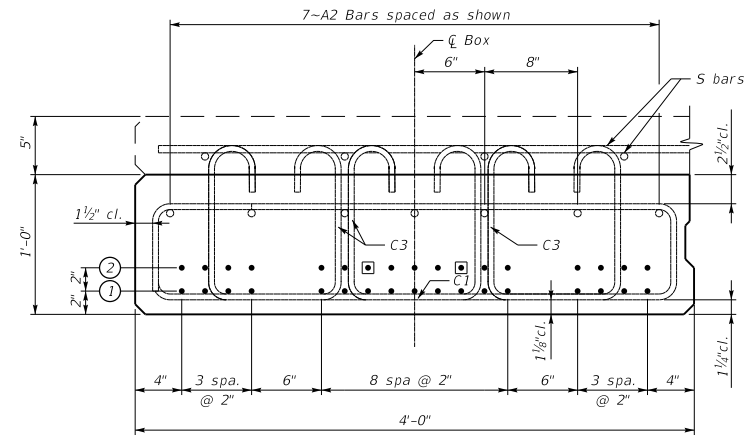
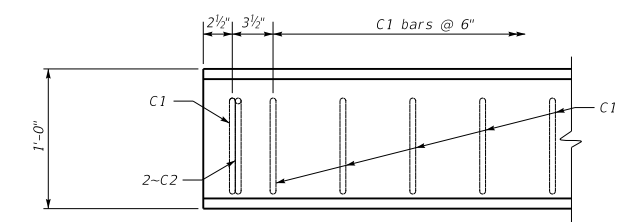


**B12 BEAM**

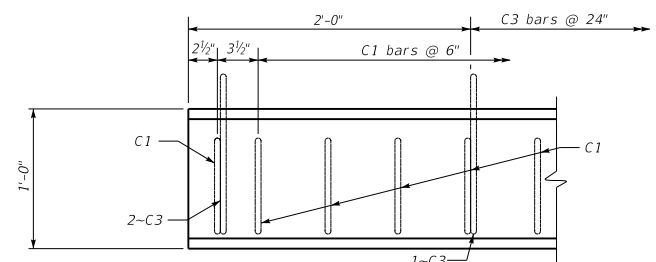


**CB12 BEAM**

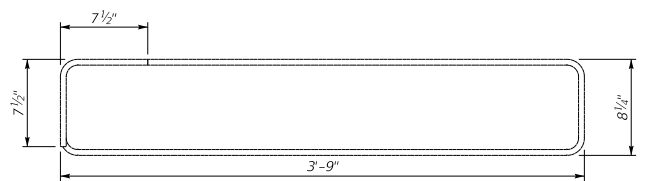
□ Debond these strands 4'-0" at each end of beam -CB12-34 Only



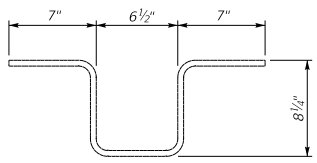
**B12 ELEVATION OF 0° SKEW**  
(Refer to BDP-003,c.e. for skewed details)



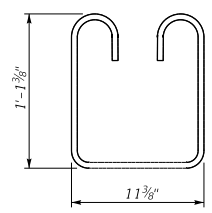
**CB12 ELEVATION OF 0° SKEW**  
(Refer to BDP-003,c.e. for skewed details)



**C1(e) Bar**  
#4 Stirrup



**C2(e) Bar**  
#4 Stirrup



**C3(e) Bar**  
#5 Stirrup

**TABLE OF STRAND DATA**

Beam Type	Beam Length (feet)	Number of Strands Required		Concrete Strength	
		Row ①	Row ②	F'CI (psi)	F'C (psi)
B12	12	9	1		
	14	10	1		
	16	11	1		
	18	12	1		
	20	12	1		
	22	12	2		
CB12	24	13	2		
	26	13	5		
	12	7			
	14	8			
	16	8			
	18	9			
	20	10			
	22	10			
	24	10			
	26	12			
	28	13			
	30	14	9		
32	14	13	6000	7100	
34	15	17	7000	8000	

**BAR QUANTITIES      DESIGN DATA**

Beam Type	Beam Length (feet)	C1	C2	C3	DC (Kips)	DW (Kips)	LL (Kips)	LL+I (Kips)	Δd (in.)	Δc (in.)
B12	12	25	2		3.9	0.4	27.8	36.3		
	14	29	2		4.6	0.4	29.1	37.8		
	16	33	2		5.2	0.5	30.1	39.1		
	18	37	2		5.8	0.5	31.0	40.1		
	20	41	2		6.5	0.6	31.8	41.0		
	22	45	2		7.1	0.6	32.5	41.9		
CB12	24	49	2		7.8	0.7	33.2	42.6		
	26	53	2		8.4	0.7	33.8	43.4		
	12	25		9	5.4	0.4	27.8	36.3	0.1	0.1
	14	29		10	6.3	0.4	29.1	37.8	0.1	0.1
	16	33		11	7.2	0.5	30.1	39.1	0.1	0.2
	18	37		12	8.1	0.5	31.0	40.1	0.1	0.2
	20	41		13	9.0	0.6	31.8	41.0	0.1	0.3
	22	45		14	9.9	0.6	32.5	41.9	0.1	0.3
	24	49		15	10.8	0.7	33.2	42.6	0.1	0.3
	26	53		16	11.6	0.8	33.8	43.4	0.1	0.5
	28	57		17	12.5	0.8	35.1	44.9	0.2	0.5
	30	61		18	13.4	0.9	36.4	46.4	0.2	0.9
32	65		19	14.3	0.9	37.7	48.1	0.2	1.0	
34	69		20	15.2	1.0	38.9	49.6	0.3	1.3	

**Straight Reinforcement**

MARK	SIZE	LENGTH
A1(E)	#5	Beam Length Minus 3"
A2(E)	#4	Beam Length Minus 3"
D(E)	#8	2'-0"

KENTUCKY  
DEPARTMENT OF HIGHWAYS  
  
BOX BEAM  
B12 & CB12  
DETAILS

STANDARD DRAWING NO. BDP-006-05  
SUBMITTED BY *Barth Adams* DATE 02-26-20  
DIRECTOR DIVISION OF STRUCTURAL DESIGN  
APPROVED BY *[Signature]* DATE 02-26-20  
STATE ENGINEER