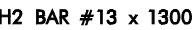


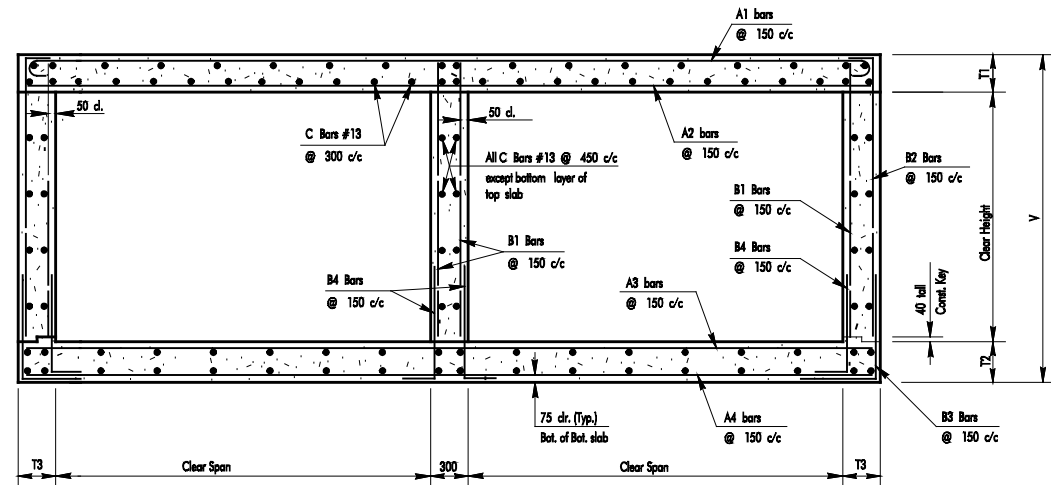
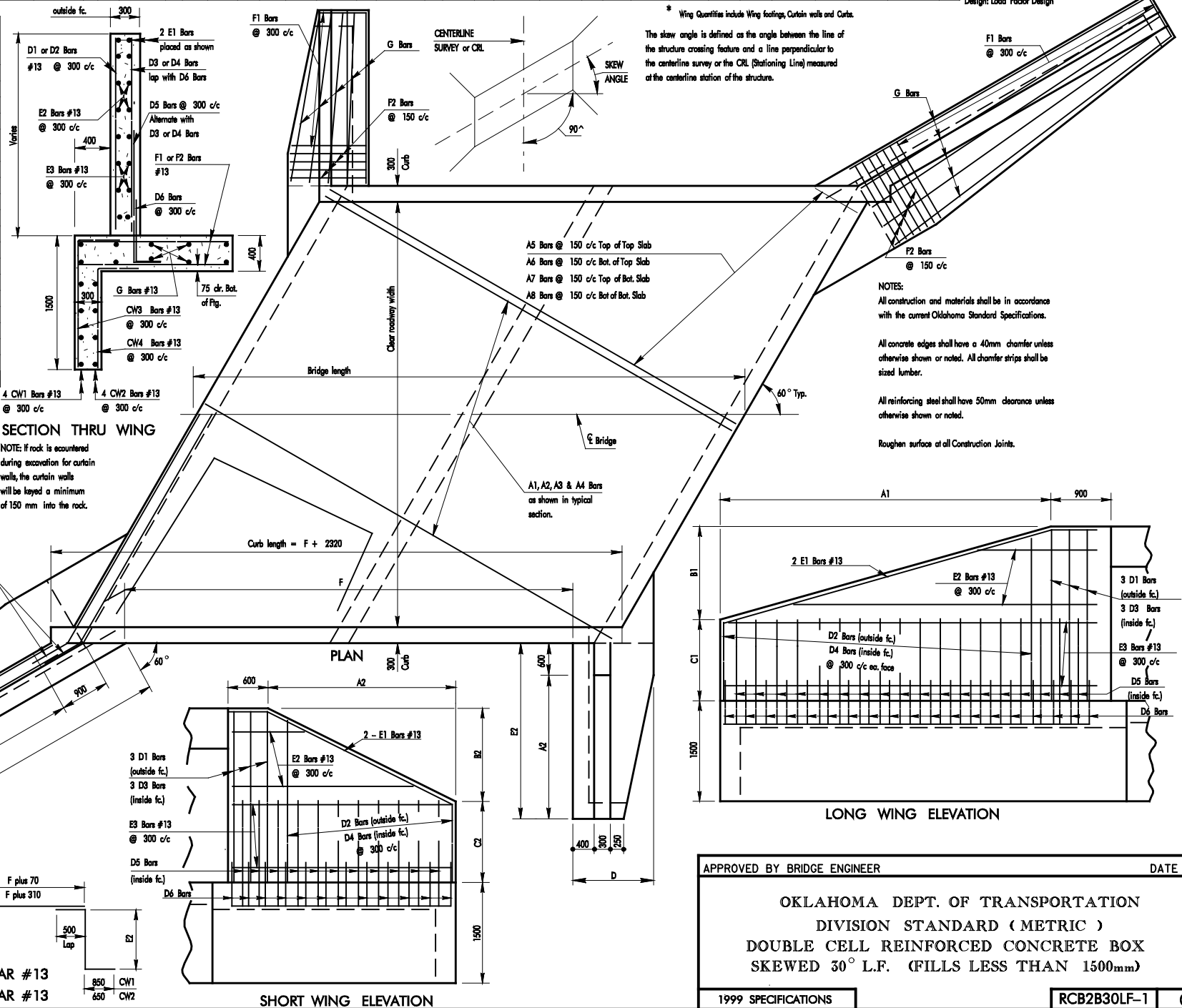
Design No.	Clear Span	Clear Height	DIMENSIONS																TWO LONG WINGS - REINFORCING																								TWO SHORT WINGS - REINFORCING																								TWO CURTAIN WALLS - REINFORCING				TWO CURBS REIN.		QUANTITIES *		Design No.																						
			WINGS								6 D1 BARS								6 D3 BARS								6 D5 BARS								6 D1 BARS								6 D3 BARS								6 D5 BARS								F1 BARS				F2 BARS				G BARS				C1 BARS					C2 BARS				C3 BARS				C4 BARS				C5 BARS				CONCRETE (m³)				REINFORCING (kg.)	
			A1	A2	B1	B2	C1	C2	D	E1	E2	F	6 D1 BARS	D2 BARS	6 D3 BARS	D4 BARS	D5 BARS	D6 BARS	4 E1 BARS	E2 BARS	E3 BARS	F1 BARS	F2 BARS	G BARS	6 D1 BARS	D2 BARS	6 D3 BARS	D4 BARS	D5 BARS	D6 BARS	4 E1 BARS	E2 BARS	E3 BARS	F1 BARS	F2 BARS	G BARS	C1 BARS	C2 BARS	C3 BARS	C4 BARS	4 C5 BARS	H2 BARS	CONCRETE (m³)	REINFORCING (kg.)																																																					
1	3000	1500	3600	2400	900	1200	1190	890	1570	5190	3000	6075	2040	24	1150 to 1970	#13	2040	24	#13	1150 to 1970	28	#13	1870	30	#13	1130	4110	8	1720 to 2910	16	4100	48	860 to 1420	1470	20	4400	2040	16	860 to 1890	#13	2040	16	#13	860 to 1890	20	#13	1580	22	#13	1130	3180	12	1100 to 2300	12	2900	32	860 to 1390	1470	20	2900	17	000	16	690	110	108	8290	58	28.7	1525	1																										
2		2000	4600	3000	1150	1500	1440	1090	1750	6190	3600	6075	2540	32	1400 to 2470	#13	2540	32	#13	1400 to 2470	36	#13	2120	38	#13	1130	5140	12	1680 to 3960	20	5100	64	860 to 1600	1650	20	5400	2540	20	1060 to 2390	#13	2540	20	#13	1060 to 2390	24	#13	1780	26	#13	1130	3850	16	1100 to 2900	16	3500	40	860 to 1570	1650	20	3500	18	290	120	118	8290	58	36.1	1885	2																												
3		2500	5600	3700	1400	1850	1690	1240	1920	7190	4300	6075	3040	38	1650 to 2910	#13	3040	38	#13	1650 to 2910	42	#13	2370	44	#13	1130	6170	16	1650 to 4990	24	6100	76	860 to 1770	1820	20	6400	3540	26	1210 to 2990	#13	3040	26	#13	1210 to 2990	30	#13	1930	32	#13	1130	4630	24	1030 to 3670	16	4200	52	860 to 1740	1820	20	4200	20	600	130	129	8290	58	44.7	2293	3																												
4	3500	3000	6600	4400	1650	2200	1940	1390	2100	8190	5000	6075	3540	44	1900 to 3470	#16	3540	44	#16	1900 to 3470	48	#16	2620	50	#16	1250	7200	20	1640 to 6000	28	7100	88	860 to 1950	2000	24	7400	3540	30	1360 to 3390	#16	3540	30	#16	1360 to 3390	34	#16	2080	36	#16	1250	5410	28	1050 to 4350	20	4900	60	860 to 1920	2000	24	4900	22	000	21	690	142	140	8290	58	54.4	3083	4																										
5		1500	3600	2400	900	1200	1200	900	1570	5190	3000	7230	2050	24	1160 to 1980	#13	2050	24	#13	1160 to 1980	28	#13	1880	30	#13	1130	4110	8	1720 to 2910	16	4100	48	860 to 1420	1470	20	4400	2050	16	870 to 1990	#13	2050	16	#13	870 to 1990	20	#13	1590	22	#13	1130	3180	12	1100 to 2300	12	2900	32	860 to 1390	1470	20	2900	18	160	175	8180	116	9450	66	29.8	1588	5																											
6		2000	4600	3000	1150	1500	1450	1100	1750	6190	3600	7230	2550	32	1410 to 2480	#13	2550	32	#13	1410 to 2480	36	#13	2130	38	#13	1130	5140	12	1680 to 3960	20	5100	64	860 to 1600</																																																																



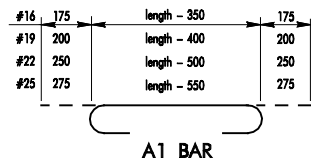
DESIGN DATA

Class "A" Concrete $f_c = 21 \text{ MPa}$
Reinforcing Steel (Grade 420) $f_y = 420 \text{ MPa}$
Loading: MS 18
Design: Load Factor Design

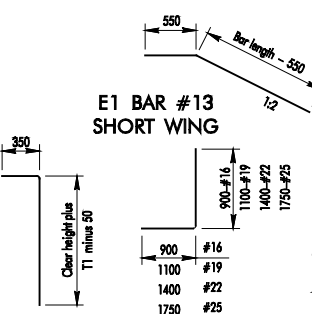
Desig. No.	Clear Span	Height	Br-Edge length	BARREL			BARREL REINFORCING																								QUANTITIES			Desig. No.									
				DIMENSIONS			A1 BARS										A2 BARS										C BARS		CONCRETE (m ³)	REINFORCING (kg)													
				TJ	T2	V	S1Z	LENGTH	S1Z	LENGTH	S1Z	LENGTH	S1Z	LENGTH	A5 BARS	A6 BARS	A7 BARS	A8 BARS	S1 BARS	B2 BARS	B3 BARS	B4 BARS	C BARS																				
1	3000	1500	7970	290	320	300	2110	#16	7150	#16	6800	#16	6800	#16	6800	48	#16	700	to 6570	48	#16	520	to 6490	48	#16	520	to 6490	48	#16	520	to 6490	#13	1700	#13	2090	#16	1800	#13	1000	98	5.56/m	519.0/m	1
2		2000		290	320	300	2610	#16	7150	#16	6800	#16	6800	#16	6800	48	#16	700	to 6670	48	#16	520	to 6490	48	#16	520	to 6490	48	#16	520	to 6490	#13	2200	#13	2590	#16	1800	#13	1000	104	6.01/m	544.8/m	2
3		2500		290	320	300	3110	#16	7150	#16	6800	#16	6800	#16	6800	48	#16	700	to 6670	48	#16	520	to 6490	48	#16	520	to 6490	48	#16	520	to 6490	#13	2700	#13	3090	#16	1800	#13	1000	110	6.46/m	570.7/m	3
4		3000		290	320	300	3610	#16	7150	#16	6800	#16	6800	#16	6800	48	#16	700	to 6670	48	#16	520	to 6490	48	#16	520	to 6490	48	#16	520	to 6490	#13	3200	#13	3590	#16	1800	#13	1000	116	6.91/m	591.2/m	4
5	3500	1500	9120	300	330	300	2130	#16	8150	#16	7800	#16	7800	#16	7800	54	#16	910	to 7670	54	#16	740	to 7490	54	#16	740	to 7490	54	#16	740	to 7490	#13	1710	#13	2100	#16	1800	#13	1000	106	6.33/m	568.7/m	5
6		2000		300	330	300	2630	#16	8150	#16	7800	#16	7800	#16	7800	54	#16	910	to 7670	54	#16	740	to 7490	54	#16	740	to 7490	54	#16	740	to 7490	#13	2210	#13	2600	#16	1800	#13	1000	112	6.78/m	594.6/m	6
7		2500		300	330	300	3130	#16	8150	#16	7800	#16	7800	#16	7800	54	#16	910	to 7670	54	#16	740	to 7490	54	#16	740	to 7490	54	#16	740	to 7490	#13	2710	#16	3100	#16	1800	#13	1000	118	7.23/m	643.5/m	7
8		3000		300	330	300	3630	#16	8150	#16	7800	#16	7800	#16	7800	54	#16	910	to 7670	54	#16	740	to 7490	54	#16	740	to 7490	54	#16	740	to 7490	#13	3210	#16	3600	#16	1800	#13	1000	124	7.68/m	673.0/m	8
9	4000	1500	10 280	300	330	300	2130	#19	8200	#19	7800	#19	7800	#19	7800	54	#16	910	to 7670	54	#16	740	to 7490	54	#16	740	to 7490	54	#16	740	to 7490	#13	3710	#16	4100	#16	1800	#13	1000	130	8.13/m	702.6/m	9
10		2000		310	340	300	2650	#19	9150	#19	8800	#19	8800	#19	8800	62	#19	900	to 8690	62	#19	700	to 8490	62	#19	700	to 8490	62	#19	700	to 8490	#13	4270	#16	4610	#19	2200	#13	1000	128	7.59/m	862.6/m	10
11		2500		310	340	300	3150	#19	9200	#19	8800	#19	8800	#19	8800	62	#19	900	to 8690	62	#19	700	to 8490	62	#19	700	to 8490	62	#19	700	to 8490	#13	4770	#16	5110	#19	2200	#13	1000	134	8.04/m	892.2/m	11
12		3000		310	340	300	3650	#19	9200	#19	8800	#19	8800	#19	8800	62	#19	900	to 8690	62	#19	700	to 8490	62	#19	700	to 8490	62	#19	700	to 8490	#13	5270	#16	5610	#19	2200	#13	1000	140	8.49/m	954.6/m	12
13	4500	1500	11 430	310	340	300	4150	#19	9200	#19	8800	#19	8800	#19	8800	62	#19	900	to 8690	62	#19	700	to 8490	62	#19	700	to 8490	62	#19	700	to 8490	#13	5770	#16	6110	#19	2200	#13	1000	146	8.94/m	988.7/m	13
14		2000		310	340	300	4650	#19	9200	#19	8800	#19	8800	#19	8800	62	#19	900	to 8690	62	#19	700	to 8490	62	#19	700	to 8490	62	#19	700	to 8490	#13	6270	#16	6610	#19	2200	#13	1000	152	9.39/m	1022.8/m	14
15		2500		320	350	300	2670	#22	10 300	#22	9800	#22	9800	#22	9800	70	#22	910	to 9740	70	#22	660	to 9490	70	#22	660	to 9490	70	#22	660	to 9490	#13	6770	#16	7170	#19	2200	#13	1000	138	8.43/m	1171.5/m	15
16		3000		320	350	300	3170	#22	10 300	#22	9800	#22	9800	#22	9800	70	#22	910	to 9740	70	#22	660	to 9490	70	#22	660	to 9490	70	#22	660	to 9490	#13	7270	#16	7670	#19	2200	#13	1000	144	8.88/m	1205.7/m	16
17	4500	1500	11 430	320	350	300	3670	#22	10 300	#22	9800	#22	9800	#22	9800	70	#22	910	to 9740	70	#22	660	to 9490	70	#22	660	to 9490	70	#22	660	to 9490	#13	7770	#16	8170	#19	2200	#13	1000	150	9.33/m	1287.8/m	17
18		2000		320	350	300	4170	#25	10 350	#22	9800	#22	9800	#22	9800	70	#25	930	to 9770	70	#22	660	to 9490	70	#22	660	to 9490	70	#22	660	to 9490	#13	8270	#16	8670	#19	2200	#13	1000	156	9.78/m	1381.2/m	18
19		2500		320	350	300	4670	#25	10 350	#22	9800	#22	9800	#22	9800	70	#25	930	to 9770	70	#22	660	to 9490	70	#22	660	to 9490	70	#22	660	to 9490	#13	8770	#16	9170	#19	2200	#13	1000	162	10.23/m	1471.9/m	19
20		3000		320	350	300	5170	#25	10 350	#22	9800	#22	9800	#22	9800	70	#25	930	to 9770	70	#22	660	to 9490	70	#22	660	to 9490	70	#25	930	to 9770	#13	9270	#16	9670	#19	2200	#13	1000	168	10.86/m	1736.4/m	20



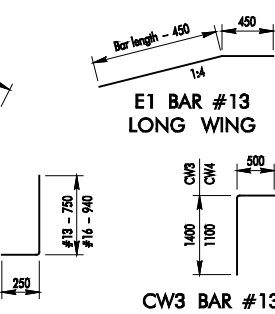
TYPICAL CROSS SECTION



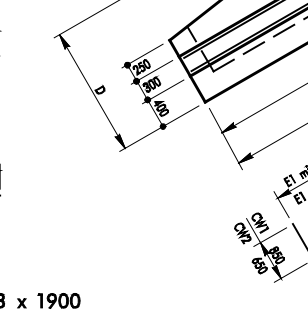
A5 BAR



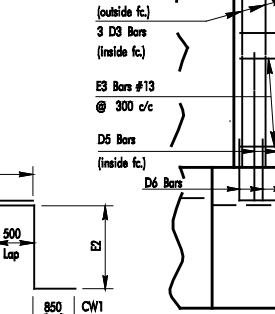
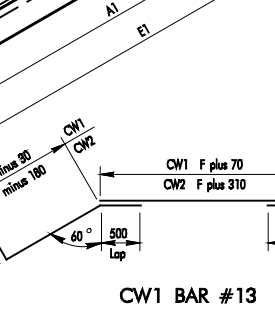
B2 BAR



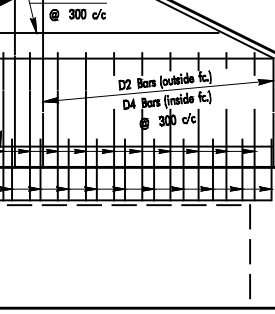
B4 BAR



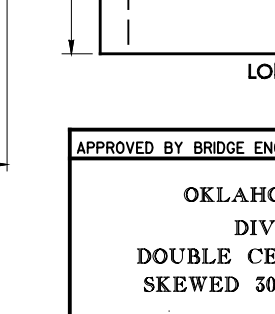
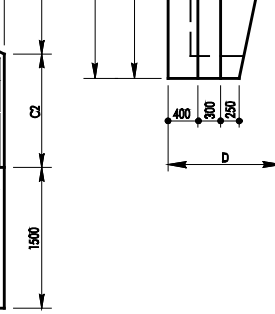
x 1600



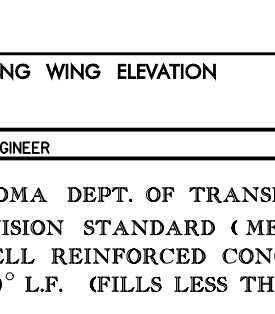
650



SHORT WING ELEVATION



1999 SPECIFICATIONS



APPROVED BY BRIDGE ENGINEER

DATE _____

OKLAHOMA DEPT. OF TRANSPORTATION
DIVISION STANDARD (METRIC)
DOUBLE CELL REINFORCED CONCRETE BOX
SKEWED 30° L.F. (FILLS LESS THAN 1500mm)

1999 SPECIFICATIONS

RCB2B30LF-1

OOM

ALL DIMENSIONS ON THIS SHEET IN MILLIMETERS UNLESS OTHERWISE NOTED.

CB-02M