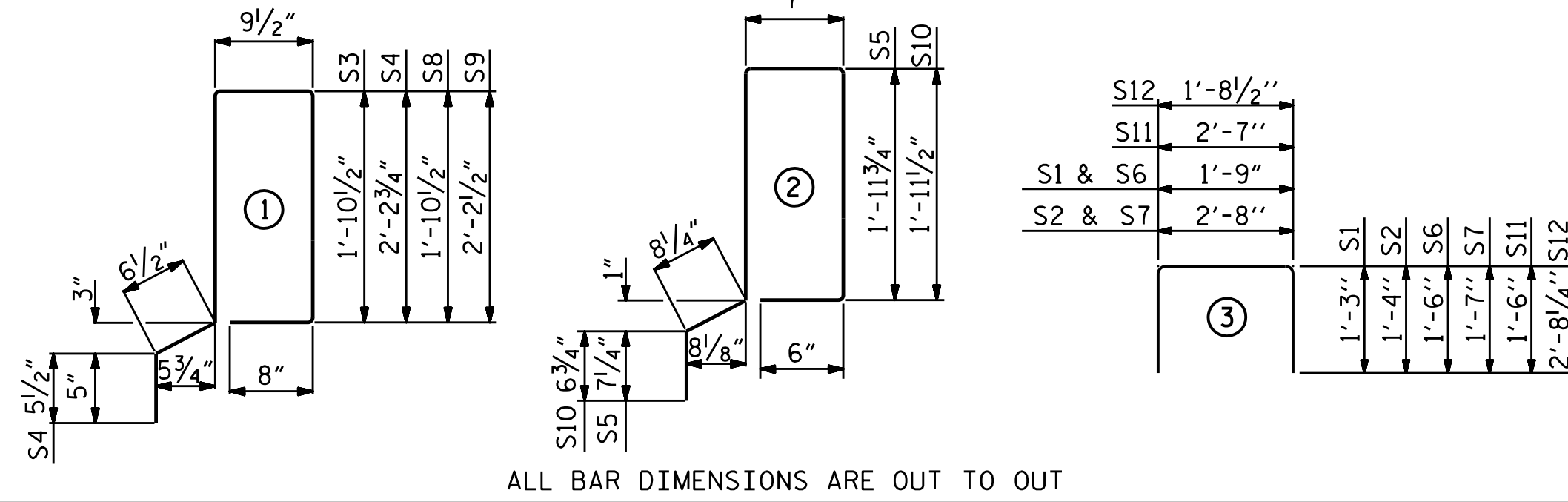
CONCRETE RELEASE STRENGTH	
UNIT	PSI
40'-0"	4000
75'-0"	7000
60'-0"	4400

CORED SLABS REQUIRED			
SPAN A	NUMBER	LENGTH	TOTAL LENGTH
40' UNIT			
TYPE I	1	40'-0"	40'-0"
TYPE II	13	40'-0"	520'-0"
TYPE III	1	40'-0"	40'-0"
TYPE IV	1	40'-0"	40'-0"
TOTAL	16		640'-0"

CORED SLABS REQUIRED			
SPAN B & C	NUMBER	LENGTH	TOTAL LENGTH
75' UNIT			
TYPE I	2	75'-0"	150'-0"
TYPE II	26	75'-0"	1950'-0"
TYPE III	2	75'-0"	150'-0"
TYPE IV	2	75'-0"	150'-0"
TOTAL	32		2400'-0"

CORED SLABS REQUIRED			
SPAN D	NUMBER	LENGTH	TOTAL LENGTH
60' UNIT			
TYPE I	1	60'-0"	60'-0"
TYPE II	13	60'-0"	780'-0"
TYPE III	1	60'-0"	60'-0"
TYPE IV	1	60'-0"	60'-0"
TOTAL	16		960'-0"

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL FOR ONE 3'-0" X 1'-9" 40' CORED SLAB UNIT - SPAN A

BAR	NUMBER	SIZE	TYPE	TYPE I		TYPE II		TYPE III		TYPE IV	
				LENGTH	WEIGHT	LENGTH	WEIGHT	LENGTH	WEIGHT	LENGTH	WEIGHT
B1	4	#4	STR	20'-9"	55	20'-9"	55	20'-9"	55	20'-9"	55
S1	8	#5	3	4'-3"	35	4'-3"	35	4'-3"	35	4'-3"	35
S2	84	#4	3	5'-4"	299	5'-4"	299	5'-4"	299	5'-4"	299
*S3	48	#5	1	6'-2"	309						
*S4	48	#5	1							6'-11"	346
*S5	48	#5	2					6'-4"	317		
REINFORCING STEEL	LBS.				389		389		389		389
*EPOXY COATED REINFORCING STEEL	LBS.				309				317		346
5000 P.S.I. CONCRETE	CU. YDS.				5.9		5.9		5.9		5.9
0.6" Ø L.R. STRANDS	No.				13		13		13		13

BILL OF MATERIAL FOR ONE 3'-0" X 2'-0" 75' CORED SLAB UNIT - SPAN B & C

BAR	NUMBER	SIZE	TYPE	TYPE I		TYPE II		TYPE III		TYPE IV	
				LENGTH	WEIGHT	LENGTH	WEIGHT	LENGTH	WEIGHT	LENGTH	WEIGHT
B2	6	#4	STR	26'-1"	105	26'-1"	105	26'-1"	105	26'-1"	105
S6	8	#5	3	4'-9"	40	4'-9"	40	4'-9"	40	4'-9"	40
S7	154	#4	3	5'-10"	600	5'-10"	600	5'-10"	600	5'-10"	600
*S8	83	#5	1	6'-2"	534						
*S9	83	#5	1							6'-10"	592
*S10	83	#5	2					6'-3"	541		
S11	4	#4	3	5'-7"	15	5'-7"	15	5'-7"	15	5'-7"	15
S12	4	#5	3	7'-1"	30	7'-1"	30	7'-1"	30	7'-1"	30
REINFORCING STEEL	LBS.				790		790		790		790
*EPOXY COATED REINFORCING STEEL	LBS.				534				541		592
9500 P.S.I. CONCRETE	CU. YDS.				12.7		12.7		12.7		12.7
0.6" Ø L.R. STRANDS	No.				38		38		38		38

BILL OF MATERIAL FOR ONE 3'-0" X 2'-0" 60' CORED SLAB UNIT - SPAN D

BAR	NUMBER	SIZE	TYPE	TYPE I		TYPE II		TYPE III		TYPE IV	
				LENGTH	WEIGHT	LENGTH	WEIGHT	LENGTH	WEIGHT	LENGTH	WEIGHT
B3	6	#4	STR	21'-1"	85	21'-1"	85	21'-1"	85	21'-1"	85
S6	8	#5	3	4'-9"	40	4'-9"	40	4'-9"	40	4'-9"	40
S7	124	#4	3	5'-10"	483	5'-10"	483	5'-10"	483	5'-10"	483
*S8	68	#5	1	6'-2"	437						
*S9	68	#5	1							6'-10"	485
*S10	68	#5	2					6'-3"	443		
S11	4	#4	3	5'-7"	15	5'-7"	15	5'-7"	15	5'-7"	15
S12	4	#5	3	7'-1"	30	7'-1"	30	7'-1"	30	7'-1"	30
REINFORCING STEEL	LBS.				653		653		653		653
*EPOXY COATED REINFORCING STEEL	LBS.				437				443		485
5500 P.S.I. CONCRETE	CU. YDS.				10.3		10.3		10.3		10.3
0.6" Ø L.R. STRANDS	No.				22		22		22		22

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.

ALL REINFORCING STEEL IN THE VERTICAL CONCRETE BARRIER RAIL, CONCRETE PARAPETS & LAMP PEDESTALS 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.

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

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.

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.

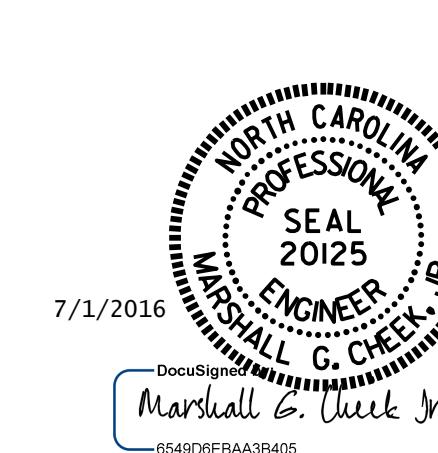
THE PERMITTED THREADED INSERTS SHALL BE GROUTED BY THE CONTRACTOR IMMEDIATELY FOLLOWING REMOVAL OF THE FALSEWORK.

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

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

PROJECT NO. B-5125
MACON COUNTY
 STATION: 13+25.89 -L-

SHEET 8 OF 8



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PRESTRESSED CONCRETE
 CORED SLAB UNIT
 90° SKEW

NO.	REVISIONS			NO.	REVISIONS			SHEET NO.
	BY:	DATE:	DATE:		BY:	DATE:	DATE:	
1				3				5-14
2				4				TOTAL SHEETS 43

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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