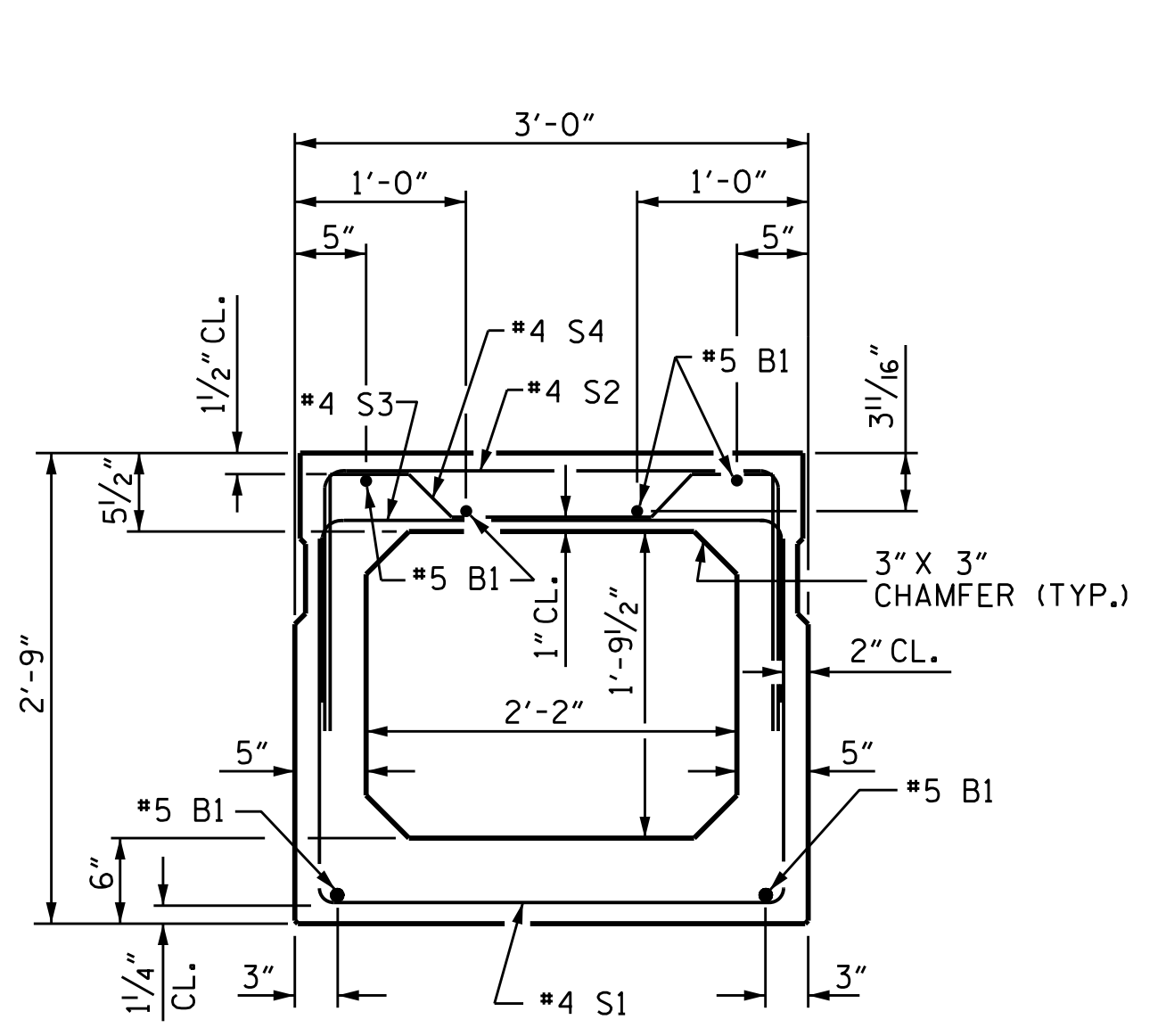
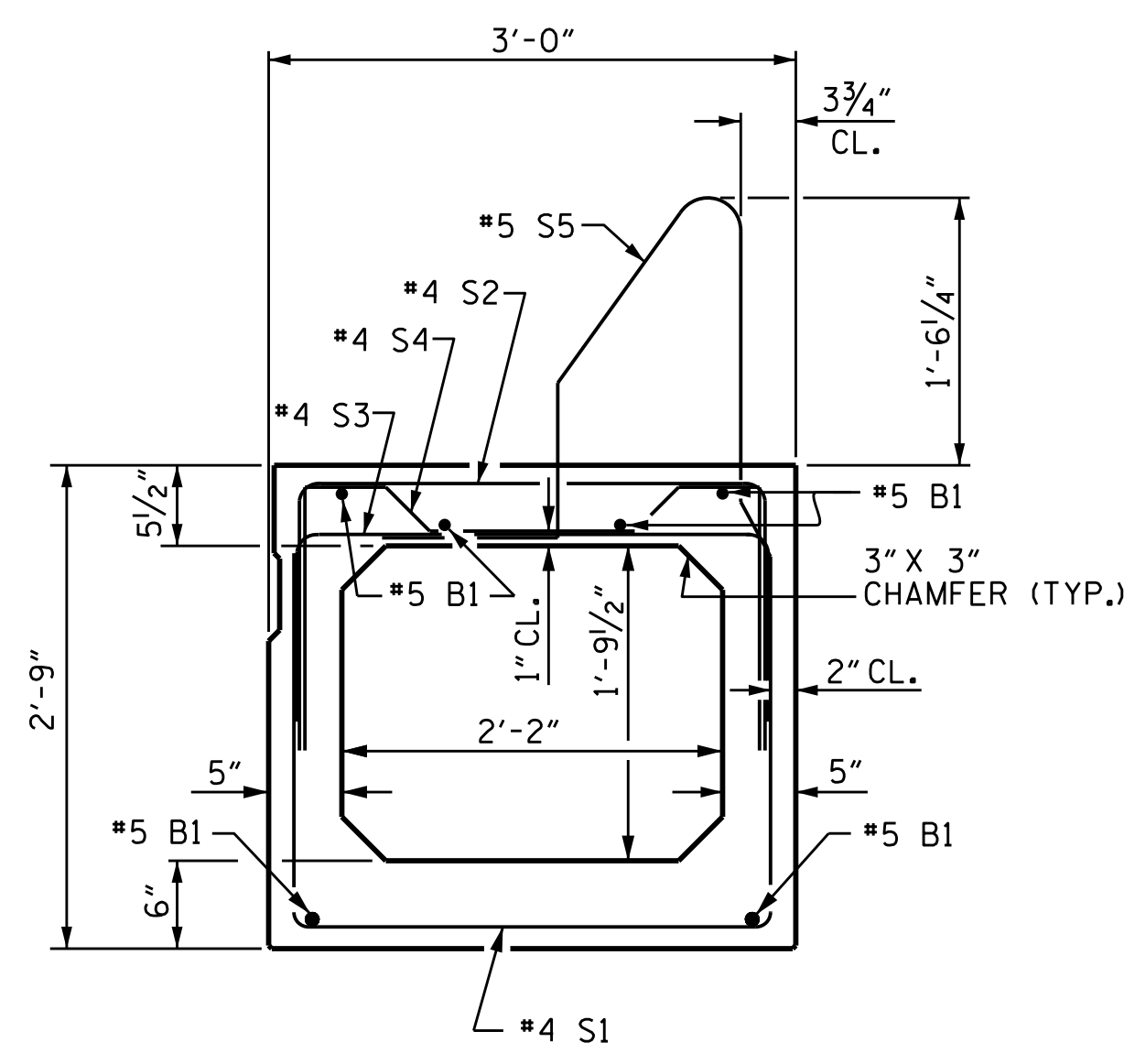


**END ELEVATION**

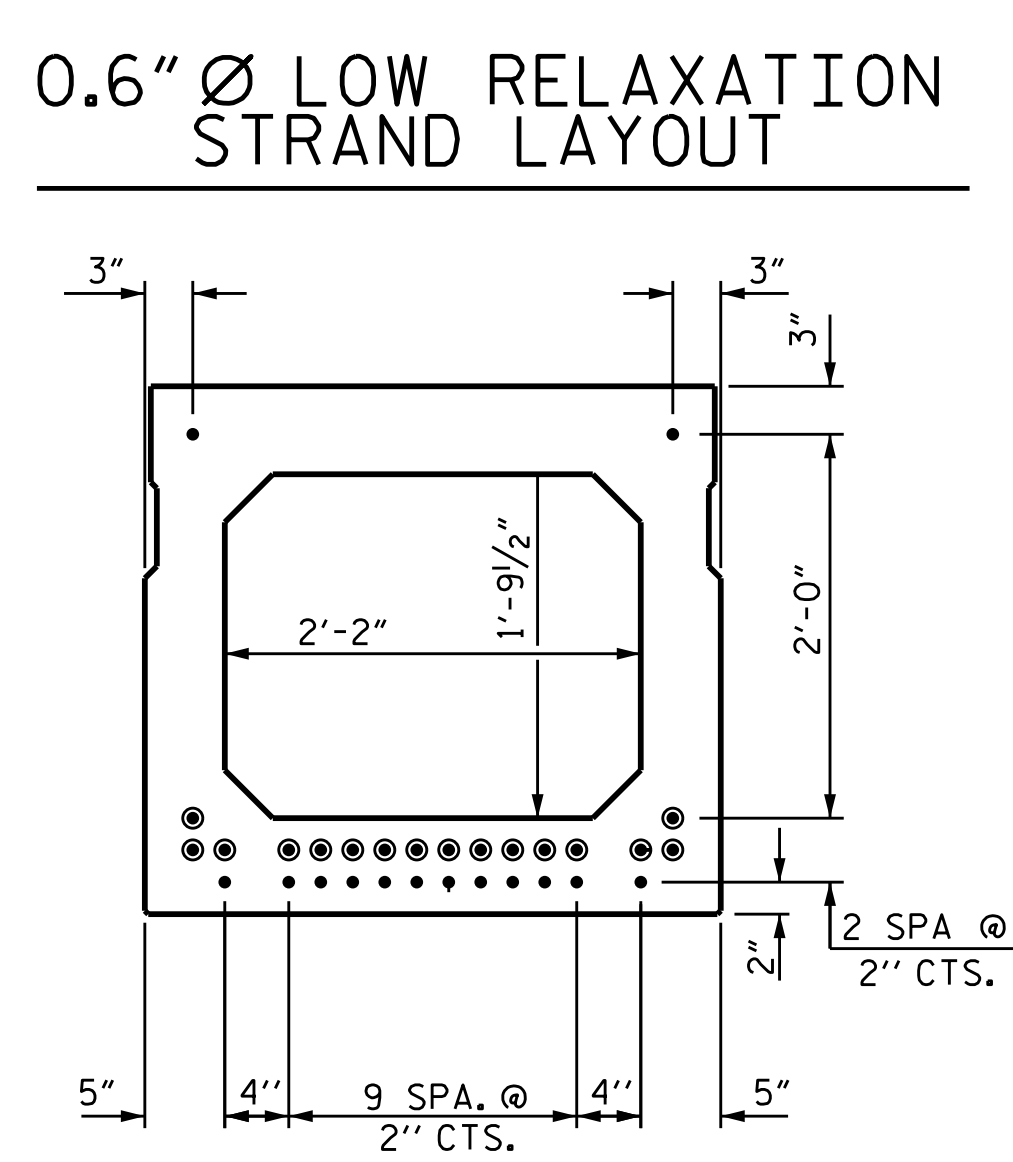
SHOWING PLACEMENT OF #5 & #4 "A" BARS AND LOCATION OF DOWEL HOLES. (INTERIOR BOX BEAM SECTION SHOWN-EXTERIOR SECTION SIMILAR EXCEPT SHEAR KEY LOCATION. STRAND LAYOUT NOT SHOWN.)



**INTERIOR BOX BEAM SECTION**  
(STRAND LAYOUT NOT SHOWN)



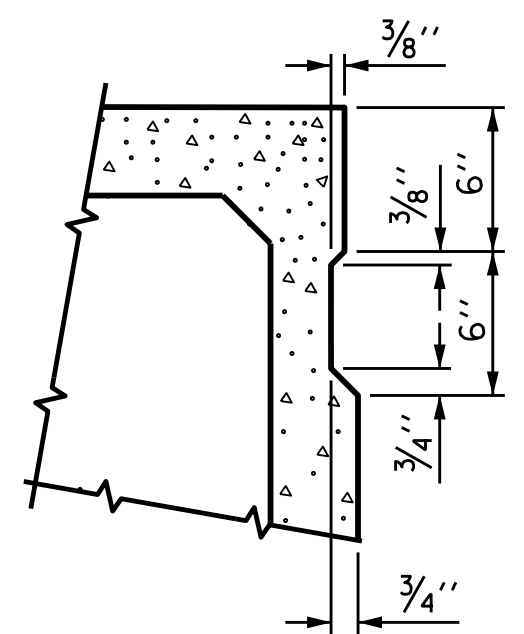
**EXTERIOR BOX BEAM SECTION**  
(STRAND LAYOUT NOT SHOWN)



**TYPICAL STRAND LOCATION**  
(14 STRANDS REQUIRED)

**DEBONDING LEGEND**

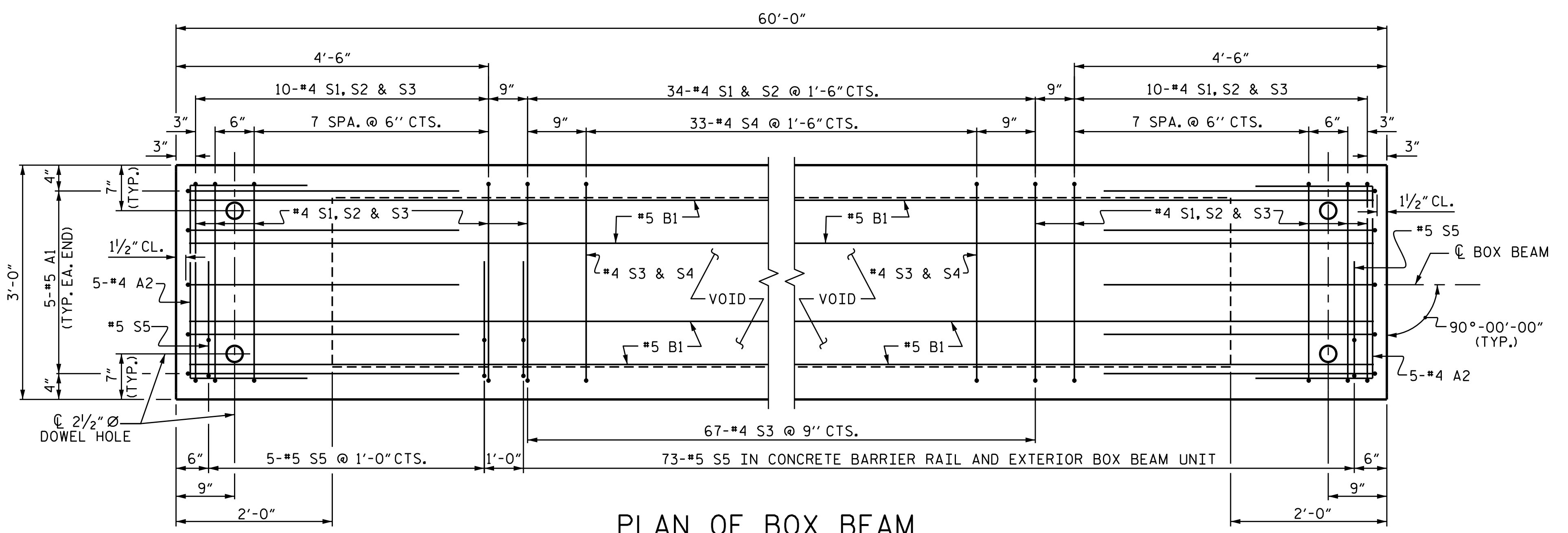
- FULLY BONDED STRANDS
- OPTIONAL FULL LENGTH DEBONDED STRANDS. THESE STRANDS ARE NOT REQUIRED. IF THE FABRICATOR CHOOSES TO INCLUDE THESE STRANDS IN THE BOX BEAM UNIT, THE STRANDS SHALL BE DEBONDED FOR THE FULL LENGTH OF THE UNIT AT NO ADDITIONAL COST.



**SHEAR KEY DETAIL**

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

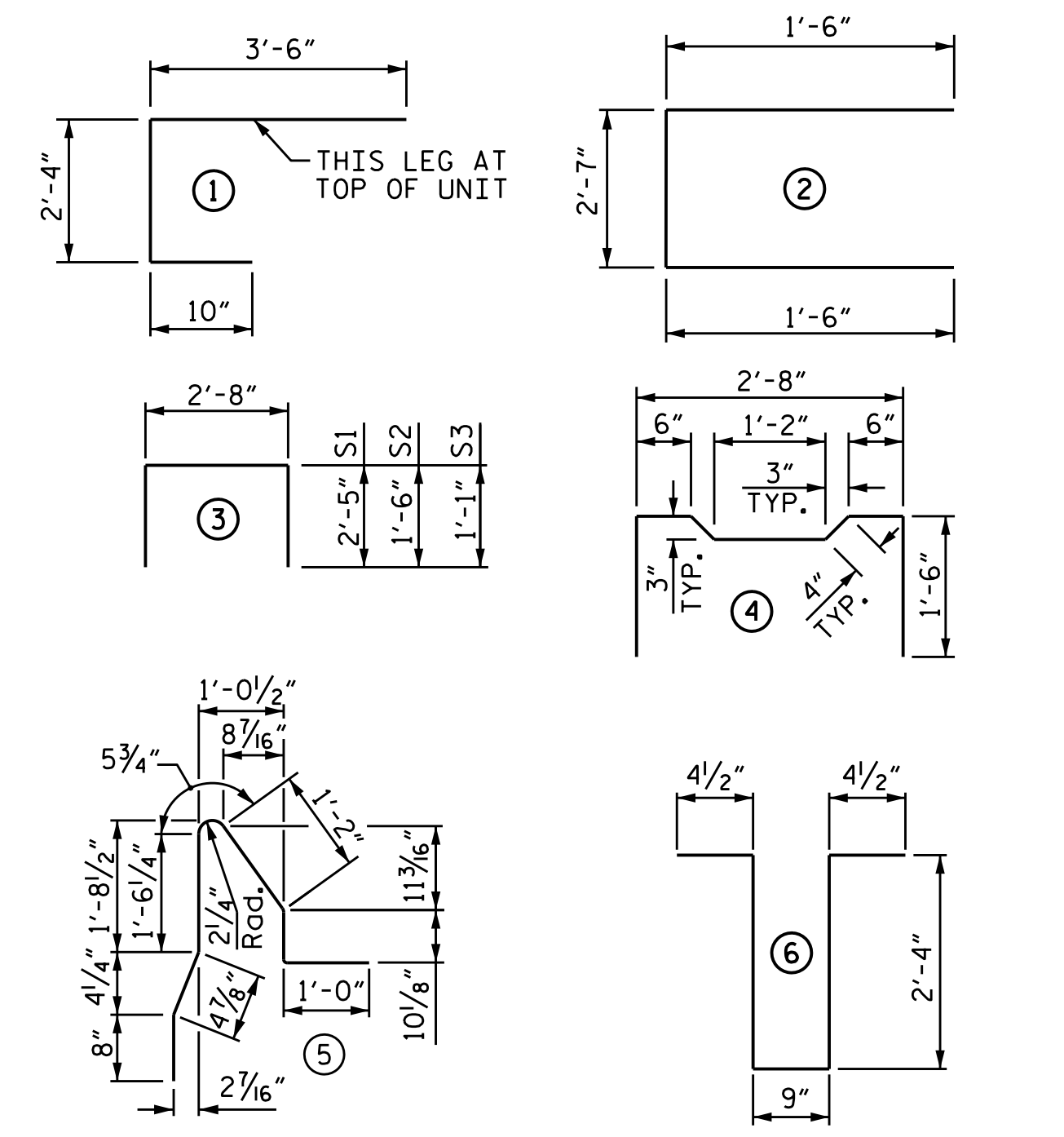
GRADE 270 STRANDS	
	0.6" Ø L.R.
AREA ( SQUARE INCHES )	0.217
ULTIMATE STRENGTH ( LBS. PER STRAND )	58,600
APPLIED PRESTRESS ( LBS. PER STRAND )	43,950



**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".

**BAR TYPES**



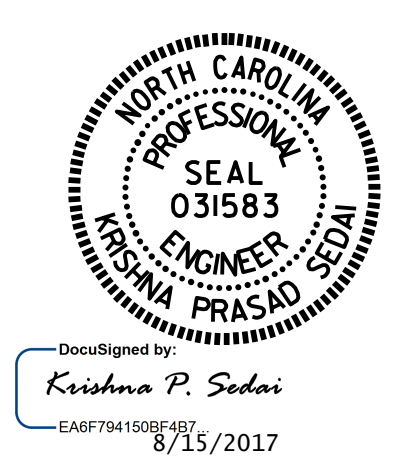
ALL BAR DIMENSIONS ARE OUT TO OUT

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

				EXTERIOR UNIT		INTERIOR UNIT	
BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT	LENGTH	WEIGHT
A1	10	#5	1	6'-8"	70	6'-8"	70
A2	28	#4	2	5'-7"	104	5'-7"	104
B1	6	#5	STR	59'-8"	373	59'-8"	373
K1	9	#4	6	6'-2"	37	6'-2"	37
K2	6	#4	STR	2'-7"	10	2'-7"	10
S1	54	#4	3	7'-6"	271	7'-6"	271
S2	54	#4	3	5'-8"	204	5'-8"	204
S3	87	#4	3	4'-10"	281	4'-10"	281
S4	33	#4	4	5'-10"	129	5'-10"	129
* S5	78	#5	5	6'-1"	495	--	--
REINFORCING STEEL				1479	LBS.	1479	LBS.
* EPOXY COATED REINF. STEEL				495	LBS.		
5000 P.S.I. CONCRETE				10.7	CU. YDS.	10.6	CU. YDS.
0.6" Ø L.R. STRANDS				No. 14		No. 14	

PROJECT NO. B-5362  
MONTGOMERY COUNTY  
STATION: 14+87.00 -L-

SHEET 5 OF 7



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
**3'-0" X 2'-9" PRESTRESSED CONCRETE BOX BEAM UNIT SPAN A**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-9
1			3			TOTAL SHEETS
2			4			21

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY: A. SORSENGINH DATE: 7/2016  
CHECKED BY: E. K. POPE DATE: 3/2017  
DESIGN ENGINEER OF RECORD: H. A. LOCKLEAR DATE: 3/2017