BILL OF MATERIAL FOR ONE CORED SLAB SECTION SPAN A

				EXTERIOR UNIT		INTERIOR UNIT	
BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT	LENGTH	WEIGHT
B1	4	# 4	STR	20′-6″	55	20′-6″	55
S1	8	# 5	1	4′-3″	35	4′-3″	35
S2	76	# 4	1	5′-4″	271	5′-4″	271
✳ S3	40	# 5	2	8′-2″	341		
REINFORCING STEEL			LBS.		361		361
✳EPOXY COATED REINFORCING STEEL			LBS.		341		——
5,000 P.S.I. CONCRETE			CU. YD.		5.4		5.4
1/2″ Ø L.R. STRANDS			No.		12		12

BILL OF MATERIAL FOR ONE CORED SLAB SECTION SPAN B

				EXTERIOR UNIT		INTERIOR UNIT	
BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT	LENGTH	WEIGHT
B2	4	# 4	STR	28′-6″	76	20′-6″	76
S1	8	# 5	1	4′-3″	35	4′-3″	35
S2	108	# 4	1	5′-4″	385	5′-4″	385
✳ S3	56	# 5	2	8′-2″	477		
REINFORCING STEEL			LBS.		496		496
✳EPOXY COATED REINFORCING STEEL			LBS.		477		——
6,000 P.S.I. CONCRETE			CU. YD.		7.6		7.6
1/2″ Ø L.R. STRANDS			No.		23		23

BILL OF MATERIAL FOR ONE CORED SLAB SECTION SPAN C

				EXTERIOR UNIT		INTERIOR UNIT	
BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT	LENGTH	WEIGHT
B3	4	# 4	STR	28′-0″	75	20′-6″	75
S1	8	# 5	1	4′-3″	35	4′-3″	35
S2	106	# 4	1	5′-4″	378	5′-4″	378
✳ S3	55	# 5	2	8′-2″	468		
REINFORCING STEEL			LBS.		488		488
✳EPOXY COATED REINFORCING STEEL			LBS.		468		——
6,000 P.S.I. CONCRETE			CU. YD.		7.5		7.5
1/2″ Ø L.R. STRANDS			No.		23		23

CORED SLABS REQUIRED

		NUMBER	LENGTH	TOTAL LENGTH
SPAN A	EXTERIOR C.S.	2	38′-9 3/4″	77′-7 1/2″
	INTERIOR C.S.	10	38′-9 3/4″	388′-1 1/2″
SPAN B	EXTERIOR C.S.	2	54′-10 1/2″	109′-9″
	INTERIOR C.S.	10	54′-10 1/2″	548′-9″
SPAN C	EXTERIOR C.S.	2	53′-9 3/4″	107′-7 1/2″
	INTERIOR C.S.	10	53′-9 3/4″	538′-1 1/2″
TOTAL		36		1770.00 FT.

DEAD LOAD DEFLECTION AND CAMBER SPAN A

	3′-0″ × 1′-9″
	1/2″ Ø L.R. STRAND
CAMBER (SLAB ALONE IN PLACE) ↑	5/8″
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD✳✳ ↓	1/8″
FINAL CAMBER ↑	1/2″

✳✳ INCLUDES FUTURE WEARING SURFACE

DEAD LOAD DEFLECTION AND CAMBER SPAN B

	3′-0″ × 1′-9″
	1/2″ Ø L.R. STRAND
CAMBER (SLAB ALONE IN PLACE) ↑	1 15/16″
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD✳✳ ↓	3/8″
FINAL CAMBER ↑	1 9/16″

✳✳ INCLUDES FUTURE WEARING SURFACE

DEAD LOAD DEFLECTION AND CAMBER SPAN C

	3′-0″ × 1′-9″
	1/2″ Ø L.R. STRAND
CAMBER (SLAB ALONE IN PLACE) ↑	2″
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD✳✳ ↓	3/8″
FINAL CAMBER ↑	1 5/8″

✳✳ INCLUDES FUTURE WEARING SURFACE

BILL OF MATERIAL FOR PARAPET AND END POSTS

BAR	BARS PER SPAN			TOTAL NO.	SIZE	TYPE	LENGTH	WEIGHT
	SPAN A	SPAN B	SPAN C					
✳B4	16			16	# 5	STR	38′-5″	641
✳B5		16		16	# 5	STR	54′-6″	909
✳B6			16	16	# 5	STR	53′-5″	891
✳E1	4		4	8	# 7	STR	2′-9″	45
✳E2	4		4	8	# 7	STR	3′-3″	53
✳E3	4		4	8	# 7	STR	3′-9″	61
✳E4	4		4	8	# 7	STR	4′-3″	69
✳E5	4		4	8	# 7	STR	4′-7″	75
✳F1	4		4	8	# 6	STR	1′-10″	22
✳F2	4		4	8	# 6	STR	3′-0″	36
✳F3	4		4	8	# 6	STR	3′-8″	44
✳EPOXY COATED REINFORCING STEEL					LBS.			2846
CLASS AA CONCRETE					CU.YDS.			35.8
TOTAL LIN. FT. OF CONCRETE PARAPET								295.50

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 GROUT. THE 2 1/2″ Ø DOWEL HOLES AT EXPANSION ENDS OF SLAB SECTIONS SHALL BE FILLED WITH JOINT SEALER MATERIAL TO 1 1/2″ ABOVE THE TOP OF DOWELS AND THEN FILLED WITH GROUT.

THE JOINT SEALER MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF TYPE B LOW MODULUS SILICONE SEALANT. THE 2″ Ø BACKER ROD SHALL CONFORM TO THE REQUIREMENTS OF TYPE M BOND BREAKER. SEE SECTION 1028 OF THE STANDARD SPECIFICATIONS.

WHEN CORED SLABS ARE CAST, A POSITIVE HOLD-DOWN SYSTEM SHALL BE EMPLOYED TO PREVENT VOIDS FROM RISING OR MOVING SIDEWAYS. THIS SYSTEM SHALL BE DESIGNED TO BE LEFT IN PLACE UNTIL THE CONCRETE HAS REACHED RELEASE STRENGTH. AT LEAST THREE 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 4000 PSI IN SPAN A AND NOT LESS THAN 4800 PSI IN SPANS B & C.

ALL REINFORCING STEEL IN PARAPETS AND END POSTS SHALL BE EPOXY COATED.

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

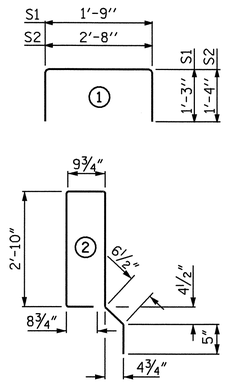
APPLY EPOXY PROTECTIVE COATING TO CORED SLAB UNIT ENDS. FOR EPOXY PROTECTIVE COATING, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC BEARINGS, SEE SPECIAL PROVISIONS.

ELASTOMER IN ALL BEARINGS SHALL BE 60 DUROMETER HARDNESS.

FOR PRESTRESSED CONCRETE MEMBERS, SEE SPECIAL PROVISIONS.

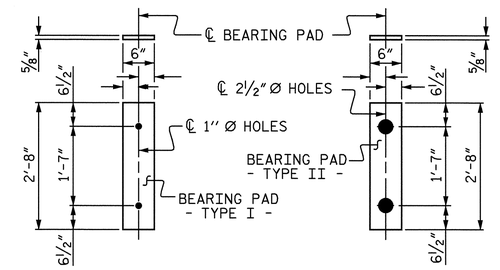
BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT

GRADE 270 STRANDS

	1/2″ Ø L.R.
AREA (SQUARE INCHES)	0.153
ULTIMATE STRENGTH (LBS. PER STRAND)	41,300
APPLIED PRESTRESS (LBS. PER STRAND)	30,980



FIXED END (TYPE I - 36 REQ'D)

EXPANSION END (TYPE II - 36 REQ'D)

ELASTOMERIC BEARING DETAILS

PROJECT NO. B-3704

WAKE COUNTY

STATION: 17+05.00 -L-

SHEET 9 OF 9

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD 3′-0″ X 1′-9″ PRESTRESSED CONCRETE CORED SLAB UNIT

OCTOBER 1981

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	5-12
1			3			TOTAL SHEETS
2			4			23

NORTH CAROLINA PROFESSIONAL SEAL 11259 ENGINEER DAVID R. ANDERSON

10-28-04

ASSEMBLED BY : N. Q. TRAN DATE : FEB 2004
CHECKED BY : M.A. ALLEN DATE : 5-04

DRAWN BY : WJH 4/89
CHECKED BY : FCJ 5/89

REV. 10/17/00 RWW/LES
REV. 7/10/01 RWW/LES
REV. 5/1/03R RWW/JTE

28-OCT-2004 15:19
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STD. NO. PCS3