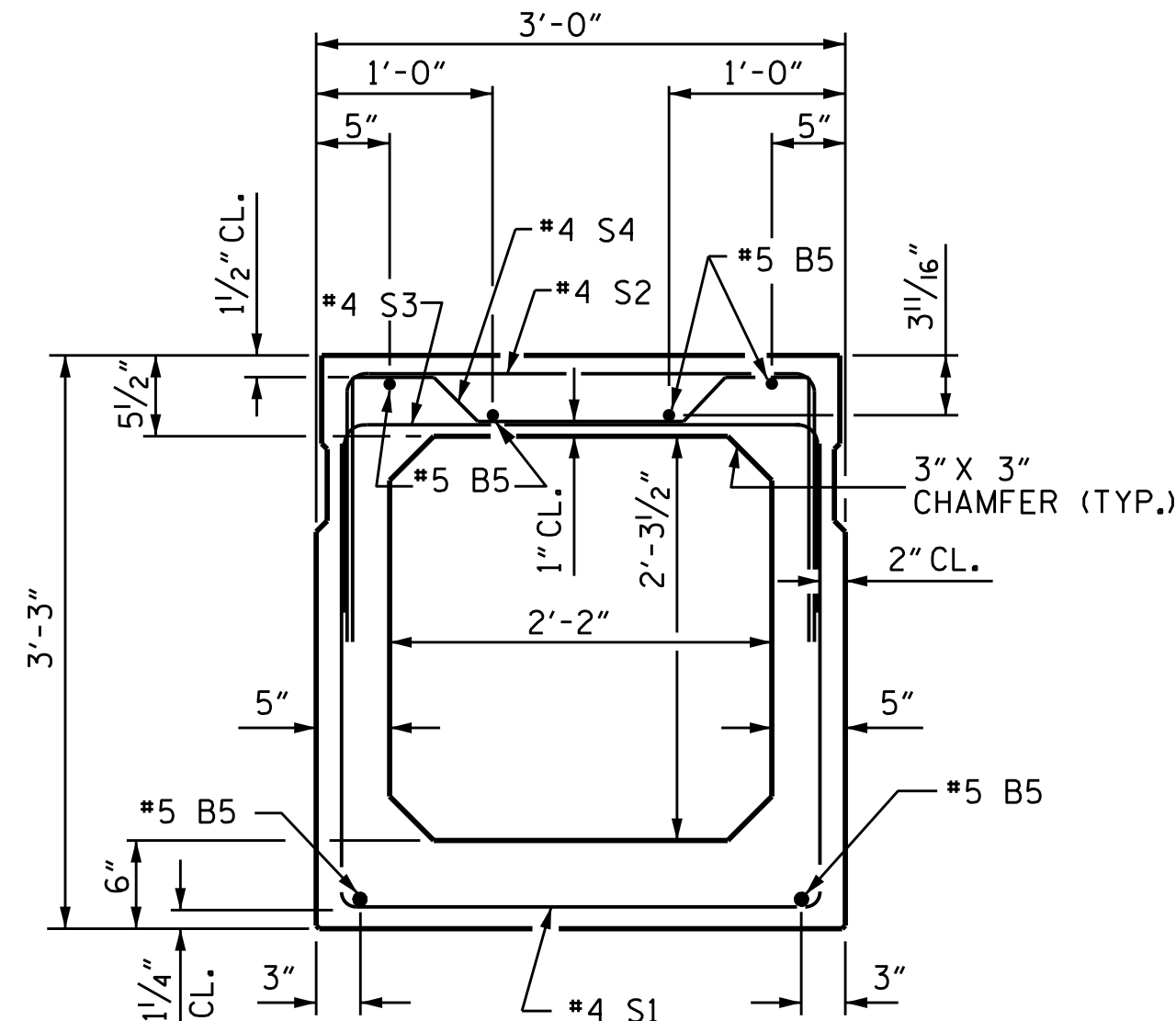


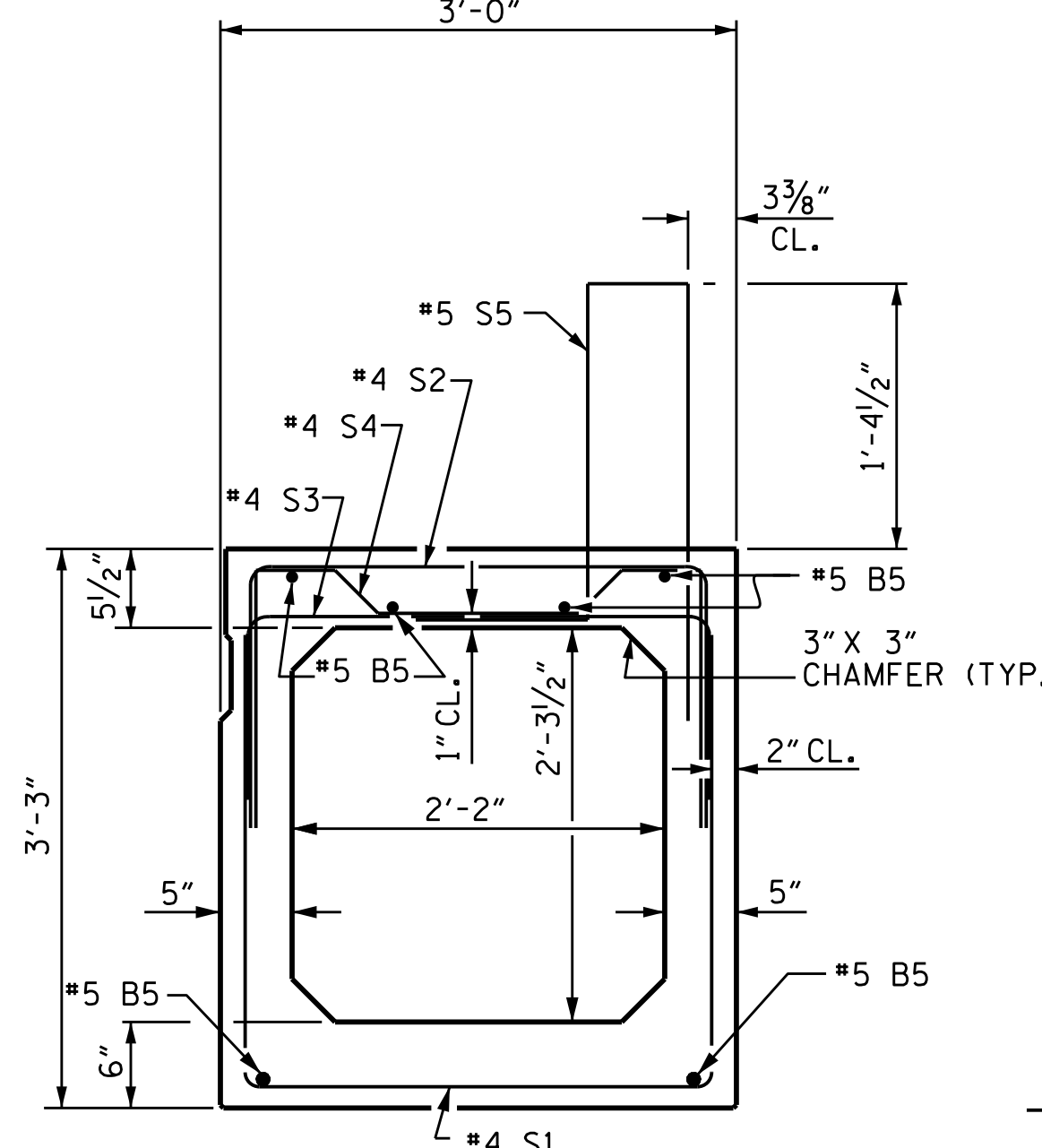
END ELEVATION

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

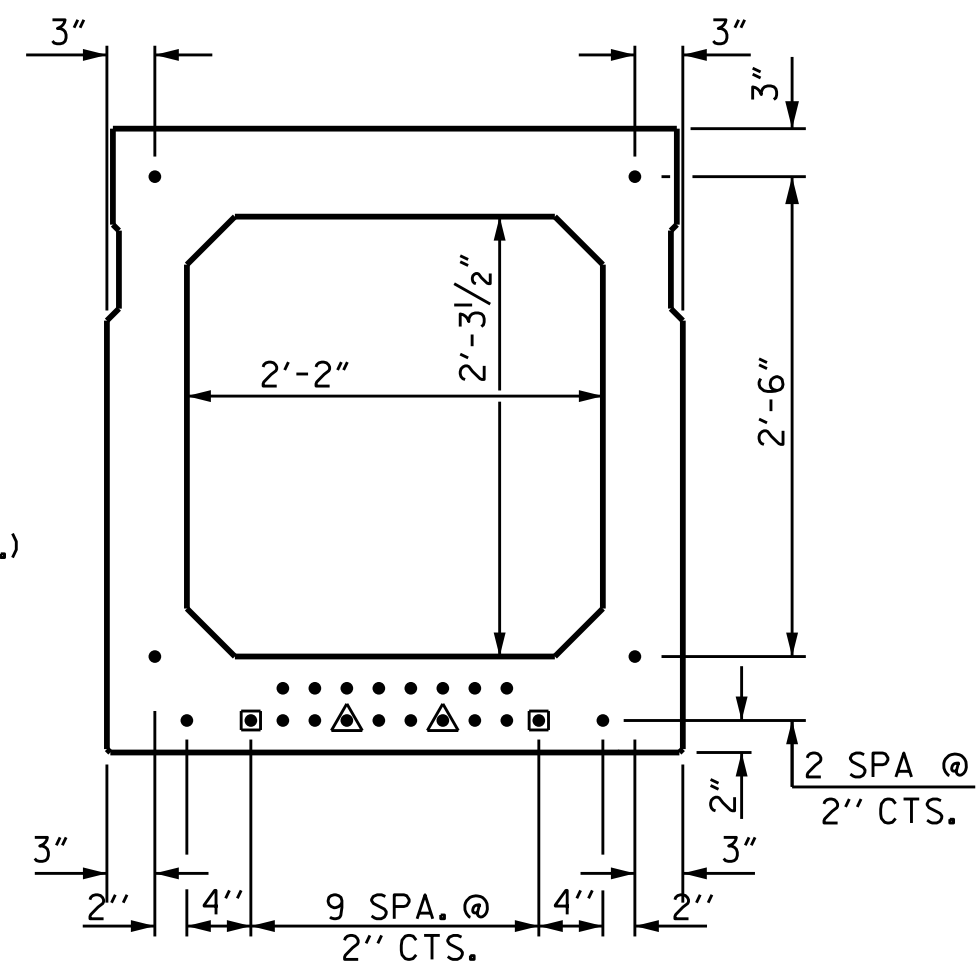
(STRAND LAYOUT NOT SHOWN)



EXTERIOR BOX BEAM SECTION

(STRAND LAYOUT NOT SHOWN)

0.6" Ø LOW RELAXATION STRAND LAYOUT



TYPICAL STRAND LOCATION

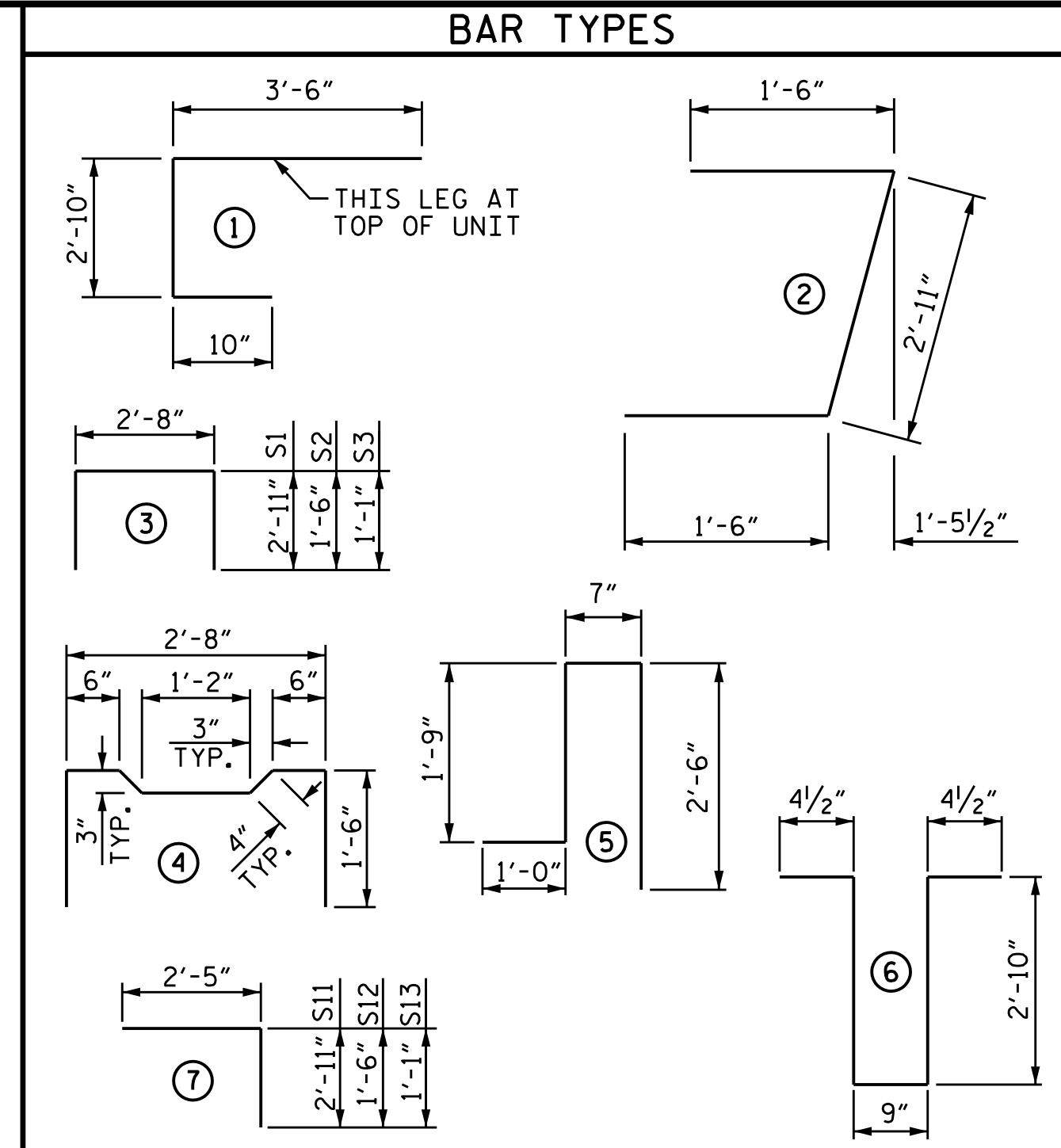
(24 STRANDS REQUIRED)

DEBONDING LEGEND

- FULLY BONDED STRANDS
- ◐ STRANDS DEBONDED FOR 4'-0" FROM END OF GIRDER
- ◑ STRANDS DEBONDED FOR 10'-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.

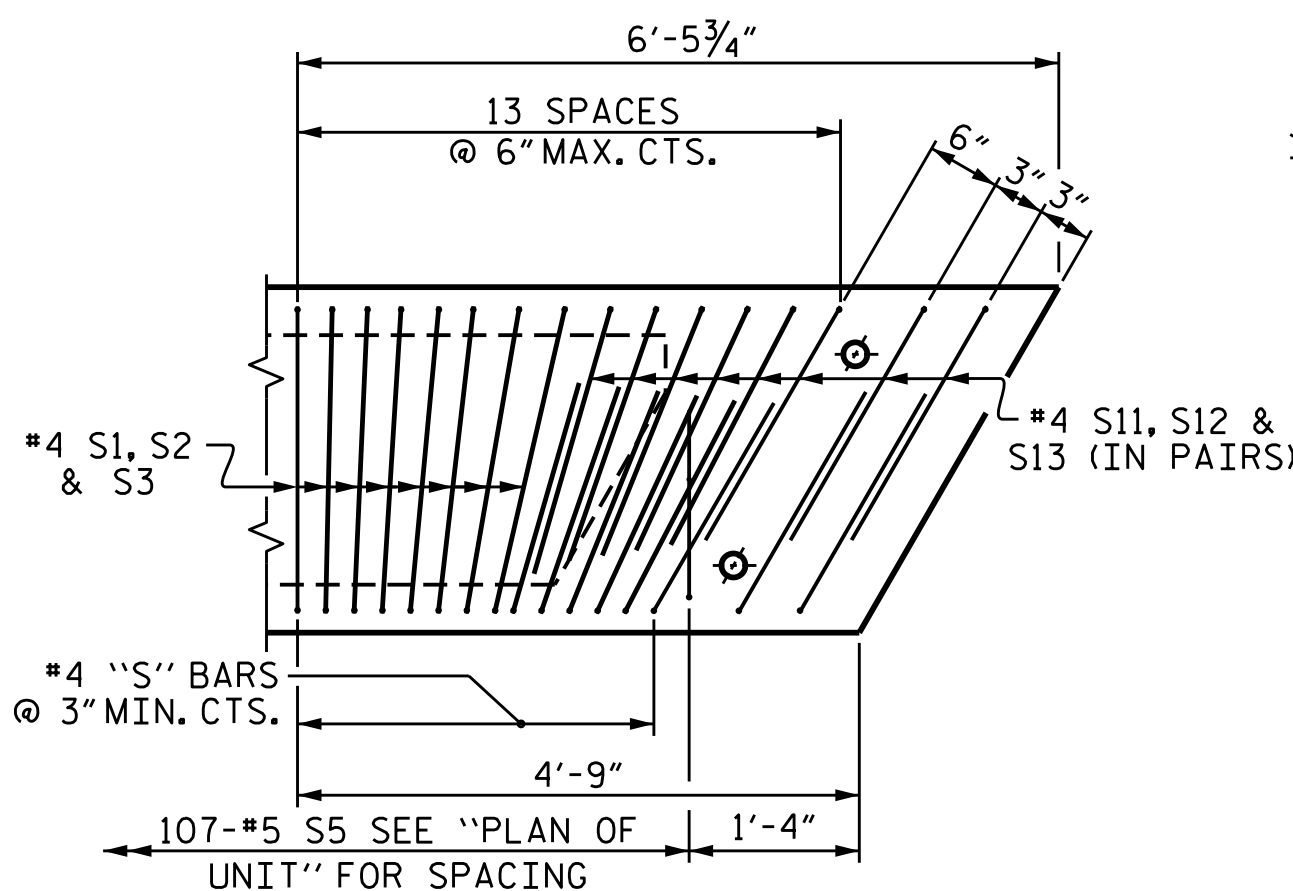
GRADE 270 STRANDS	
AREA (SQUARE INCHES)	0.6" Ø L.R.
ULTIMATE STRENGTH (LBS. PER STRAND)	58,600
APPLIED PRESTRESS (LBS. PER STRAND)	43,950



ALL BAR DIMENSIONS ARE OUT TO OUT

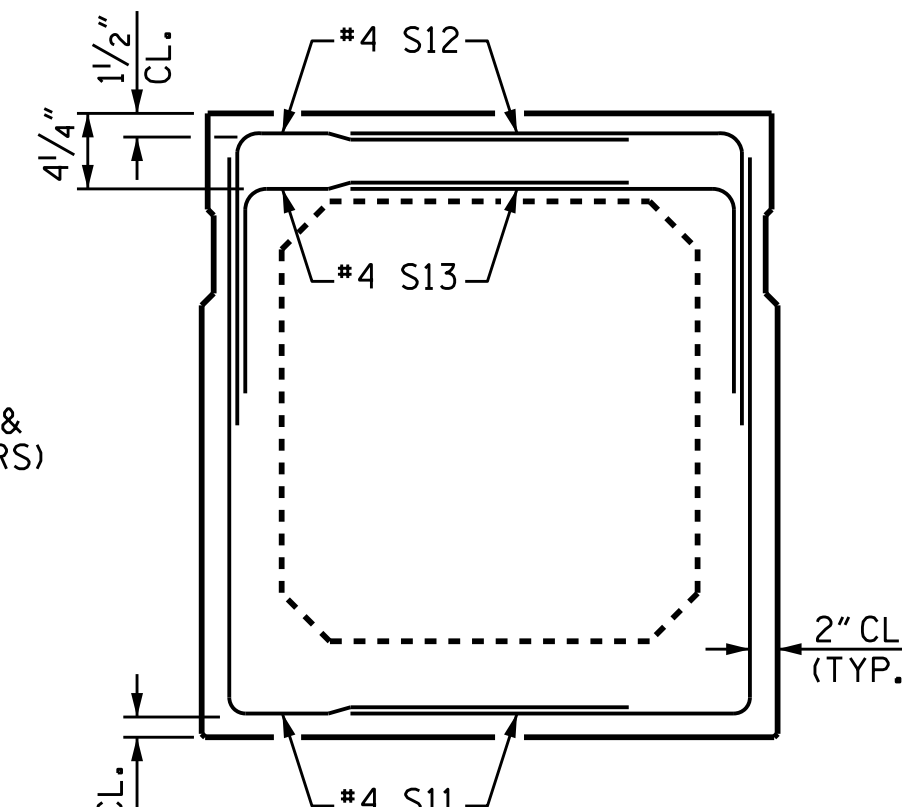
BILL OF MATERIAL FOR ONE BOX BEAM SECTION

BAR NUMBER	SIZE	TYPE	EXTERIOR UNIT		INTERIOR UNIT	
			LENGTH	WEIGHT	LENGTH	WEIGHT
A1	10	#5	7'-2"	75	7'-2"	75
A2	38	#4	5'-11"	150	5'-11"	150
B5	12	#5	40'-11"	512	40'-11"	512
K1	12	#4	7'-2"	57	7'-2"	57
K2	8	#4	2'-10"	15	2'-10"	15
S1	62	#4	8'-6"	352	8'-6"	352
S2	62	#4	5'-8"	235	5'-8"	235
S3	107	#4	4'-10"	345	4'-10"	345
S4	45	#4	5'-10"	175	5'-10"	175
S11	32	#4	5'-4"	114	5'-4"	114
S12	32	#4	3'-11"	84	3'-11"	84
S13	32	#4	3'-6"	75	3'-6"	75
* S5	107	#5	5'-10"	651	--	--
REINFORCING STEEL			2189	LBS.	2189	LBS.
* EPOXY COATED REINF. STEEL			651	LBS.		
7000 P.S.I. CONCRETE			16.1	CU. YDS.	15.9	CU. YDS.
0.6" Ø L.R. STRANDS			No.	24	No.	24



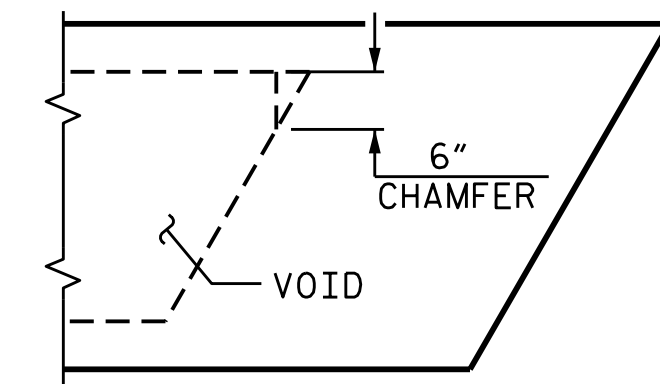
DETAIL "B"

EXTERIOR UNIT SHOWN, INTERIOR UNIT SIMILAR EXCEPT OMIT #5 S5 BARS. "B" BARS AND "A" BARS NOT SHOWN.



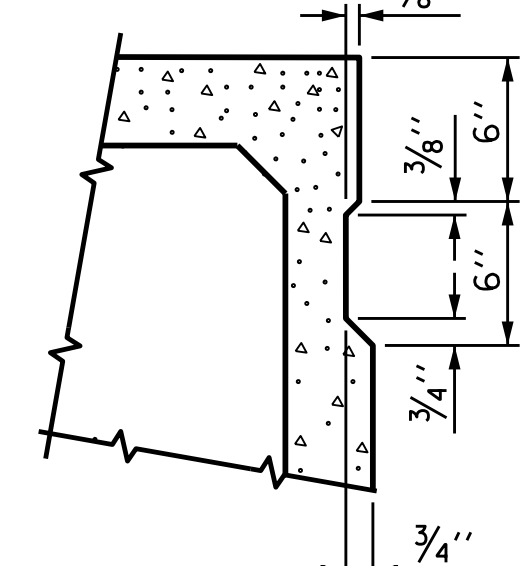
END VIEW

(SHOWING #4 "S" BARS IN END OF BEAM)



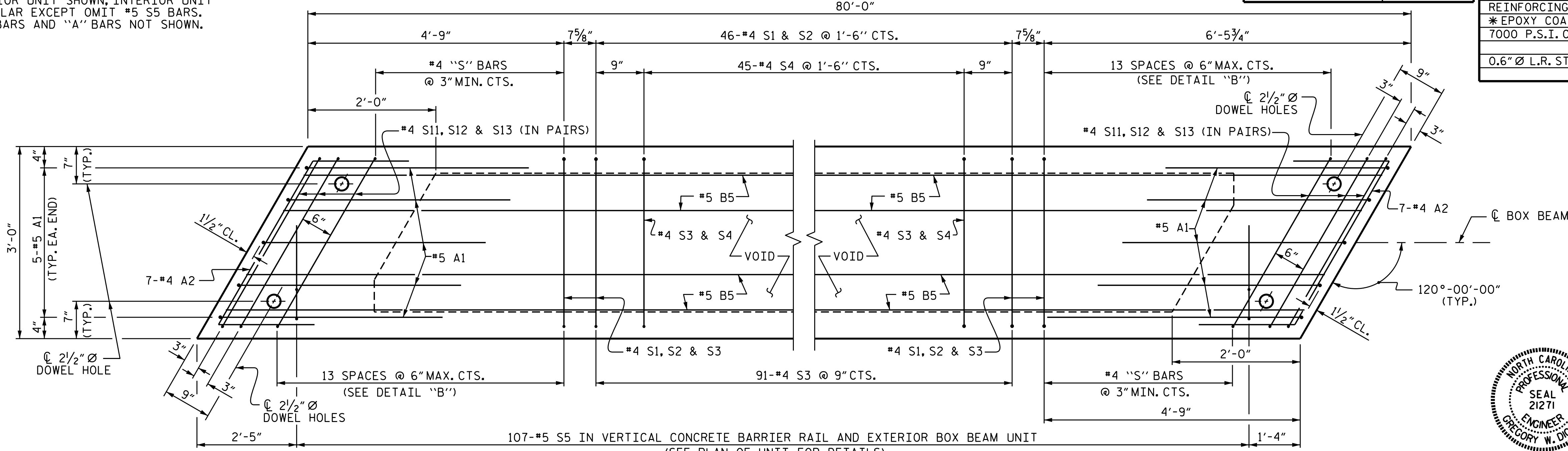
CHAMFER DETAIL

SHOWING 6" VOID CHAMFER



SHEAR KEY DETAIL

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



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 : A. K. PATEL DATE : 1/14/16
 CHECKED BY : W. F. PARKER DATE : 3/16
 DESIGN ENGINEER OF RECORD : K. P. SEDAİ DATE : 6/16

DRAWN BY : DGE II/II REV. 9/14 MAA/TMG
 CHECKED BY : TMG II/II



DocuSigned by:
 Gregory W. Dickey
 8/22/2016

PROJECT NO. **B-5360**
 RANDOLPH COUNTY
 STATION: **23+68.00 -L-**

SHEET 5 OF 7

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

REVISIONS						SHEET NO. S-9
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 38
2			4			

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED