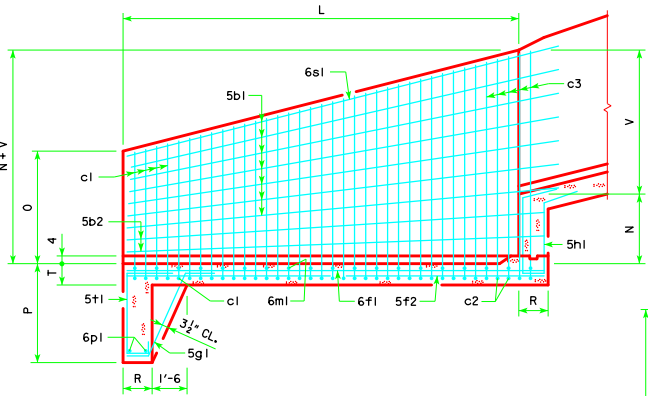
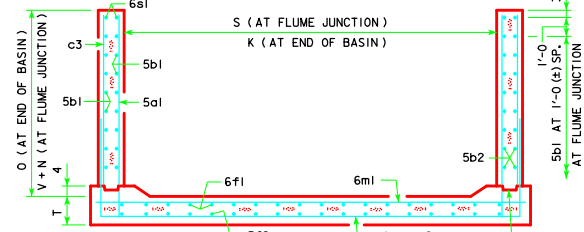


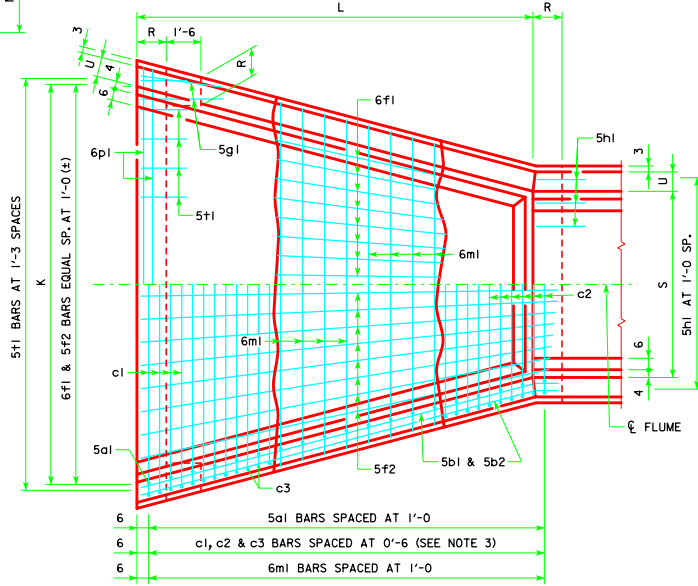
ESTIMATE OF QUANTITIES - FLUME BASIN																														
BILL OF REINFORCING STEEL			8' x 4'			8' x 5'			8' x 6'			8' x 7'			8' x 8'			8' x 9'			8' x 10'									
BAR	LOCATION	SHAPE	SIZE	NO.	LENGTH	WEIGHT	SIZE	NO.	LENGTH	WEIGHT	SIZE	NO.	LENGTH	WEIGHT	SIZE	NO.	LENGTH	WEIGHT	SIZE	NO.	LENGTH	WEIGHT	SIZE	NO.	LENGTH	WEIGHT				
5a1	WALLS - VERT. - F.F.		5	30	2'-6 1/2"-0	133	5	32	3'-3 7/8"-0	171	5	34	4'-1 1/8"-0	214	5	36	4'-10 9/16"-1	261	5	38	5'-7 1/10"-1	310	5	40	6'-4 1/11"-1	363	5	42	7'-2 1/21"-1	422
5b1	WALLS - LONGIT. - F.F. & B.F.		5	12	15'-2	202	5	16	17'-3	288	5	16	18'-4	306	5	20	19'-4	403	5	24	20'-5	511	5	28	21'-6	628	5	28	22'-6	657
5b2	WALLS - LONGIT. - F.F. & B.F.		5	4	15'-1	63	5	4	16'-1	67	5	8	17'-5	145	5	8	18'-5	154	5	8	19'-5	162	5	8	20'-6	171	5	12	21'-6	269
c1	WALLS - VERT. - B.F.	---	5	29	20'-11 1/21'-2	636	5	22	22'-11 1/23'-3	530	5	16	25'-1 1/25'-4	421	5	10	27'-1 1/27'-4	284	5	4	29'-3 1/29'-6	123	---	---	---	---	---	---	---	---
c2	WALLS - VERT. - B.F.	---	---	---	---	---	5	9	15'-7 1/17'-7	156	5	17	15'-7 1/19'-7	312	5	25	15'-7 1/21'-7	485	5	33	15'-9 1/23'-9	680	5	39	15'-9 1/25'-3	834	6	41	16'-7 1/26'-7	1329
c3	WALLS - VERT. - B.F.	---	---	---	---	---	5	18	5'-0 1/6'-0	103	5	34	5'-0 1/7'-0	213	5	50	5'-1 1/8'-1	343	5	66	5'-1 1/9'-1	488	5	78	5'-4 1/10'-1	627	6	82	6'-2 1/11'-1	1062
6f1	FLOOR - LONGIT. - TOP		6	16	14'-8	352	6	17	15'-8	400	6	17	16'-11	432	6	18	17'-11	484	6	18	18'-11	511	6	19	19'-11	568	6	19	20'-11	597
5f2	FLOOR - LONGIT. - BOTT.		5	16	14'-8	245	5	17	15'-8	278	5	17	16'-11	300	5	18	17'-11	336	5	18	18'-11	355	5	19	19'-11	395	5	19	20'-11	415
5g1	CURTAIN BRACKET - VERT.		5	4	5'-6	23	5	4	5'-6	23	5	4	5'-9	24	5	4	6'-0	25	5	4	6'-3	26	5	4	6'-5	27	5	4	6'-8	28
5h1	BASIN BACKWALL - VERT.		5	10	8'-0	83	5	10	8'-6	89	5	10	9'-3	96	5	10	9'-9	102	5	10	10'-3	107	5	10	10'-9	112	5	10	11'-3	117
6m1	FLOOR TRANS. - TOP		6	15	9'-8 1/16'-5	294	6	16	9'-8 1/17'-5	319	6	17	9'-8 1/17'-5	346	6	18	9'-8 1/17'-5	373	6	19	9'-10 1/18'-7	405	6	20	9'-10 1/19'-1	434	6	21	9'-10 1/19'-7	464
6p1	CURTAIN - TRANS.		6	2	16'-4 1/16'-6	49	6	2	16'-10 1/17'-0	51	6	2	17'-3 1/17'-6	52	6	2	17'-9 1/18'-0	54	6	2	18'-5 1/18'-8	56	6	2	18'-11 1/19'-2	57	6	2	19'-5 1/19'-8	59
6s1	WALL - TOP SLOPE		6	4	16'-5	99	6	4	17'-6	105	6	4	18'-7	112	6	4	19'-7	118	6	4	20'-8	124	6	4	21'-9	131	6	4	22'-9	137
5t1	CURTAIN - VERT.		5	13	6'-4	86	5	13	6'-4	86	5	14	6'-7	96	5	14	6'-10	100	5	15	7'-1	111	5	15	7'-4	115	5	15	7'-7	119
TOTAL WEIGHT (LB)						2265				2666				3069				3522				3969				4462				5675
CONCRETE (CY)			FOOTING			9.9	WALLS			10.6	FLOOR			11.9	CURTAIN			12.9	TOTAL			14.1	TOTAL			15.2	TOTAL			16.3
			TOTAL			12.5	TOTAL			14.2	TOTAL			16.6	TOTAL			18.7	TOTAL			22.0	TOTAL			24.6	TOTAL			27.4



LONGITUDINAL SECTION



8'x8' FLUME BASIN EXAMPLE SHOWN



PLAN VIEW

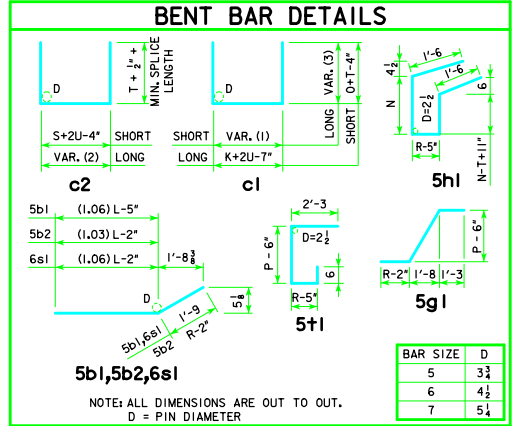
VARIABLE DIMENSIONS	
VARIABLE (1)	$K+2U-4''$ (K-S) (No. of c1 - 1) No. of c1 + c2 - 1
VARIABLE (2)	$S+2U-4''$ (K-S) (No. of c2 - 1) No. of c1 + c2 - 1
VARIABLE (3)	$O+T-4''$ (N+V-D) (No. of c1 - 1) No. of c1 + c2 - 1

FLUME BASIN NOTES:

- SEE STANDARD SHEET RCFB-01-12 FOR GENERAL INFORMATION.
- c2 & c3 BARS ARE LAPPED.
- c1 BARS ARE OMITTED IF BOTH S AND H ARE EQUAL TO OR LARGER THAN 8' AND 9' RESPECTIVELY.

TABLE OF FLUME BASIN DIMENSIONS										
S x H	K	L	M	N	O	P	R	T	U	V
8' x 4'	15'-0	14'-0	3'-0	2'-3	1'-10	3'-6	1'-0	1'-0	0'-9	3'-1 1/8
8' x 5'	15'-6	15'-0	3'-9	2'-6	2'-7	3'-6	1'-0	1'-0	0'-9	3'-10 3/8
8' x 6'	16'-0	16'-0	4'-6	2'-9	3'-5	3'-6	1'-3	1'-0	0'-9	4'-7 3/8
8' x 7'	16'-6	17'-0	5'-3	3'-0	4'-2	3'-9	1'-3	1'-0	0'-9	5'-5
8' x 8'	17'-0	18'-0	6'-0	3'-3	4'-11	4'-0	1'-3	1'-0	0'-10	6'-2 1/4
8' x 9'	17'-6	19'-0	6'-9	3'-6	5'-8	4'-3	1'-3	1'-0	0'-10	6'-11 1/4
8' x 10'	18'-0	20'-0	7'-6	3'-9	6'-6	4'-6	1'-3	1'-0	0'-10	7'-8 1/4

S = CULVERT SPAN
H = CULVERT HEIGHT



NOTE: ALL DIMENSIONS ARE OUT TO OUT.
D = PIN DIAMETER

BAR SIZE	D
5	3 3/8
6	4 1/2
7	5 1/4

LATEST REVISION DATE	 IOWA Department of Transportation Highway Division STANDARD DESIGN REINFORCED CONCRETE BOX CULVERTS APRIL, 2012	APPROVED BY BRIDGE ENGINEER Thomas E. McQuinn		
			FLUME BASIN DETAILS 8' SPAN	RCFB-03-12