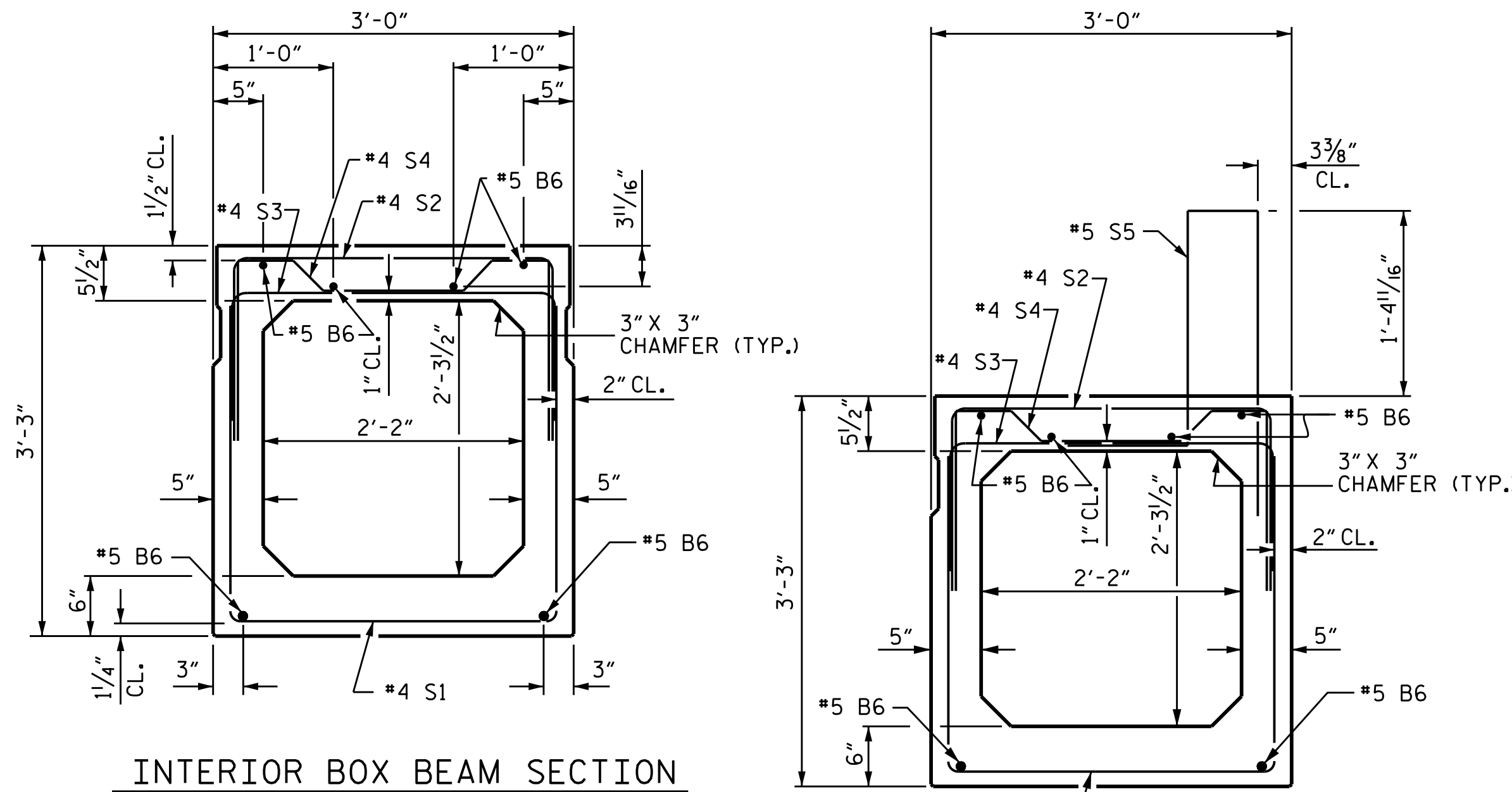


**END ELEVATION**

SHOWING PLACEMENT OF #5 & #4 "A" BARS AND LOCATION OF DOWEL HOLES. (INTERIOR BOX BEAM SECTION SHOWN-EXTERIOR SECTION SIMILAR EXCEPT SHEAR KEY LOCATION. STRAND LAYOUT NOT SHOWN.)

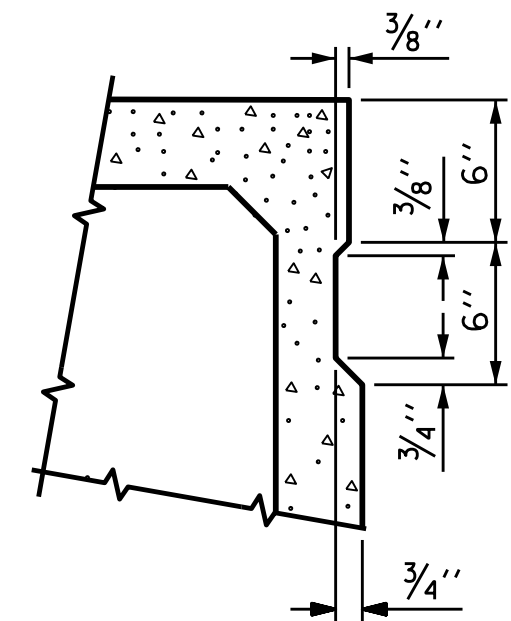


**INTERIOR BOX BEAM SECTION**

(STRAND LAYOUT NOT SHOWN)

**EXTERIOR BOX BEAM SECTION**

(STRAND LAYOUT NOT SHOWN)

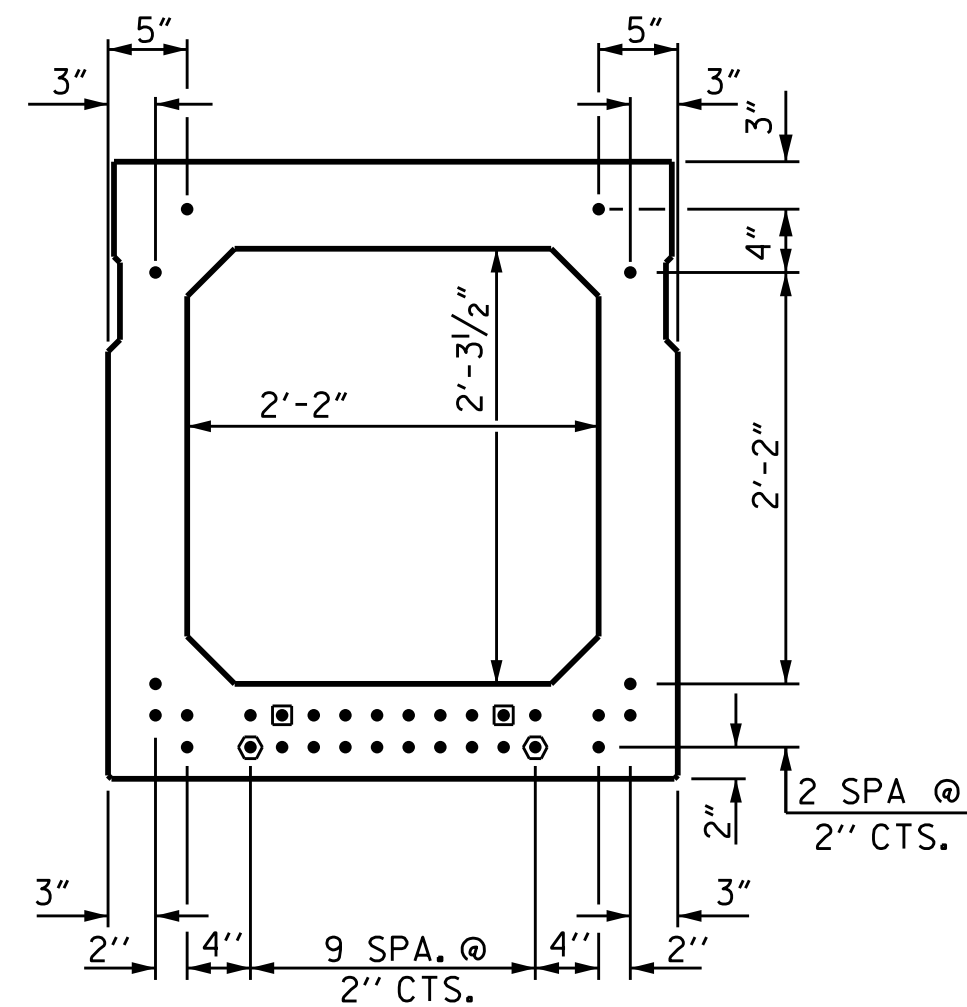


**SHEAR KEY DETAIL**

NOTE: OMIT SHEAR KEY ON OUTSIDE FACE OF EXTERIOR BOX BEAMS.

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

**0.6" Ø LOW RELAXATION STRAND LAYOUT**



**TYPICAL STRAND LOCATION**

(32 STRANDS REQUIRED)

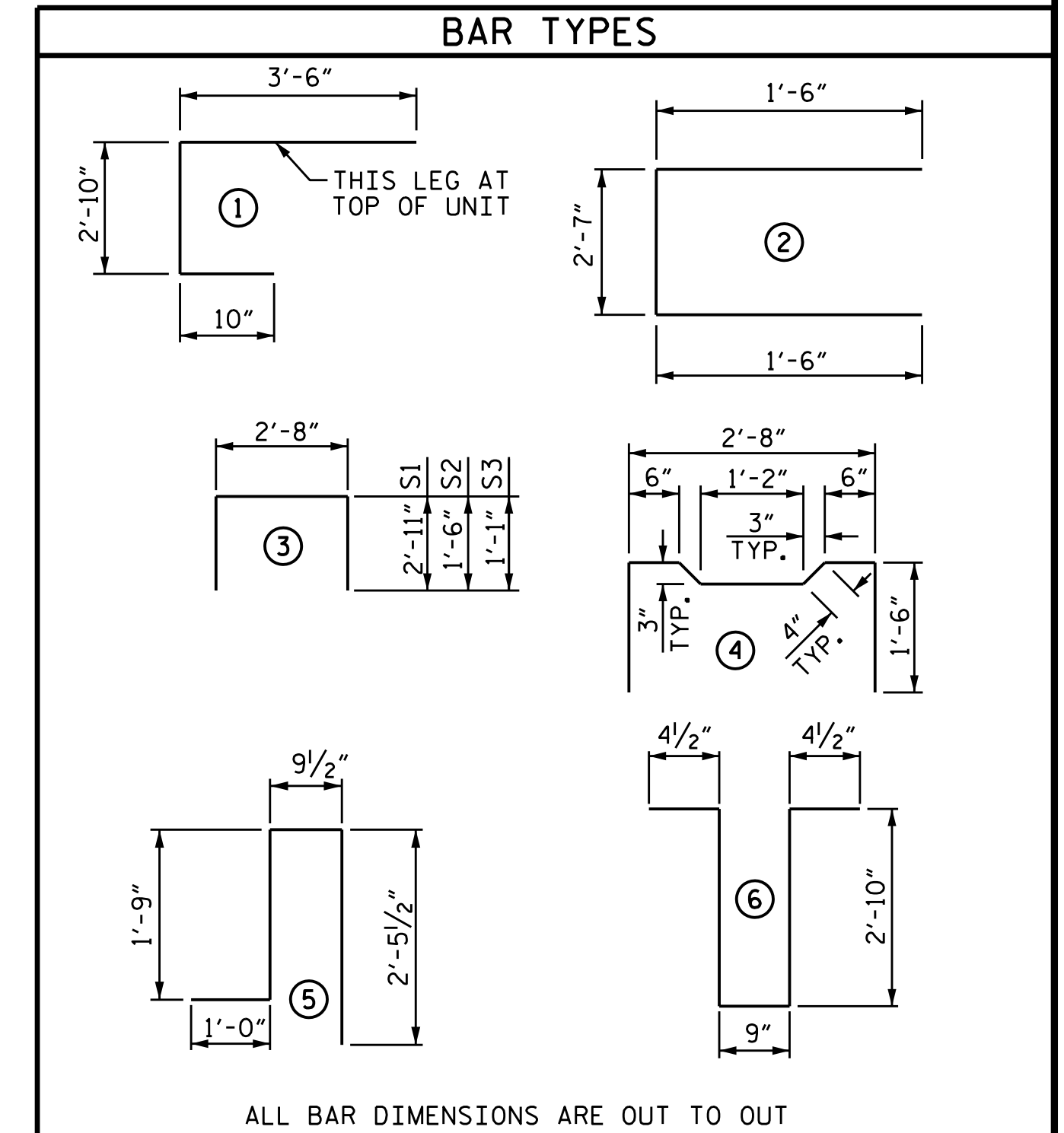
**DEBONDING LEGEND**

- FULLY BONDED STRANDS
- ◐ STRANDS DEBONDED FOR 4'-0" FROM END OF GIRDER
- ◑ STRANDS DEBONDED FOR 12'-0" FROM END OF GIRDER

BOND SHALL BE BROKEN ON STRANDS AS SHOWN FOR THE SPECIFIED LENGTH FROM EACH END OF THE BOX BEAM. SEE STANDARD SPECIFICATIONS ARTICLE 1078-7.

DEAD LOAD DEFLECTION AND CAMBER	
	3'-0" x 3'-3"
	0.6" Ø L.R. STRAND
CAMBER ( SLAB ALONE IN PLACE )	1 3/16" ↑
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD**	1 1/16" ↓
FINAL CAMBER	3/4" ↑

\*\* INCLUDES FUTURE WEARING SURFACE

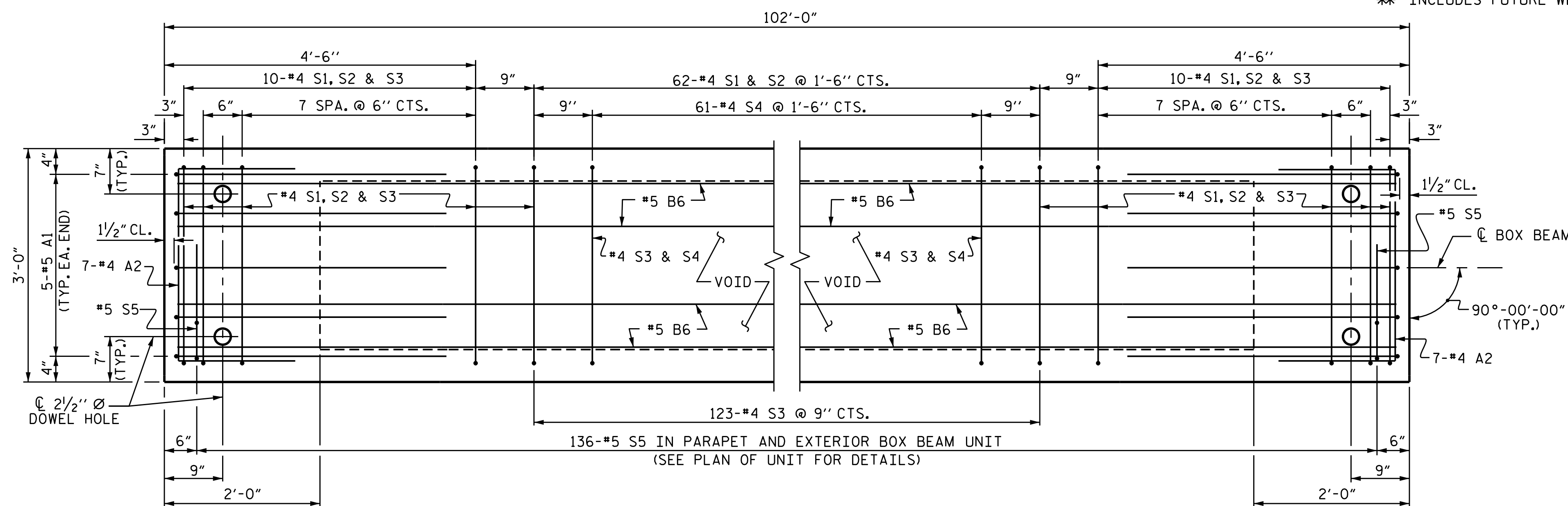


**BILL OF MATERIAL FOR ONE BOX BEAM SECTION**

BAR	NUMBER	SIZE	TYPE	EXTERIOR UNIT		INTERIOR UNIT	
				LENGTH	WEIGHT	LENGTH	WEIGHT
A1	10	#5	1	7'-2"	75	7'-2"	75
A2	44	#4	2	5'-7"	164	5'-7"	164
B6	12	#5	STR	51'-11"	650	51'-11"	650
K1	15	#4	6	7'-2"	72	7'-2"	72
K2	10	#4	STR	2'-7"	17	2'-7"	17
S1	82	#4	3	8'-6"	466	8'-6"	466
S2	82	#4	3	5'-8"	310	5'-8"	310
S3	143	#4	3	4'-10"	462	4'-10"	462
S4	61	#4	4	5'-10"	238	5'-10"	238
* S5	136	#5	5	6'-0"	851	--	--
REINFORCING STEEL					2454 LBS.		2454 LBS.
* EPOXY COATED REINF. STEEL					851 LBS.		
7500 P.S.I. CONCRETE				20.0 CU. YDS.		19.8 CU. YDS.	
0.6" Ø L.R. STRANDS				No. 32		No. 32	

**BOX BEAM UNITS REQUIRED**

	NO.	LENGTH	TOTAL LENGTH
EXTERIOR B.B.	2	102'-0"	204'-0"
INTERIOR B.B.	10	102'-0"	1020'-0"
TOTAL	12		1224'-0"

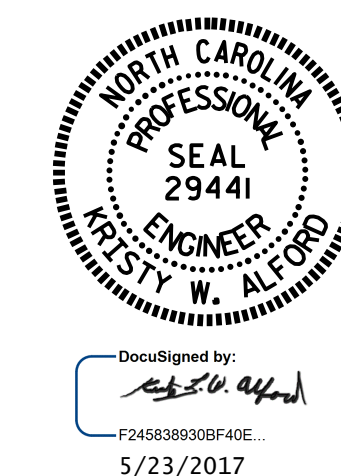


**PLAN OF BOX BEAM**

EXTERIOR UNIT SHOWN, INTERIOR UNIT SIMILAR EXCEPT OMIT #5 S5 BARS. FOR LOCATION OF DIAPHRAGMS, SEE "PLAN OF UNIT". FOR THREADED INSERTS, SEE "THREADED INSERT DETAIL". FOR REINFORCING STEEL IN DIAPHRAGMS, SEE "DOUBLE DIAPHRAGM DETAILS".

ASSEMBLED BY : J.D. HAWK	DATE : 7/16
CHECKED BY : H.B. DESAI	DATE : 10/16
DRAWN BY : DGE II/II	REV. 9/14
CHECKED BY : TMG II/II	MAA/TMG

23-MAY-2017 09:46  
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jdhaw



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT NO. B-5348  
ORANGE COUNTY  
STATION: 14+50.50 -L-  
SHEET 3 OF 5

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
STANDARD  
3'-0" X 3'-3"  
PRESTRESSED CONCRETE  
BOX BEAM UNIT

REVISIONS				SHEET NO.
NO.	BY:	DATE:		S-7
1				TOTAL SHEETS 19
2				

STD. NO. 39PCBB6\_90S.100L