

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 CONSTRUCTION OF SUPERSTRUCTURE.

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 1/2" 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. THE 12" WIDE BOND BREAKING TAPE SHALL BE CENTERED OVER THE JOINT AND CONFORM TO THE REQUIREMENTS OF TYPE N 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.

ALL REINFORCING STEEL IN 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. FOR EPOXY PROTECTIVE COATING, SEE SPECIAL PROVISIONS.

VERTICAL 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 VERTICAL 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.

FOR ELASTOMERIC BEARINGS, SEE SPECIAL PROVISIONS.

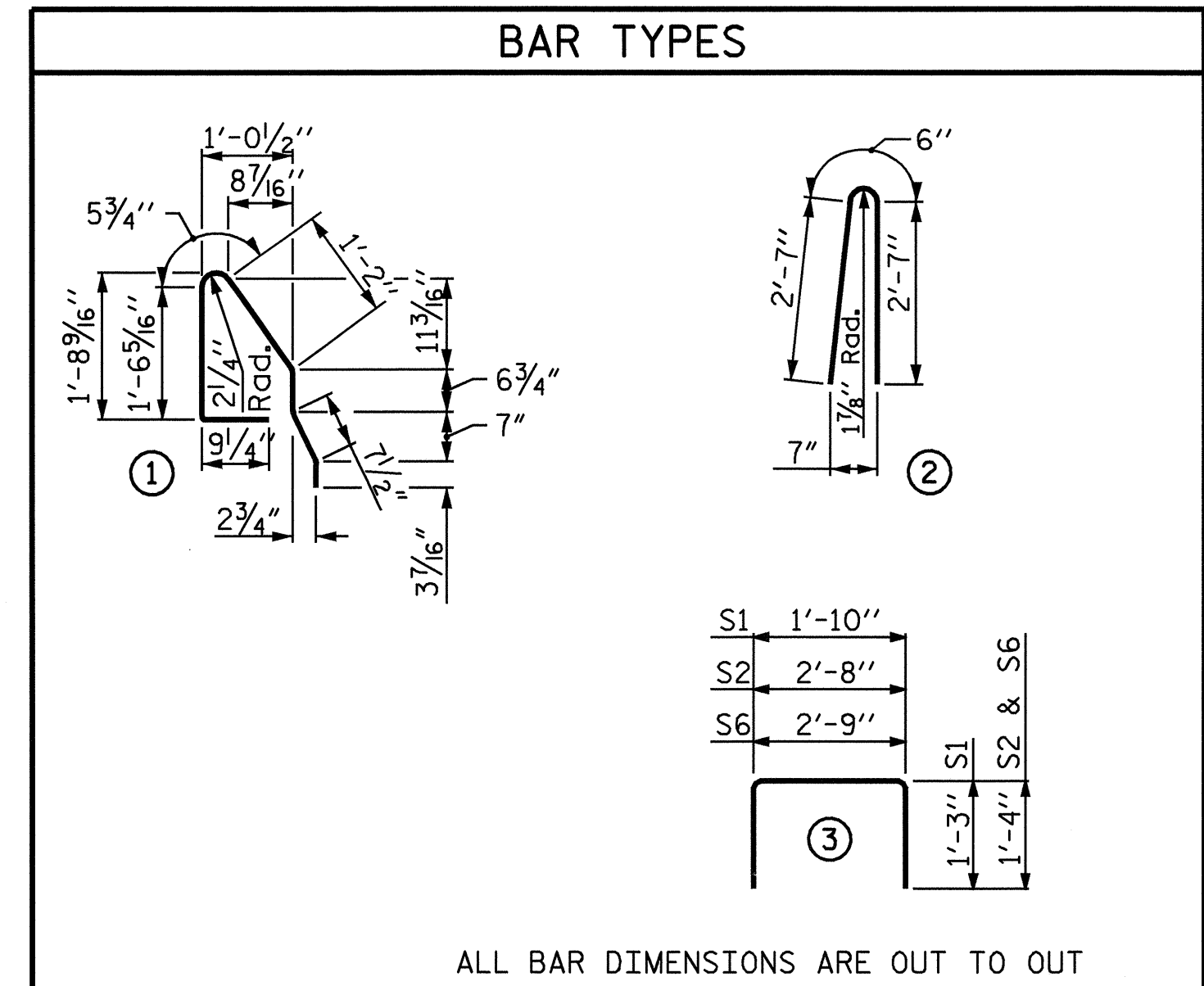
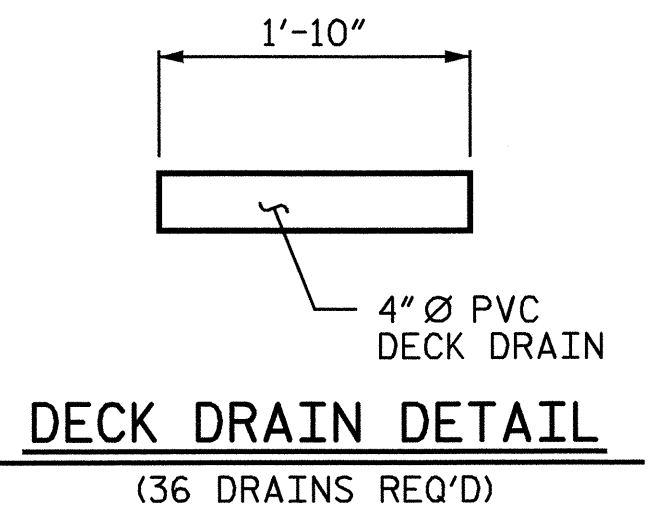
FOR PRESTRESSED CONCRETE MEMEBERS, SEE SPECIAL PROVISIONS.

BILL OF MATERIAL FOR CONCRETE BARRIER RAIL								
BAR	BARS PER SPAN			TOTAL NO.	SIZE	TYPE	LENGTH	WEIGHT
	SPAN "A"	SPAN "B"	SPAN "C"					
* B3	56			56	#5	STR	11'-5"	667
* B4		56	56	112	#5	STR	14'-2"	1655
* S4	80	102	102	284	#5	2	5'-8"	1679
* EPOXY COATED REINFORCING STEEL								4001 LBS.
CLASS AA CONCRETE								31.6 CU. YDS.
TOTAL LIN. FT. OF CONCRETE BARRIER RAIL								277.02

DEAD LOAD DEFLECTION AND CAMBER	
SPAN "A"	3'-0" x 1'-9"
CAMBER (SLAB ALONE IN PLACE)	1/2" Ø L.R. STRAND 13/16" ↑
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD **	1/16" ↓
FINAL CAMBER	3/4" ↑
SPAN "B" & "C"	1/2" Ø L.R. STRAND
CAMBER (SLAB ALONE IN PLACE)	2" ↑
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD **	5/16" ↓
FINAL CAMBER	1 1/16" ↑

** INCLUDES FUTURE WEARING SURFACE

CORED SLABS REQUIRED			
SPAN "A"	NUMBER	LENGTH	TOTAL LENGTH
EXTERIOR C.S.	2	38'-9 1/4"	77'-6 1/2"
INTERIOR C.S.	9	38'-9 1/4"	348'-11 1/4"
SPAN "B" & "C"	NUMBER	LENGTH	TOTAL LENGTH
EXTERIOR C.S.	4	49'-10 7/16"	199'-5 3/4"
INTERIOR C.S.	18	49'-10 7/16"	897'-7 7/8"
TOTAL	33		1523.61'

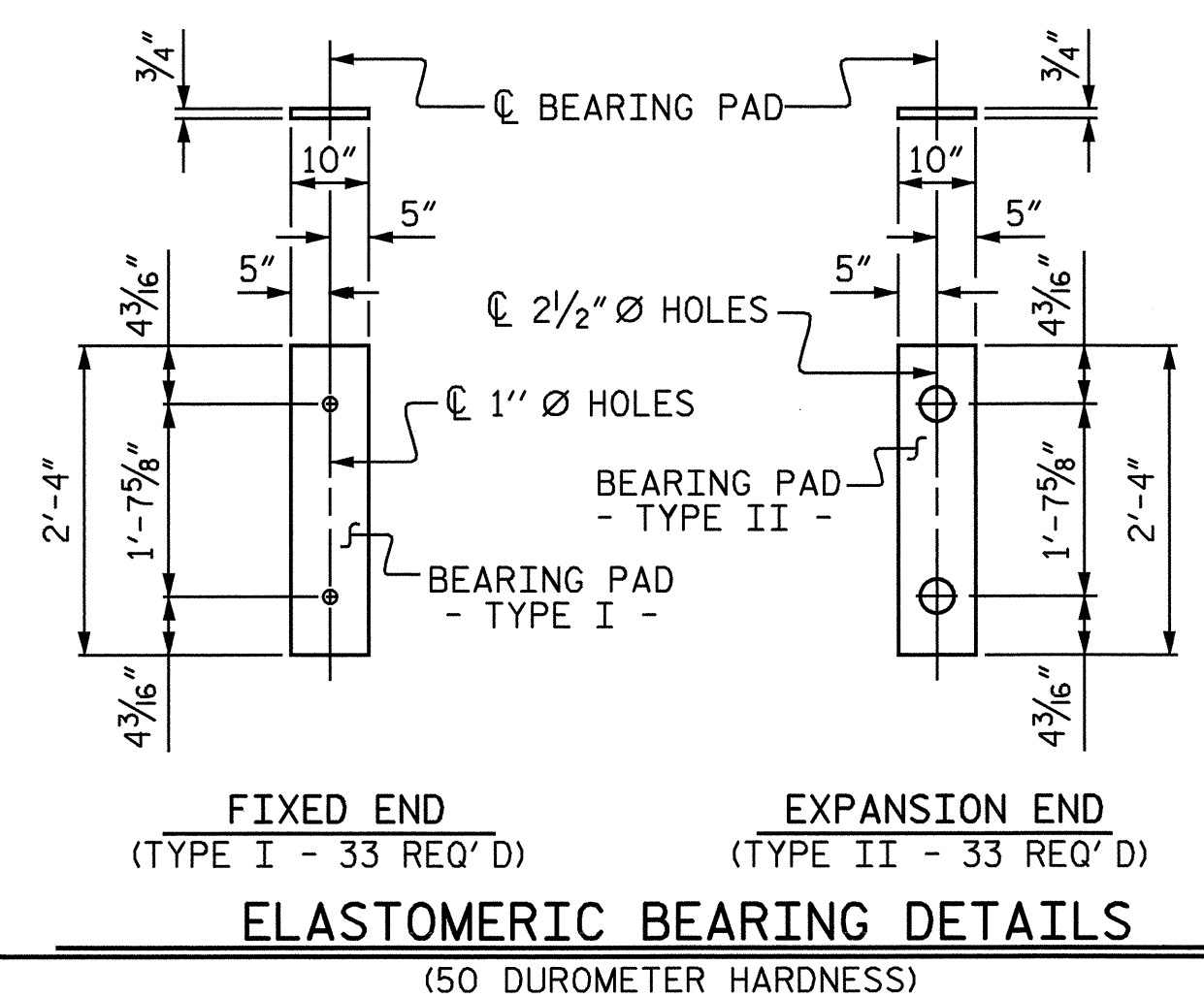
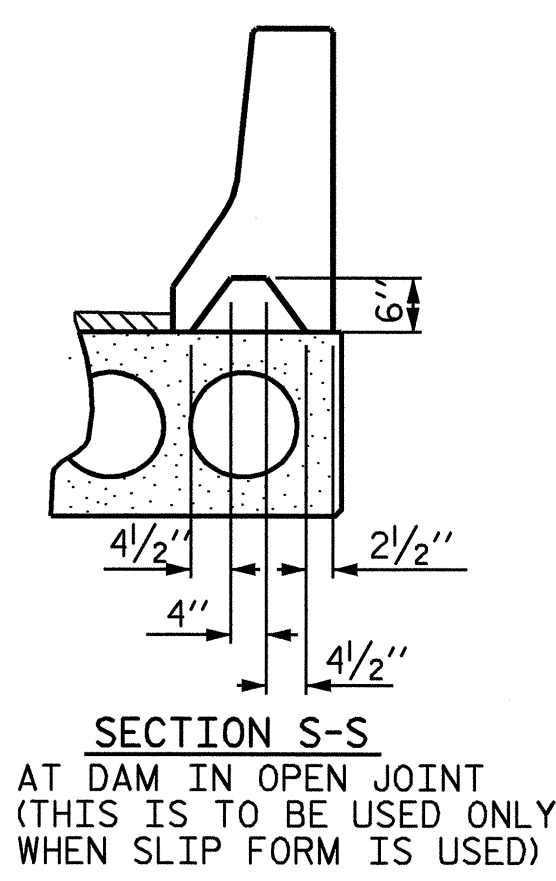
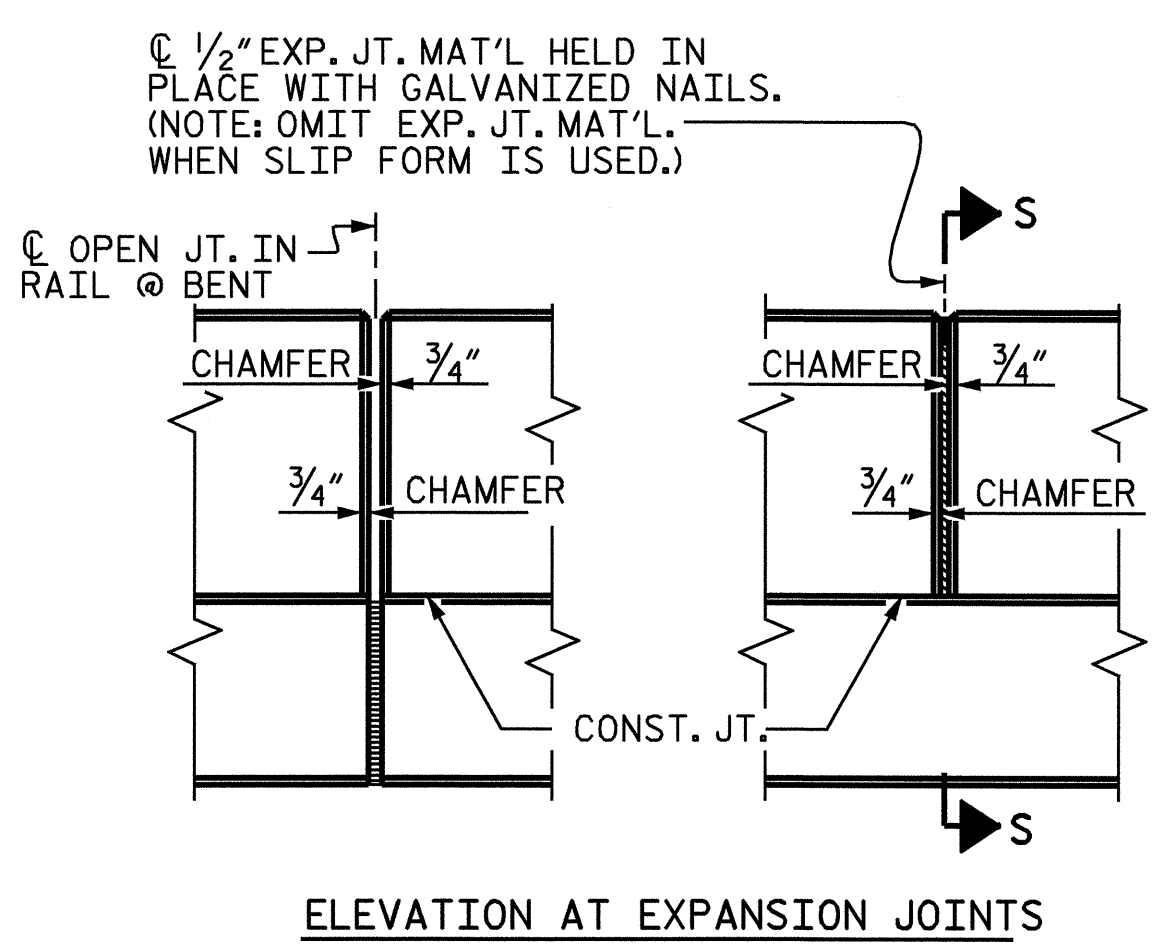
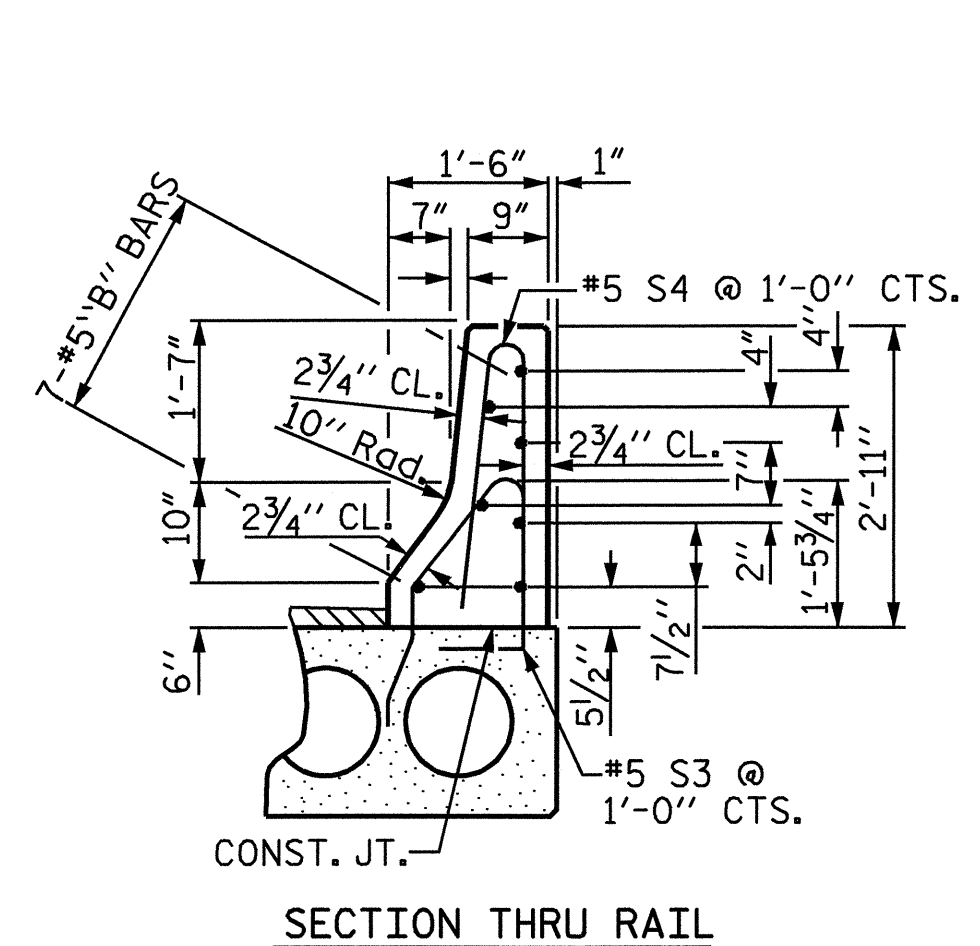


ALL BAR DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL FOR ONE CORED SLAB SECTION									
BAR	NUMBER	SIZE	TYPE	SPAN "A"		EXTERIOR UNIT		INTERIOR UNIT	
				LENGTH	WEIGHT	LENGTH	WEIGHT	LENGTH	WEIGHT
B1	4	#4	STR	20'-6"	55	20'-6"	55		
S1	8	#5	3	4'-4"	36	4'-4"	36		
S2	76	#4	3	5'-4"	271				
S2	62	#4	3			5'-4"	221		
* S3	40	#5	1	5'-5"	226				
S6	4	#4	3	5'-5"	14	5'-5"	14		
REINFORCING STEEL					376 LBS.				326 LBS.
* EPOXY COATED REINFORCING STEEL					226 LBS.				
5,000 P.S.I. CONCRETE					5.5 CU. YDS.				5.5 CU. YDS.
1/2" Ø L.R. STRANDS				No.	14				14

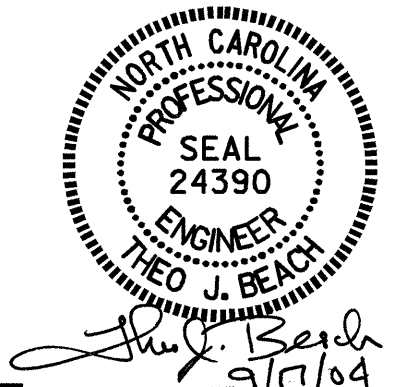
BILL OF MATERIAL FOR ONE CORED SLAB SECTION									
BAR	NUMBER	SIZE	TYPE	SPAN "B" OR "C"		EXTERIOR UNIT		INTERIOR UNIT	
				LENGTH	WEIGHT	LENGTH	WEIGHT	LENGTH	WEIGHT
B2	4	#4	STR	26'-0"	69	26'-0"	69		
S1	8	#5	3	4'-4"	36	4'-4"	36		
S2	96	#4	3	5'-4"	342				
S2	78	#4	3			5'-4"	278		
* S3	51	#5	1	5'-5"	288				
S6	4	#4	3	5'-5"	14	5'-5"	14		
REINFORCING STEEL					461 LBS.				397 LBS.
* EPOXY COATED REINFORCING STEEL					288 LBS.				
5,000 P.S.I. CONCRETE					7.1 CU. YDS.				7.1 CU. YDS.
1/2" Ø L.R. STRANDS				No.	22				22

GRADE 270 STRANDS	
AREA (SQUARE INCHES)	0.153
ULTIMATE STRENGTH (LBS. PER STRAND)	41,300
APPLIED PRESTRESS (LBS. PER STRAND)	30,980



ASSEMBLED BY : P.C. BREWER	DATE : 10/16/03
CHECKED BY : M. BRITT	DATE : 10/28/03
DRAWN BY : WJH	4/89
CHECKED BY : FCJ	5/89
REV. 10/17/00	RWW/LES
REV. 7/10/01	RWW/LES
REV. 5/7/03	RWW/JTE

17-SEP-2004 10:23
w:\squad\b4058\pbrewer\Microsoft\B4058.sd..01.dgn
sbw\llc.ms



PROJECT NO. B-4058
CASWELL COUNTY
 STATION: 16+75.55 -L-

SHEET 7 OF 7

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						1981
STANDARD 3'-0" X 1'-9" PRESTRESSED CONCRETE CORED SLAB UNIT						S-10
OCTOBER						TOTAL SHEETS 25
REVISIONS						SHEET NO. S-10
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			
2			4			