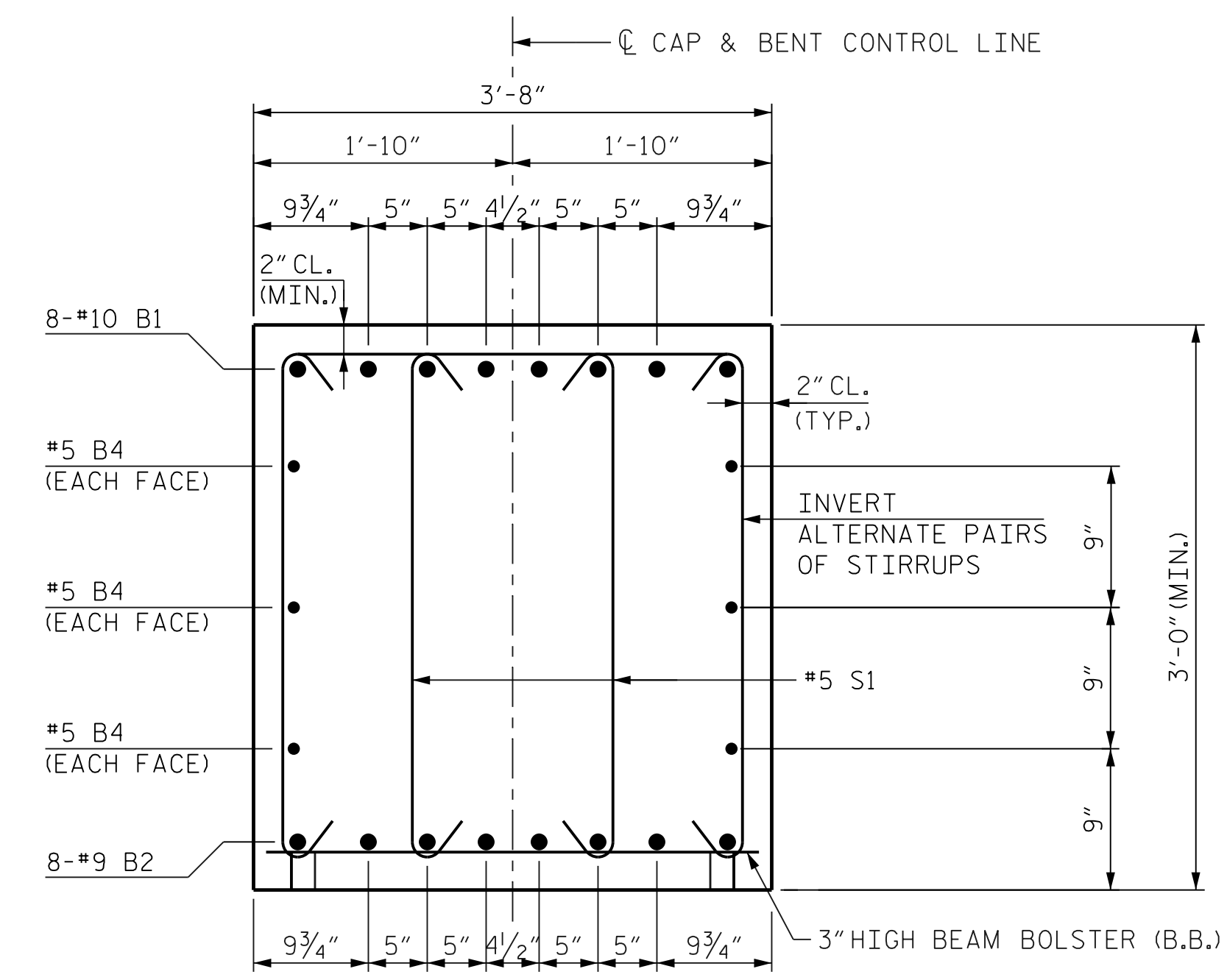
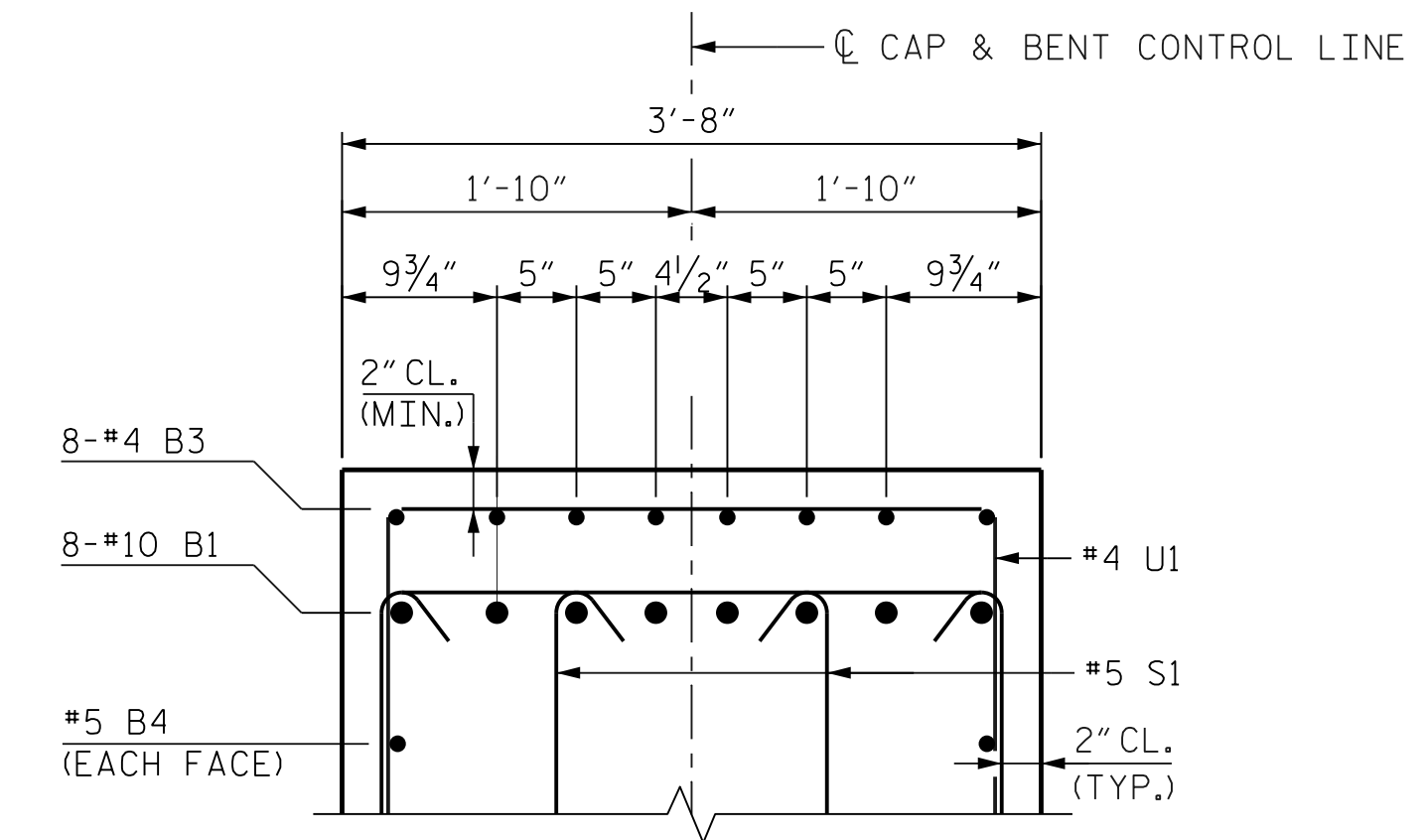


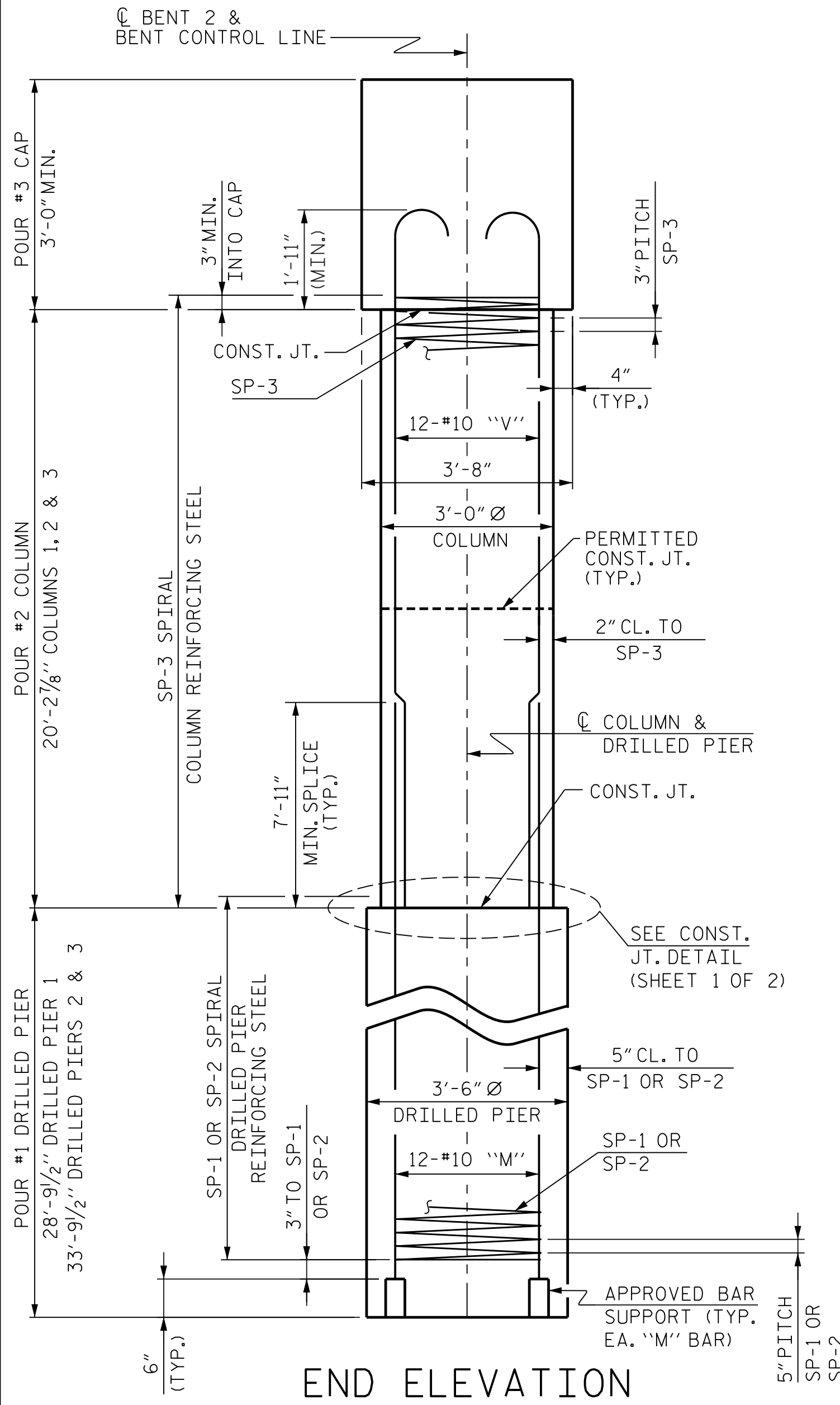
**END OF CAP DETAIL**  
(TYPICAL BOTH ENDS)



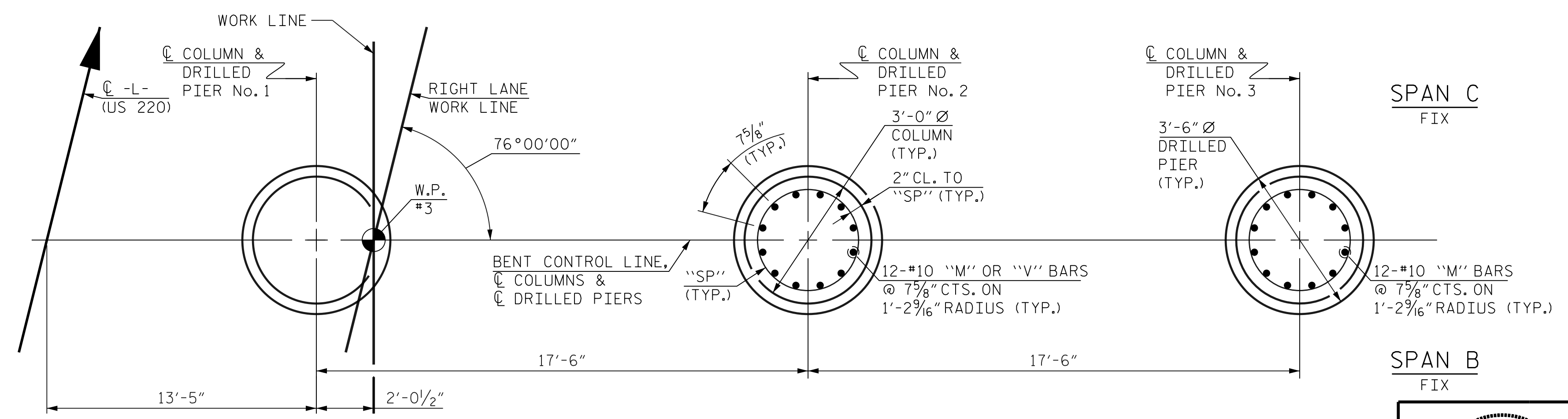
**SECTION A-A**



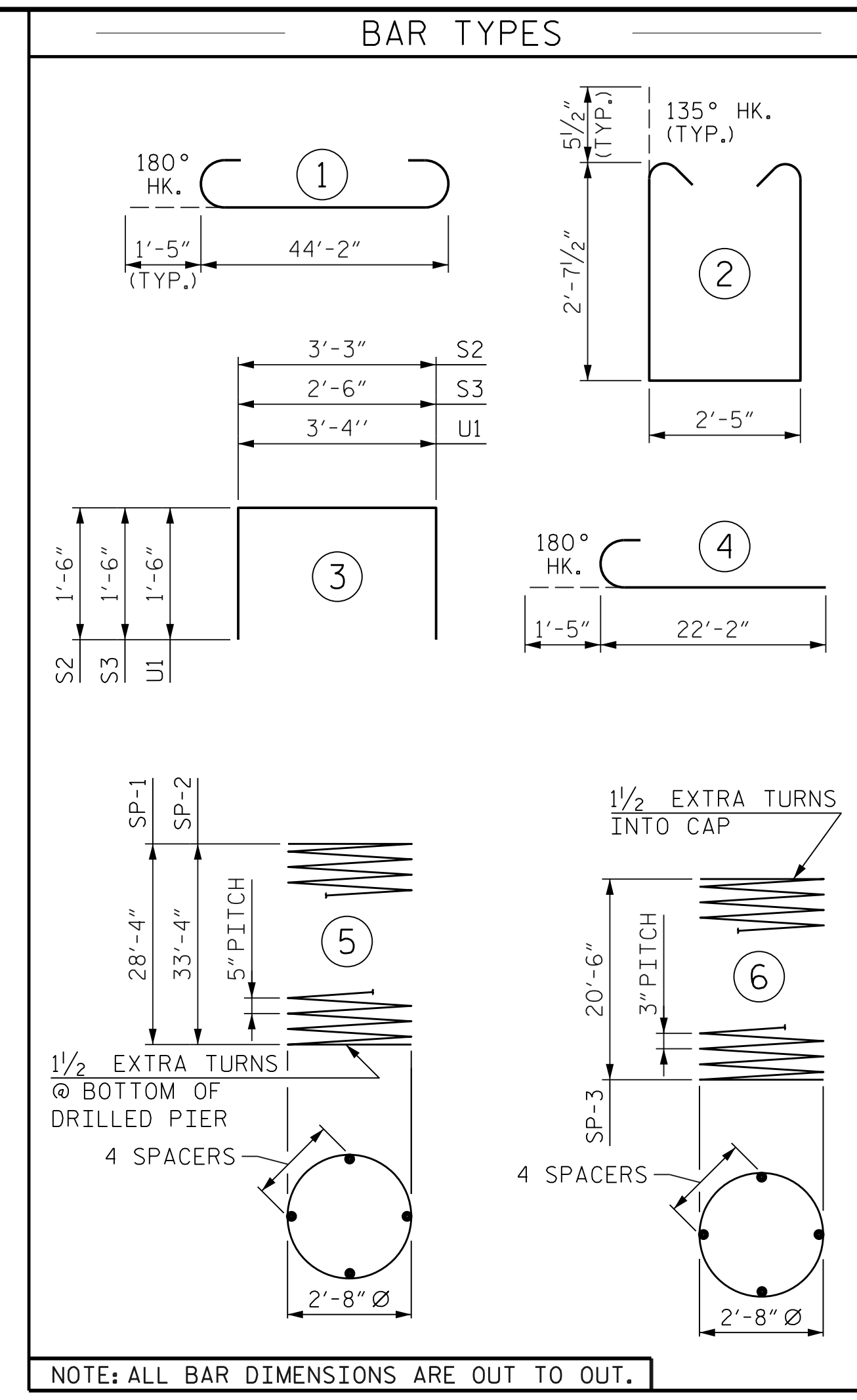
**SECTION B-B**



**END ELEVATION**



**PLAN OF DRILLED PIERS & COLUMNS**  
(DETAILS ARE TYPICAL EACH DRILLED PIER & COLUMN)



NOTE: ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIAL					
BENT 2					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	8	#10		47'-0"	1,618
B2	8	#9	STR	44'-2"	1,201
B3	8	#4	STR	11'-5"	61
B4	6	#5	STR	44'-2"	276
M1	12	#10	STR	39'-3"	2,027
M2	24	#10	STR	44'-3"	4,570
S1	108	#5	2	8'-7"	967
S2	6	#4	3	6'-3"	25
S3	8	#4	3	5'-6"	29
U1	45	#4	3	6'-4"	190
V1	36	#10	4	23'-7"	3,653
REINFORCING STEEL					14,617 LBS.
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
SP-1	1	*	5	571'-8"	596
SP-2	2	*	5	670'-4"	1,398
SP-3	3	**	6	688'-11"	1,381
SPIRAL COLUMN REINFORCING STEEL					3,375 LBS.
*SP-1 & SP-2 SPIRAL REINFORCING STEEL SHALL BE W31 OR D-31 COLD DRAWN WIRE OR #5 PLAIN OR DEFORMED BAR					
**SP-3 SPIRAL REINFORCING STEEL SHALL BE W20 OR D-20 COLD DRAWN WIRE OR #4 PLAIN OR DEFORMED BAR					
CLASS A CONCRETE					
POUR 2 (COLUMNS)					15.9 C.Y.
POUR 3 (CAP)					19.1 C.Y.
TOTAL					35.0 C.Y.
DRILLED PIERS					
POUR 1 (DRILLED PIERS)					34.3 C.Y.
3'-6" Ø DRILLED PIER NOT IN SOIL					24.0 LIN. FT.
3'-6" Ø DRILLED PIER IN SOIL					72.4 LIN. FT.
CSL TUBES					403.5 LIN. FT.

PROJECT NO. B-5352  
 ROCKINGHAM COUNTY  
 STATION: P.O.T. 22+16.89 -L-  
 SHEET 2 OF 2



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
**SUBSTRUCTURE**  
 BENT 2  
 DETAILS AND  
 BILL OF MATERIAL

DRAWN BY: D. H. CARTER DATE: FEB 2018  
 CHECKED BY: M. T. NEIHEISEL DATE: FEB 2018  
 DESIGN ENGINEER OF RECORD: M. T. NEIHEISEL DATE: FEB 2018

**ICA Engineering, Inc.**  
 555 Fayetteville St., Suite 900  
 Raleigh, NC 27601  
 NC License No: F-0258

DocuSigned by:  
 Matthew T. Neiheisel  
 2/20/2018  
 04E318F9E30749E

REVISIONS				SHEET NO.	
BY:	DATE:	NO.	BY:	DATE:	S-31
		3			TOTAL SHEETS
		4			37

PLOT DRIVER: NCDOT STRUCTURES DEFAULT PLOTTER.PHT PENTABLE: NCDOT STRUCTURES DEFAULT PEN.tbl  
 USER: dcarter DATE: 2/19/2018 TIME: 1:45:14 PM  
 FILE: ...\\structures\dgm\Final\CAD\1113