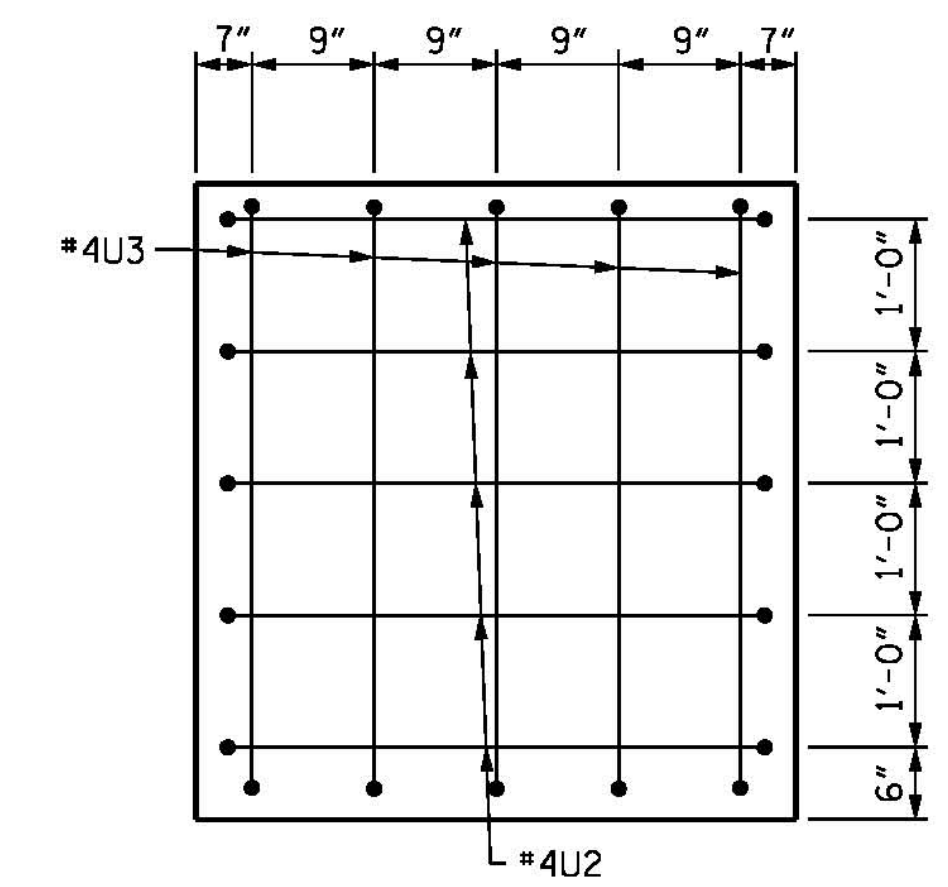
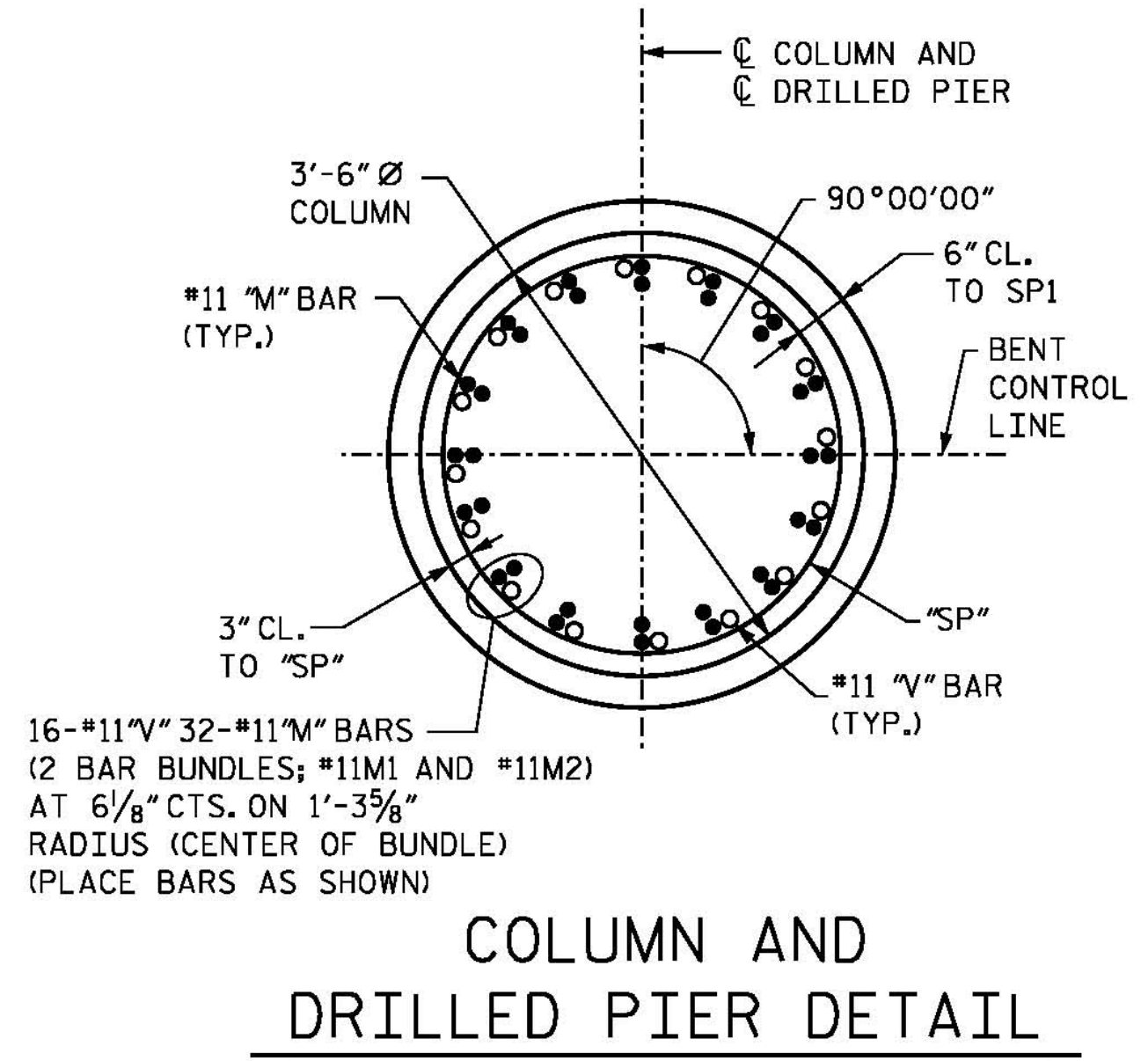


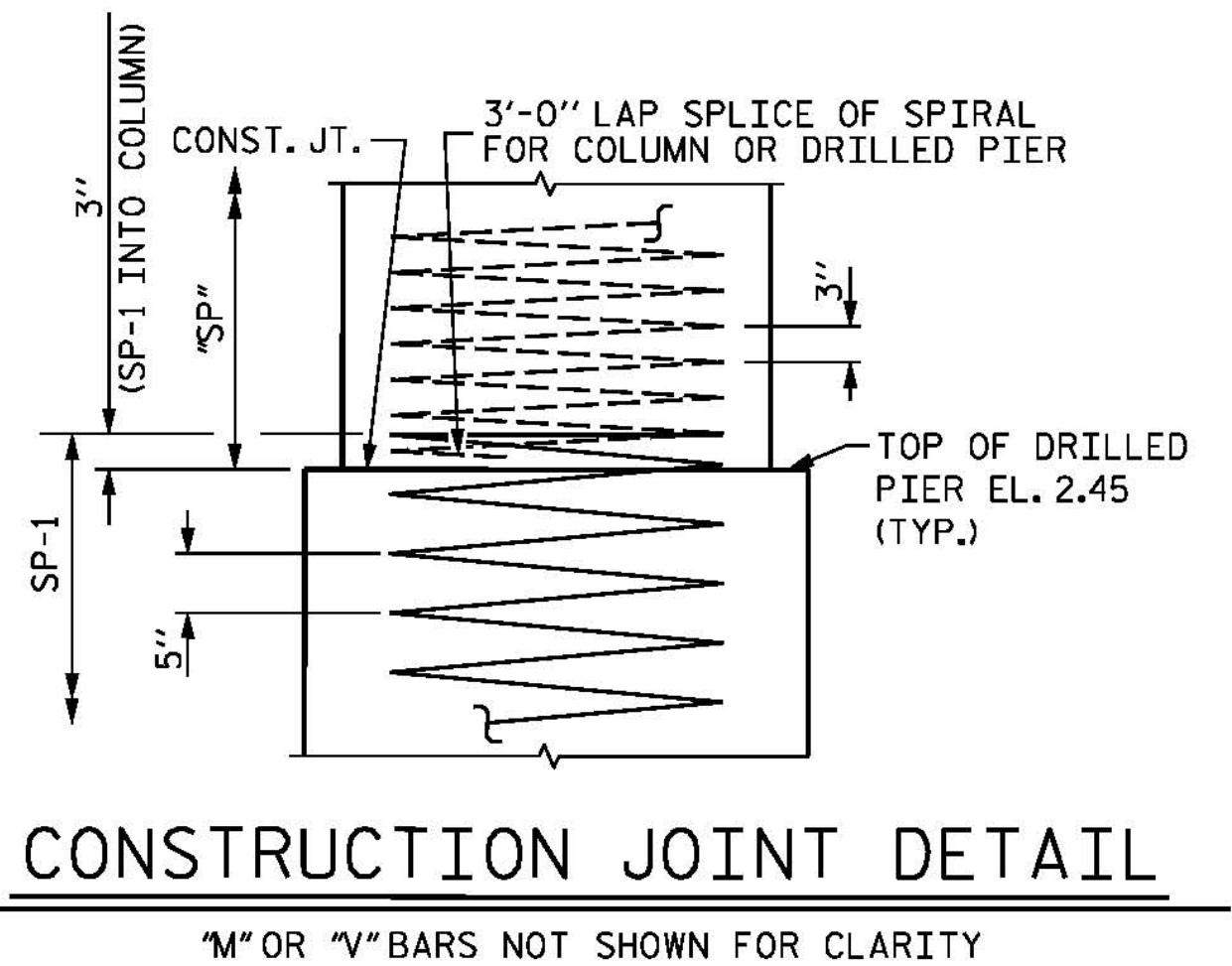
SECTION A-A



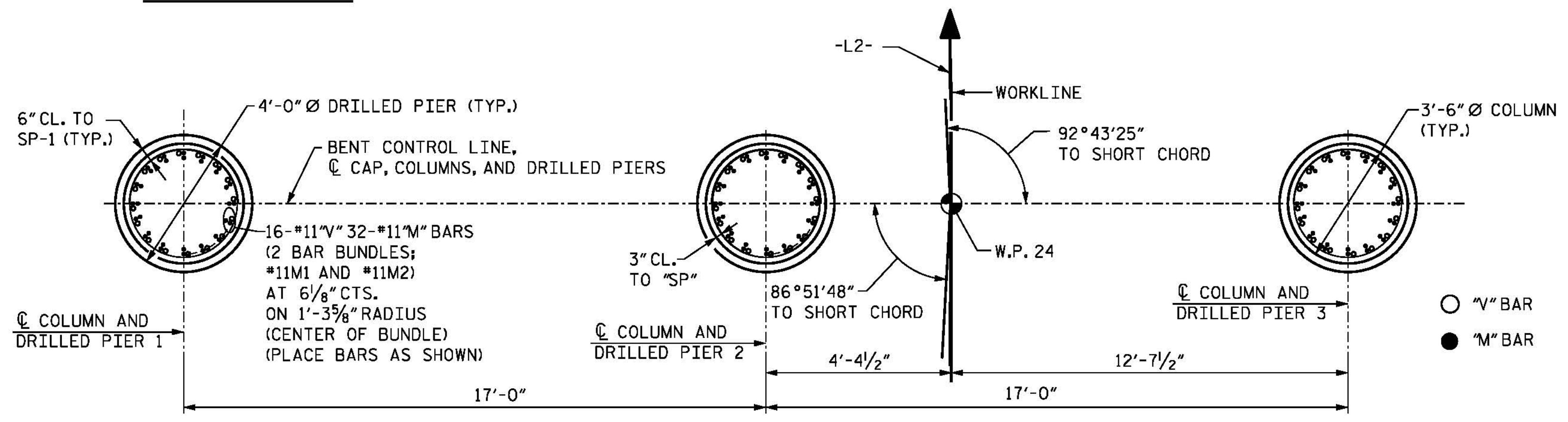
VIEW X-X



COLUMN AND DRILLED PIER DETAIL

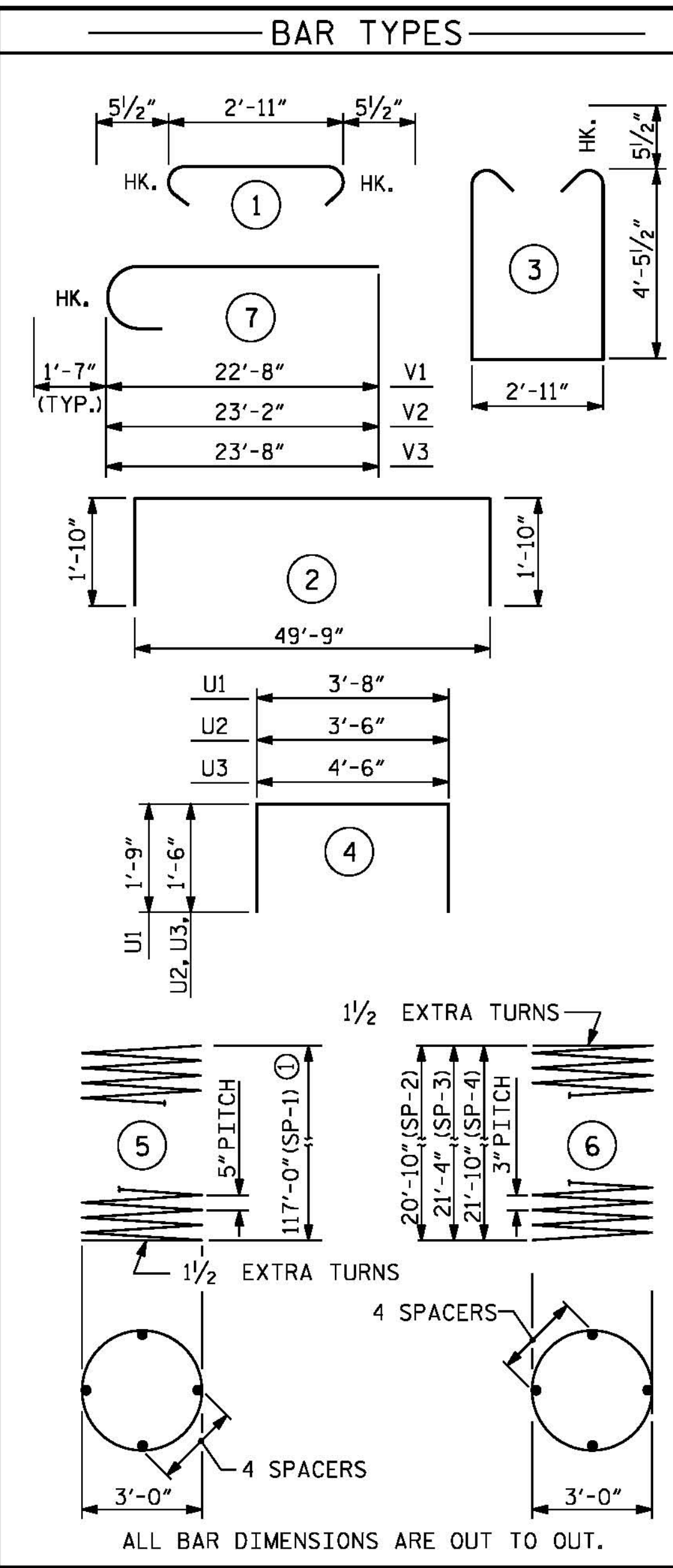


CONSTRUCTION JOINT DETAIL



PLAN OF COLUMNS AND DRILLED PIERS

(REINFORCING STEEL ARE TYPICAL FOR EACH COLUMN AND DRILLED PIER)

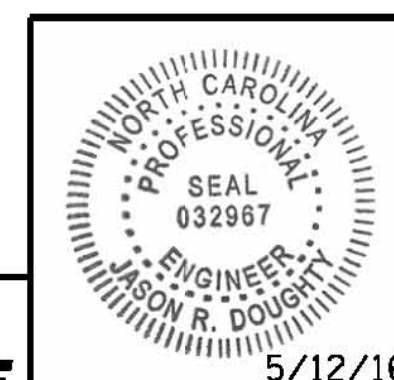


** THE SP-2, SP-3 AND SP-4 EPOXY COATED SPIRAL REINFORCING STEEL SHALL BE W20 OR D-20 COLD DRAWN WIRE OR #4 PLAIN OR DEFORMED BAR.
 * THE SP-1 EPOXY COATED SPIRAL REINFORCING STEEL SHALL BE W31 OR D-31 COLD DRAWN WIRE OR #5 PLAIN OR DEFORMED BAR,
 ① CONTRACTOR MAY PROVIDE 3'-0" MIN SPLICE AT MID HEIGHT OF EPOXY COATED SPIRAL REINFORCING STEEL. NO ADDITIONAL PAYMENT WILL BE PROVIDE FOR SPLICES.

BILL OF MATERIAL

BENT 23					
BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT
B1	8	#10	2	53'-5"	1839
B2	10	#5	STR	49'-6"	516
B3	16	#10	STR	49'-6"	3408
B4	32	#4	STR	6'-0"	128
B5	8	#4	STR	4'-10"	26
B6	13	#4	STR	3'-8"	32
M1	96	#11	STR	33'-0"	16,832
M2	192	#11	STR	60'-0"	61,206
S1	164	#5	3	12'-9"	2181
S2	164	#5	1	3'-10"	656
U1	50	#4	4	7'-2"	239
U2	10	#4	4	6'-6"	43
U3	10	#4	4	7'-6"	50
V1	16	#11	7	24'-3"	2061
V2	16	#11	7	24'-9"	2104
V3	16	#11	7	25'-3"	2146
EPOXY COATED REINFORCING STEEL				LBS.	93,467
SP1	3	*	5	2623'-7"	8209
SP2	1	**	6	799'-7"	534
SP3	1	**	6	818'-2"	547
SP4	1	**	6	836'-9"	559
EPOXY COATED SPIRAL COLUMN REINFORCING STEEL				LBS.	9849
CLASS "AA" CONCRETE BREAKDOWN					
POUR #2 - COLUMNS					22.5 C.Y.
POUR #3 - CAP					40.3 C.Y.
CLASS "AA" CONCRETE					62.8 C.Y.
DRILLED PIER QUANTITIES					
POUR #1 - DRILLED PIER CONCRETE					164.0 C.Y.
4'-0" Ø DRILLED PIERS					352.3 L.F.
PERMANENT STEEL CASING FOR 4'-0" Ø DRILLED PIERS					53.4 L.F.
SPT TESTING					3 EA.
SID INSPECTIONS					1 EA.
CSL TUBES					1428 L.F.

PROJECT NO. B-4929
PENDER COUNTY
 STATION: 38+13.81 -L2-
 SHEET 2 OF 2



PARSONS BRINCKERHOFF
 434 FAYETTEVILLE STREET
 SUITE 1500
 RALEIGH, NC 27601
 LICENSE NO. F-0165

DocuSigned by:
 Jason R. Doughty
 00F1C86448274F7...

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE
 BENT 23
 SECTIONS AND DETAILS

REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO.
S-191
 TOTAL SHEETS
 278

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

5/11/2016 400_375_B4929_SMU_IB232.dgn

DESIGNED BY: M. WAGNER DATE: JAN. 2016
 DRAWN BY: B. CALDWELL DATE: FEB. 2016
 CHECKED BY: J. SHERMAN DATE: MAR. 2016
 DESIGN ENGINEER OF RECORD: J. DOUGHTY DATE: MAY 2016