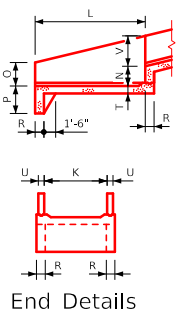


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### Estimate of Quantities - Flume Basin

Bill of Reinforcing Steel		3' x 3'		4' x 4'		5' x 3'		5' x 4'		5' x 5'		5' x 6'														
Bar	Location	Shape	Size	No.	Length	Weight	Size	No.	Length	Weight	Size	No.	Length	Weight	Size	No.	Length	Weight								
4a1	Walls - Vert. - F.F.	U	4	28	1'-8";4'-10"	61	4	30	2'-5";5'-11"	84	4	30	1'-8";4'-10"	61	4	30	3'-2";6'-11"	108	4	30	4'-0";7'-11"	135				
5b1	Walls - Longit. - F.F. & B.F.	U	5	8	15'-4"	128	5	12	16'-5"	205	5	12	16'-5"	205	5	16	17'-6"	292	5	16	18'-7"	310				
5b2	Walls - Longit. - F.F. & B.F.	U	5	4	13'-10"	58	5	4	15'-1"	63	5	4	13'-10"	58	5	4	16'-1"	67	5	8	17'-5"	145				
c1	Walls - Vert. - B.F.	U	5	14	13'-9";14'-0"	203	5	15	16'-9";17'-0"	264	5	14	15'-9";16'-0"	232	5	15	17'-9";18'-0"	280	5	12	19'-9";20'-1"	249	6	9	21'-1";22'-2"	298
c2	Walls - Vert. - B.F.	U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5	4	12'-1";13'-7"	54	6	8	12'-1";16'-5"	176		
c3	Walls - Vert. - B.F.	U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5	8	5'-3";6'-0"	47	6	16	5'-3";7'-0"	147		
6f1	Floor - Longit. - Top	U	6	11	13'-5"	222	6	12	14'-8"	264	6	13	13'-5"	262	6	13	14'-8"	286	6	14	15'-8"	329	6	14	16'-11"	356
5f2	Floor - Longit. - Bott.	U	5	11	13'-5"	154	5	12	14'-8"	184	5	13	13'-5"	182	5	13	14'-8"	199	5	14	15'-8"	229	5	14	16'-11"	247
4g1	Curtain Bracket - Vert.	U	4	4	5'-3"	14	4	4	5'-6"	15	4	4	5'-3"	14	4	4	5'-6"	15	4	4	5'-9"	15	4	4	5'-9"	15
5h1	Basin Backwall - Vert.	U	5	5	7'-4"	38	5	6	8'-1"	51	5	7	7'-4"	54	5	7	8'-1"	59	5	7	8'-7"	63	5	7	9'-4"	68
6m1	Floor Trans. - Top	U	6	14	4'-8";10'-11"	164	6	15	5'-8";12'-5"	204	6	14	6'-8";12'-11"	206	6	15	6'-8";13'-5"	226	6	16	6'-8";13'-11"	247	6	17	6'-8";14'-5"	269
5p1	Curtain - Trans.	U	5	2	11'-0"	23	5	2	12'-4";12'-6"	26	5	2	13'-0"	27	5	2	13'-4";13'-6"	28	5	2	13'-10";14'-0"	29	5	2	14'-3";14'-6"	30
5s1	Wall - Top Slope	U	5	4	15'-7"	65	5	4	16'-8"	70	5	4	15'-7"	65	5	4	17'-9"	74	5	4	17'-9"	74	5	4	18'-10"	79
5t1	Curtain - Vert.	U	5	9	6'-1"	57	5	10	6'-4"	66	5	10	6'-1"	63	5	11	6'-4"	73	5	11	6'-7"	75	5	11	6'-7"	76
Total Weight (LB)						1187				1496				1352				1588			1876				2351	
Concrete (CY)																										
Footings						5.3				6.8				6.4							8.0				9.1	
Walls						1.8				2.6				1.9							3.6				4.7	
Total						7.1				9.4				8.3						11.6				13.8		

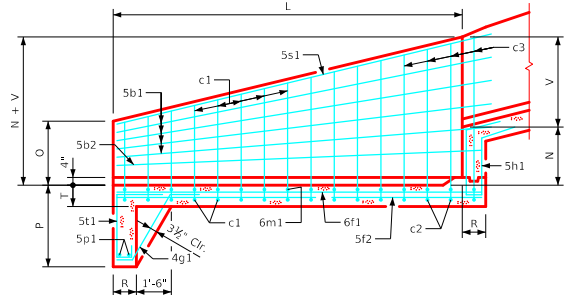
### Variable Dimensions

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-O) (No. of c1 - 1) No. of c1 + c2 - 1

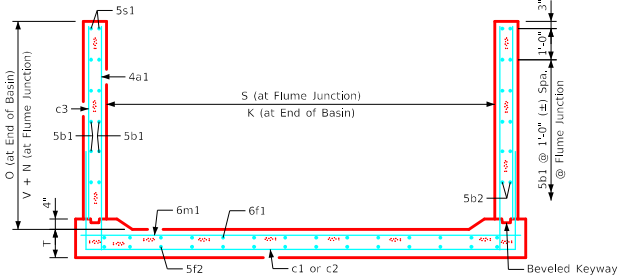
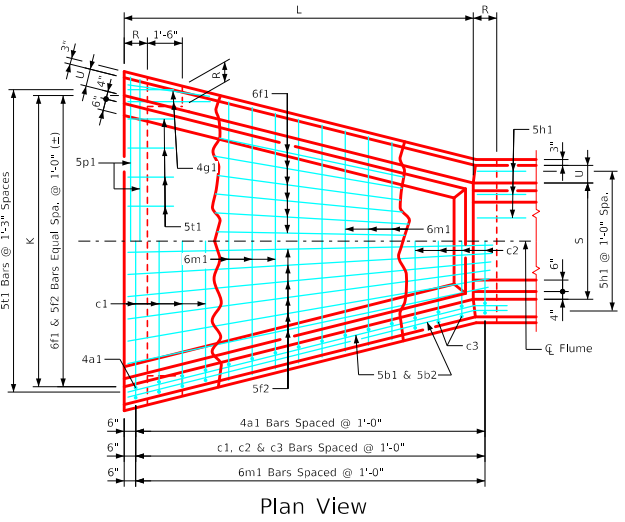
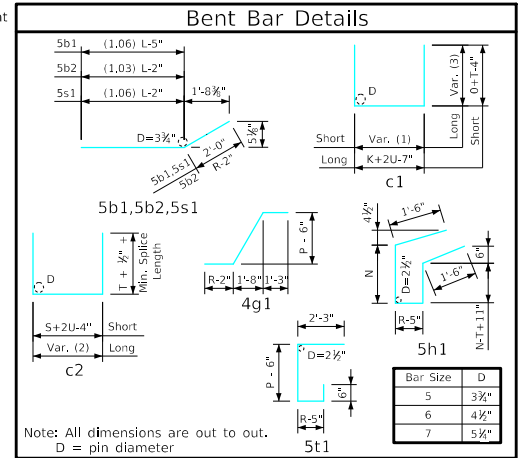
### Table of Flume Basin Dimensions

S x H	K	L	M	N	O	P	R	T	U	V
3' x 3'	9'-6"	13'-0"	2'-3"	2'-0"	1'-1"	3'-6"	9"	11"	9"	2'-3 1/2"
4' x 4'	11'-0"	14'-0"	3'-0"	2'-3"	1'-10"	3'-6"	9"	11"	9"	3'-1 1/2"
5' x 3'	11'-6"	13'-0"	2'-3"	2'-0"	1'-1"	3'-6"	9"	11"	9"	2'-3 1/2"
5' x 4'	12'-0"	14'-0"	3'-0"	2'-3"	1'-10"	3'-6"	9"	11"	9"	3'-1 1/2"
5' x 5'	12'-6"	15'-0"	3'-9"	2'-6"	2'-7"	3'-6"	1'-0"	11"	9"	3'-10 1/2"
5' x 6'	13'-0"	16'-0"	4'-6"	2'-9"	3'-5"	3'-6"	1'-3"	11"	9"	4'-7 1/2"

S = Culvert Span  
H = Culvert Height



**Flume Basin Notes:**  
 1. See Sheet RCF 01-20 for general information.  
 2. c2 & c3 bars are lapped.



LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER

Standard Design  
**Single Reinforced Concrete  
 Box Culverts**  
 December, 2020

**RCFB 01-20**

**Flume Basin  
 Details**

3'-0", 4'-0" & 5'-0" Spans