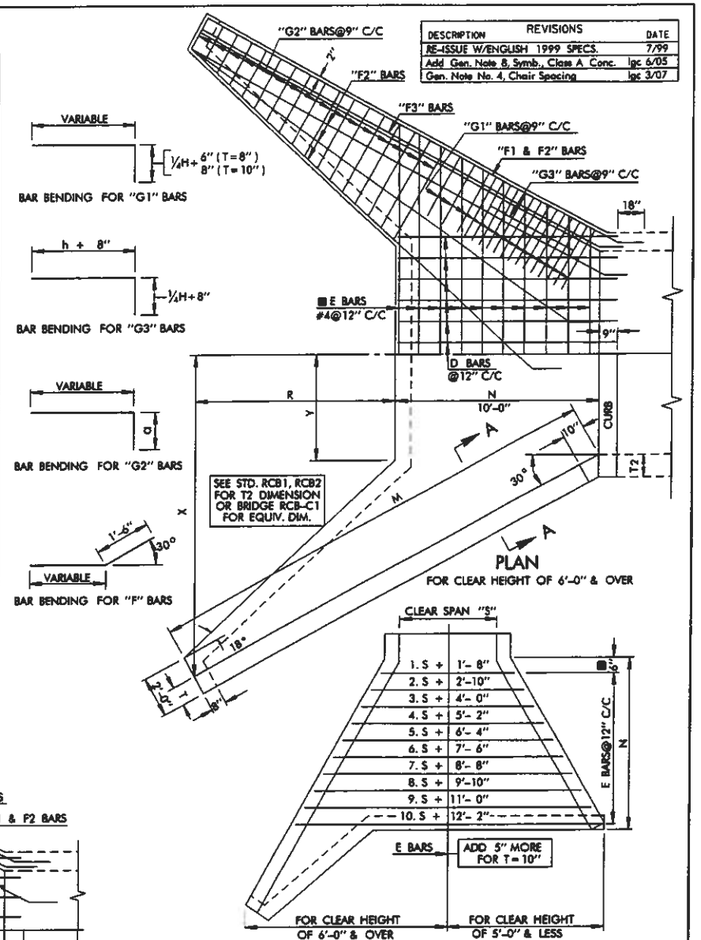
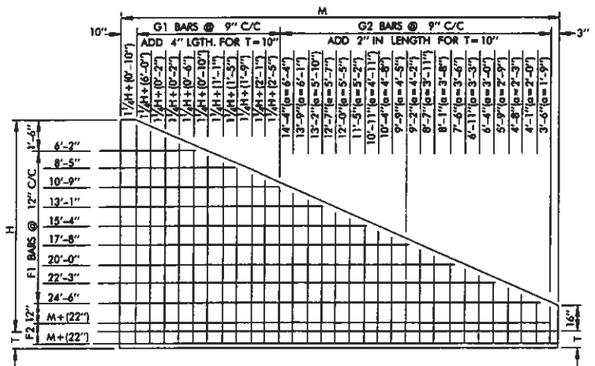
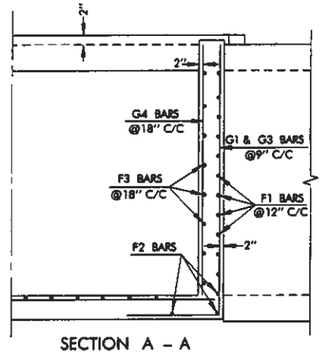
DESIGN NO.	CLEAR SPAN (ft.)	CLEAR HEIGHT (ft.)	X (ft.)	Y (ft.)	WING DIMENSIONS d (ft.)	T	H	M	N	R	REINFORCING BARS: APRON "D" BARS NO	SIZE	LGTH.	APRON "E" BARS NO	SIZE	AVER. LENGTH	TWO WINGS "F1" BARS NO	SIZE	AVER. LENGTH	"F2" BARS NO	SIZE	LGTH	"F3" BARS NO	SIZE	AVER. LENGTH	"F4" BARS NO	SIZE	LGTH	"G1" BARS @ #4 NO	AVER. LENGTH	"G2" BARS @ #4 AVER. LENGTH	"G3" BARS NO	SIZE	h	AVER. LENGTH	"G4" BARS @ #4 NO	AVER. LENGTH	ONE CURB "CH" BARS @ #4 NO	LGTH	"S" BARS @ #4 NO	MIN. LENGTH	* TOTAL QUANT. ONE HEADWALL CONC CU.YD	STEEL LBS.	ADD'L QUANT. CURTAIN WALL CONC. C.Y./V.F.
1	2		3.33													5'- 5"																										
2	3		3.83								5					6'- 5"																										
3	4	2	4.33		0.08	8"	2'-8"	4'-8"	4'-0"		6	#4	4'-10"	4	#4	7'- 5"	2	#4	6'-0"	6	#4	6'-6"	2	#4	6'-0"	2	#4	6'-0"	12	3'-7"						6	2'-0"	2	3'- 8"	5	2'- 1"	1.30	126	0.29
4	5		4.83								7					8'- 5"																									4'- 8"	6	2'- 1"	1.43	135	0.33
5	3		4.96								5					7'- 7"																									5'- 8"	7	2'- 3"	1.56	144	0.36
6	4		5.46								6					8'- 7"																									6'- 8"	8	2'- 5"	1.68	154	0.40
7	5	3	5.96		0.13	8"	3'-8"	6'-11"	6'-0"		7	#4	6'-10"	6	#4	9'- 7"	4	#4	6'-1"	6	#4	8'-9"	2	#4	6'-1"	2	#4	8'-3"	18	4'-4"						10	2'-4"	2	4'- 8"	6	2'- 1"	2.44	206	0.41
8	6		6.46								8					10'- 7"																									5'- 8"	7	2'- 3"	2.59	218	0.45
9	8		7.46								10					12'- 7"																									6'- 8"	8	2'- 5"	2.76	230	0.46
10	4		6.63								6					9'- 9"																									7'- 8"	9	2'- 7"	2.94	243	0.52
11	5		7.13								7					10'- 9"																									9'- 8"	11	2'-11"	3.30	269	0.60
12	6	4	7.63		0.17	8"	4'-8"	9'-3"	8'-0"		8	#4	8'-10"	8	#4	11'- 9"	6	#4	7'-8"	6	#4	11'-1"	4	#4	7'-10"	2	#4	10'-7"	24	5'-1"						12	3'-0"	2	5'- 8"	7	2'- 2"	3.87	321	0.53
13	8		8.63								10					13'- 9"																									6'- 8"	8	2'- 4"	4.10	345	0.57
14	10		9.63								12					15'- 9"																									7'- 8"	9	2'- 6"	4.32	351	0.61
15	5		8.25								7					11'-11"																									9'- 8"	11	2'- 9"	4.79	381	0.68
16	6		8.75								8					12'-11"																									11'- 8"	13	3'- 0"	5.27	412	0.76
17	8	5	9.75		0.21	8"	5'-10"	11'-6"	10'-0"		9	#4	10'-10"	10	#4	13'-11"	8	#4	8'-11"	6	#4	13'-4"	6	#4	9'-3"	2	#4	12'-10"	30	5'-11"						16	3'-6"	2	6'-10"	8	2'- 5"	5.63	464	0.65
18	10		10.75								12					16'-11"																									7'-10"	9	2'- 6"	5.90	481	0.69
19	5		9.42	5.32							7					11'-11"																									7'-10"	11	2'- 9"	6.50	517	0.76
20	6		9.92	5.82							8					12'-11"																									11'-10"	13	3'- 0"	7.02	553	0.84
21	8	6	10.92	6.82	0.25	8"	6'-10"	13'-10"	10'-0"	2'-0"	10	#4	10'-10"	10	#4	14'-11"	10	#4	10'-1"	8	#4	15'-8"	6	#4	9'-3"	2	#4	15'-2"	28	7'-4"	8	4'-5"				18	4'-2"	2	7'- 0"	8	2'- 4"	6.78	571	0.74
22	10		11.92	7.82							12					16'-11"																									8'- 0"	9	2'- 5"	7.06	588	0.78
23	5		10.58	4.48							7					11'-11"																									10'- 0"	11	2'- 9"	7.62	624	0.85
24	6		11.08	4.98							8					12'-11"																									12'- 0"	13	2'-11"	8.20	660	0.93
25	8	7	12.08	5.98	0.29	10"	7'-10"	16'-2"	10'-0"	4'-0"	10	#4	10'-10"	10	#4	14'-11"	12	#4	11'-6"	8	#4	18'-0"	8	#4	11'-0"	2	#4	17'-6"	26	9'-1"	16	5'-6"				22	4'-6"	2	7'- 2"	8	2'- 4"	10.14	713	0.83
26	10		13.08	6.98							12					16'-11"																									8'- 2"	9	2'- 5"	10.49	723	0.86
27	6		12.25	3.90							8					12'-11"																									10'- 2"	11	2'- 9"	11.17	759	0.94
28	8	8	13.25	4.90	0.34	10"	8'-10"	18'-6"	10'-0"	6'-0"	10	#4	10'-10"	10	#4	14'-11"	14	#4	12'-7"	10	#4	20'-4"	10	#4	12'-9"	2	#4	19'-10"	24	10'-6"	24	6'-8"	12	#4	2'-0"	5'-7"	24	5'-2"	2	12'- 2"	8	2'-11"	11.85	795	1.01
29	10		14.25	5.90							12					16'-11"																									12'- 2"	13	2'-11"	12.48	920	0.95
30	10	9	15.36	4.87	0.38	10"	10'-0"	20'-9"	10'-0"	8'-0"	12	#4	10'-10"	10	#4	16'-11"	16	#4	14'-2"	10	#4	22'-7"	10	#4	12'-7"	2	#4	22'-1"	22	12'-0"	32	7'-10"	18	#4	3'-0"	6'-10"	28	5'-7"	2	12'- 6"	14	2'-10"	13.16	957	1.02
31	10	10	16.54	3.79	0.42	10"	11'-0"	23'-1"	10'-0"	10'-0"	12	#4	10'-10"	10	#4	16'-11"	18	#4	15'-4"	12	#4	24'-11"	12	#4	14'-3"	2	#4	24'-5"	20	13'-5"	40	8'-11"	24	#5	4'-3"	8'-4"	30	6'-3"	2	12'- 8"	14	2'-10"	18.61	1530	1.27

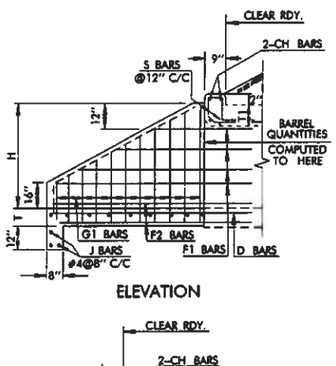
* INCLUDES 2 WINGS, ONE APRON, ONE CURB AND STD. DEPTH CURTAIN WALL

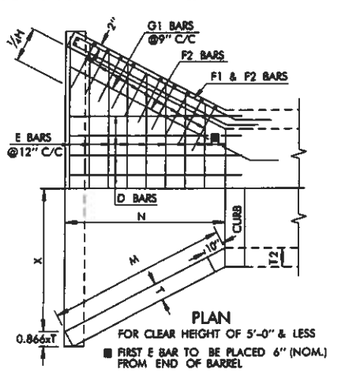
DESCRIPTION	REVISIONS	DATE
RE-ISSUE W/ENGLISH 1999 SPECS.		7/99
Add Gen. Note 8, Symb., Class A Conc.		lgc 6/05
Gen. Note No. 4, Chair Spacing		lgc 3/07

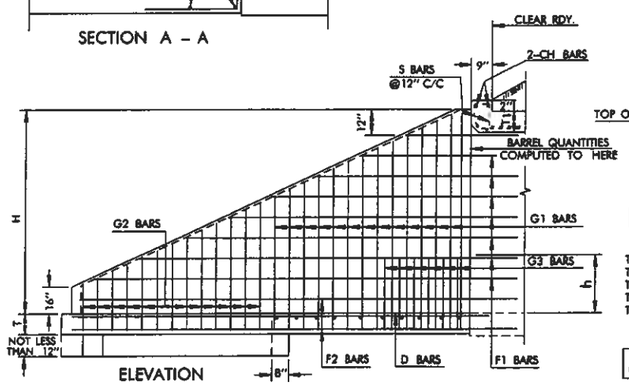


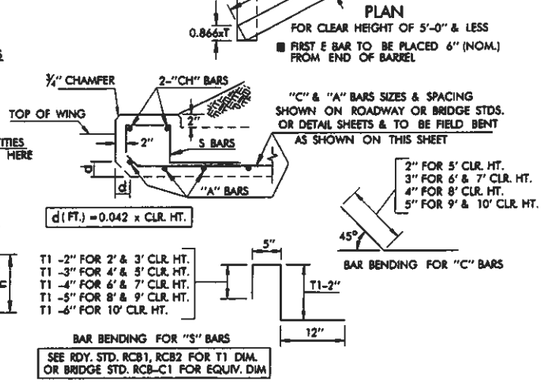












BASIS OF PAYMENT

	ITEM NO.	ITEM	UNIT
*	509.06(A)	CLASS AA CONCRETE	C. Y.
*	509.06(B)	CLASS A CONCRETE	C. Y.
	511.06(A)	REINFORCING STEEL	LBS.

GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIAL SHALL BE IN ACCORDANCE WITH THE 1999 ENGLISH STANDARD SPECIFICATIONS.
2. REINFORCING STEEL IN APRON SHALL BE SUPPORTED ON BAR CHAIRS.
3. CHAIRS SHALL BE SUPPORTED ON TIMBER PLANKS OR CLASS C CONCRETE STRIPS SPACED AT 4'-0" CENTERS.
4. THE TOP OF CHAIR SUPPORTS, SHALL BE AT THE ELEVATION OF THE BOTTOM OF FOOTING. REINFORCING STEEL IN THE WINGS SHALL BE HELD IN PLACE BY METAL CHAIRS. MAXIMUM SPACING OF CHAIRS SHALL BE 4'-0" CENTERS.
5. COST OF METAL CHAIRS, WOOD PLANK OR CONCRETE STRIPS SHALL BE INCLUDED IN OTHER ITEMS OF WORK.
6. DETAILS OF SINGLE CELL BARRELS CORRESPONDING TO THE HEADWALLS SHOWN ON THIS STANDARD SHALL BE INCLUDED IN THE PLANS.
7. ALL REINFORCING STEEL SHALL HAVE 2" MINIMUM CLEARANCE FROM ALL ADJACENT CONCRETE SURFACES.
8. * WINGWALL, CURB AND APRON CONSTRUCTION SHALL CONSIST OF THE SAME CLASS OF CONCRETE USED FOR THE REINFORCED CONCRETE BOX.

APPROVED BY ROADWAY ENGINEER Timothy A. Tegeler DATE 3/1/07

OKLAHOMA DEPT. OF TRANSPORTATION
ROADWAY STANDARD (ENGLISH)
HEADWALL
ONE CELL REINFORCED CONCRETE BOX

1999 SPECIFICATIONS | (2" HIGH CURB) | RCB2H-1 | 02E | R-53E