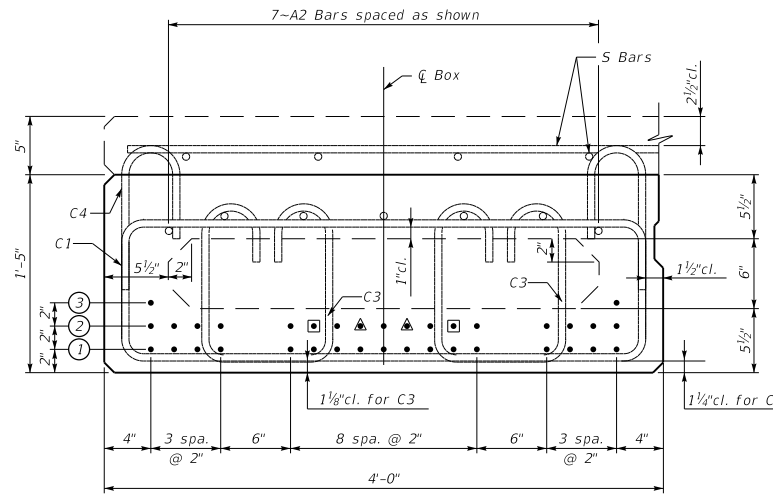
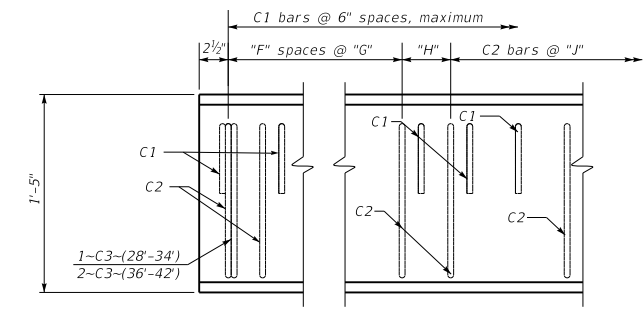


B17 BEAM

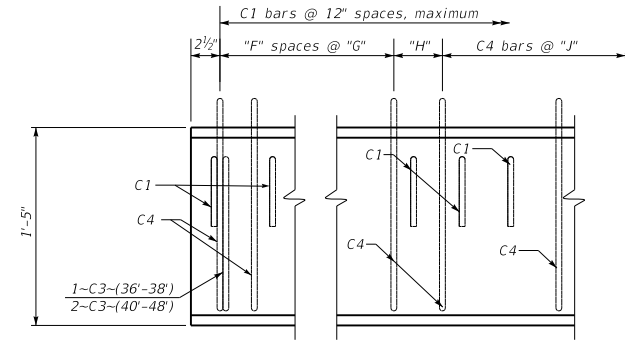


CB17 BEAM

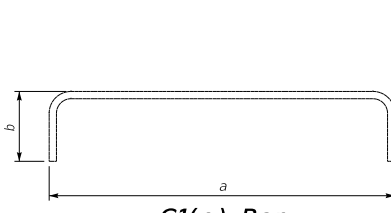
□ Debond these strands 4' each end of beam
 △ Debond these strands 6' each end of beam CB17-48 Beam Only



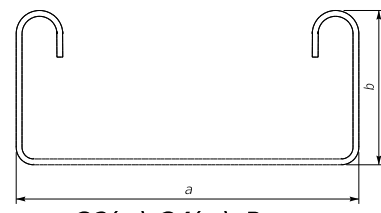
B17 ELEVATION OF 0° SKEW
 (Refer to BDP-003,c.e. for skewed details)



CB17 ELEVATION OF 0° SKEW
 (Refer to BDP-003,c.e. for skewed details)



C1(e) Bar



C2(e)-C4(e) Bars

TABLE OF STRAND DATA

Beam Type	Beam Length (feet)	Number of Strands Required			Conc. Strength	
		Row ①	Row ②	Row ③	F'CI (psi)	F'CI (psi)
B17	28	12				
	30	13				
	32	14				
	34	15				
	36	16				
	38	17	1			
	40	17	3			
CB17	42	17	5			
	36	14				
	38	15				
	40	16				
	42	17	1			
	44	17	2			
	46	17	9		6000	7000
	48	17	17	2	7000	8000

TABLE OF DIMENSION DATA

Beam Type	Beam Length (feet)	"F"	"G"	"H"	"J"				
B17	28	4	9"	8 1/2"	11"				
	30	4	9"	9 1/2"	11"				
	32	4	9"	10 1/2"	11"				
	34	5	8"	7 1/2"	11"				
	36	6	8"	6"	11"				
	38	7	7"	6 1/2"	10"				
	40	7	7"	8 1/2"	10"				
CB17	42	7	7"	5 1/2"	10"				
	36	6	8"	11 1/2"	14"				
	38	6	8"	9 1/2"	14"				
	40	6	8"	7 1/2"	14"				
	42	7	7"	8 1/2"	12"				
	44	8	7"	7 1/2"	12"				
	46	8	7"	7 1/2"	12"				
	48	10	6"	9 1/2"	12"				

TABLE OF BAR QUANTITIES DESIGN DATA

Beam Type	Beam Length (feet)	C1	C2	C3	C4	DC (kips)	DW (kips)	LL (kips)	LL+I (kips)	Δd (in.)	Δc (in.)
B17	28	57	33	2		9.4	0.8	35.1	44.9		
	30	61	35	2		10.1	0.9	36.4	46.4		
	32	65	37	2		10.7	0.9	37.7	48.1		
	34	69	41	2		11.4	1.0	38.9	49.6		
	36	73	44	4		12.1	1.0	40.0	50.9		
	38	77	51	4		12.7	1.1	41.1	52.2		
	40	81	53	4		13.4	1.1	42.1	53.4		
CB17	42	85	56	4		14.1	1.2	43.0	54.5		
	36	37		2	37	16.6	1.0	40.0	50.9	0.2	0.6
	38	39		2	39	17.5	1.1	41.1	52.2	0.2	0.7
	40	41		4	41	18.4	1.1	42.1	53.4	0.2	0.8
	42	43		4	49	19.3	1.2	43.0	54.5	0.3	0.9
	44	45		4	52	20.2	1.3	43.9	55.5	0.3	1.0
	46	47		4	54	21.1	1.3	44.7	56.5	0.3	1.3
	48	49		4	56	22.0	1.4	45.5	57.4	0.4	1.8

Straight Reinforcement

Mark	Size	Length
A1(E)	#5	Beam Length Minus 3"
A2(E)	#4	Beam Length Minus 3"
D(E)	#8	2'-0"

Bent Reinforcement

Mark	Size	a	b
C1(e)	#5	3'-9"	6"
C2(e)	#4	3'-9"	1'-1 1/4"
C3(e)	#5	11 3/8"	1'-1 3/8"
C4(e)	#4	3'-9"	1'-6 1/4"

KENTUCKY
 DEPARTMENT OF HIGHWAYS
 BOX BEAM
 B17 & CB17
 DETAILS

STANDARD DRAWING NO. BDP-007-05
 SUBMITTED: _____ DATE: 02-26-20
 APPROVED: _____ DATE: 02-26-20