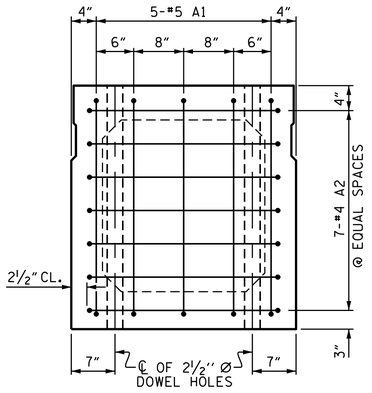
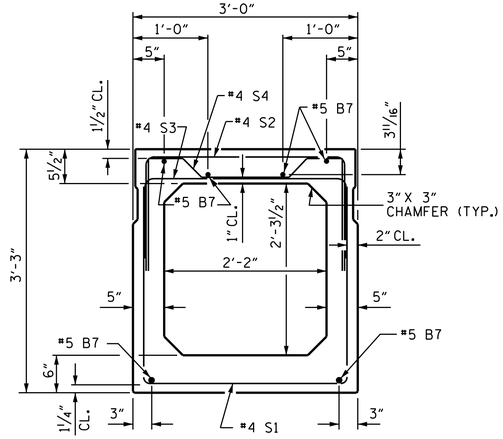


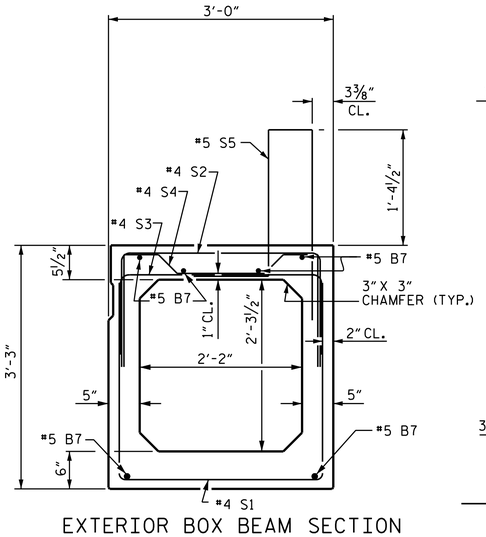
END ELEVATION

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

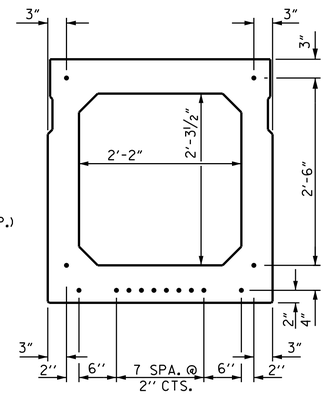
(STRAND LAYOUT NOT SHOWN)



EXTERIOR BOX BEAM SECTION

(STRAND LAYOUT NOT SHOWN)

0.6" Ø LOW RELAXATION STRAND LAYOUT

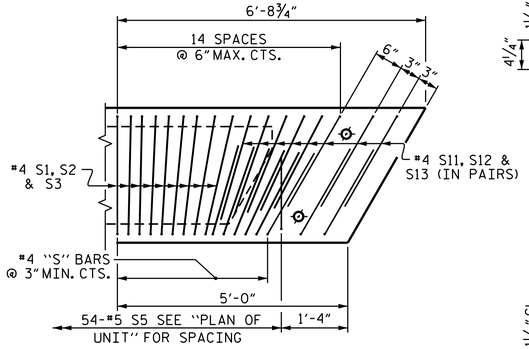


TYPICAL STRAND LOCATION

(14 STRANDS REQUIRED)

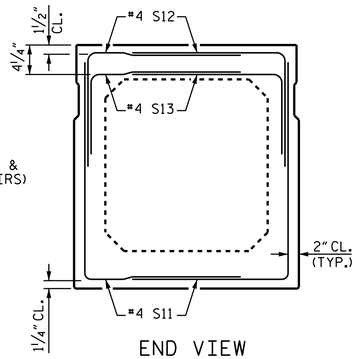
DEBONDING LEGEND

● FULLY BONDED STRANDS



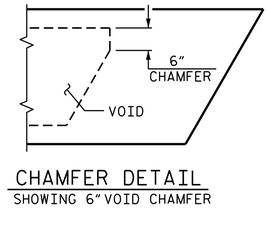
DETAIL "B"

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



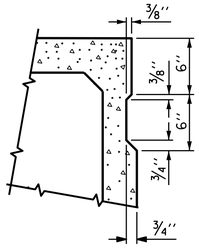
END VIEW

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



CHAMFER DETAIL

SHOWING 6" VOID CHAMFER



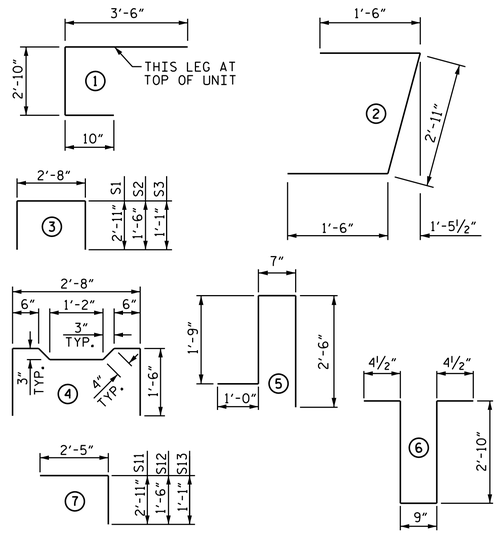
SHEAR KEY DETAIL

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

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

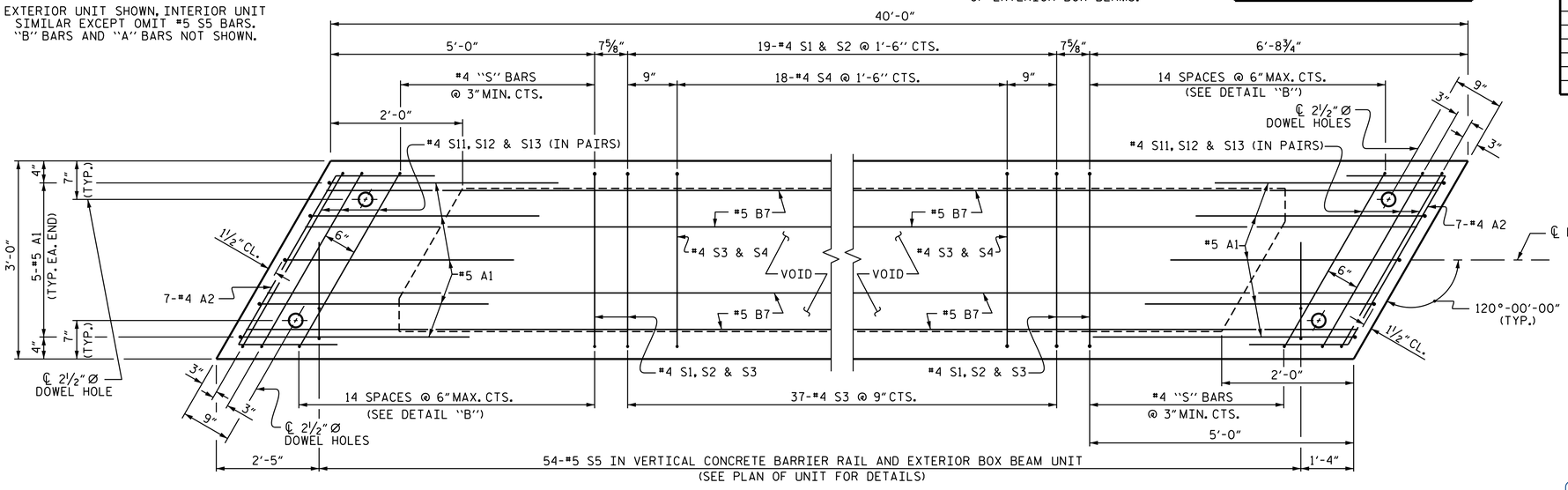
BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL FOR ONE BOX BEAM SECTION

BAR	NUMBER	SIZE	TYPE	EXTERIOR UNIT LENGTH	EXTERIOR UNIT WEIGHT	INTERIOR UNIT LENGTH	INTERIOR UNIT WEIGHT
A1	10	#5	1	7'-2"	75	7'-2"	75
A2	32	#4	2	5'-11"	126	5'-11"	126
B7	6	#5	STR	39'-7"	248	39'-7"	248
K1	9	#4	6	7'-2"	43	7'-2"	43
K2	6	#4	STR	2'-10"	11	2'-10"	11
S1	37	#4	3	8'-6"	210	8'-6"	210
S2	37	#4	3	5'-8"	140	5'-8"	140
S3	55	#4	3	4'-10"	178	4'-10"	178
S4	18	#4	4	5'-10"	70	5'-10"	70
S11	32	#4	7	5'-4"	114	5'-4"	114
S12	32	#4	7	3'-11"	84	3'-11"	84
S13	32	#4	7	3'-6"	75	3'-6"	75
✱ S5	54	#5	5	5'-10"	329	--	--
REINFORCING STEEL					1374 LBS.		1374 LBS.
✱ EPOXY COATED REINF. STEEL					329 LBS.		
5000 P.S.I. CONCRETE				8.5	CU. YDS.	8.4	CU. YDS.
0.6" Ø L.R. STRANDS				No. 14		No. 14	



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".

PROJECT NO. B-5320

GRANVILLE COUNTY

STATION: 15+98.00 -L-

SHEET 7 OF 9

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD

SPAN C
3'-0" X 3'-3"
PRESTRESSED CONCRETE BOX BEAM UNIT

NORTH CAROLINA PROFESSIONAL SEAL 29441 ENGINEER KRISTY W. ALCORD

DocuSigned by: F2458389308BF40E...
3/19/2018

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-13
1			3			TOTAL SHEETS
2			4			26

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ASSEMBLED BY : M. A. LESHURE	DATE : 1/4/18	REV. 10/1/11	MAA/GM
CHECKED BY : R. L. CHESSON	DATE : 1/18	REV. 1/15	RWW/TMG
DRAWN BY : TLA 5/05		REV. 12/17	MAA/THC
CHECKED BY : GM 6/05			

19-MAR-2018 10:57
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kalford

(SHT 3) STD. NO. PCBB6