

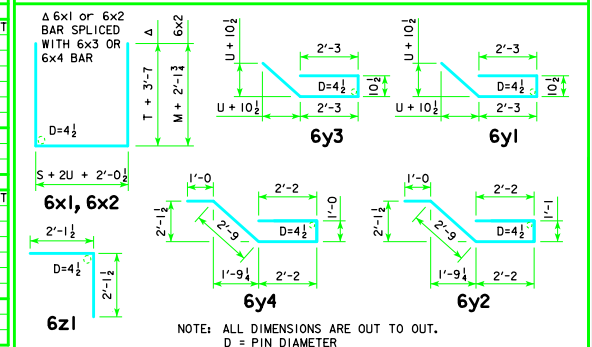
### ESTIMATE OF QUANTITIES - FLUME BELL JOINTS

JUNCTION BELL JOINT		12' x 4'		12' x 5'		12' x 6'		12' x 7'		12' x 8'		12' x 9'		12' x 10'		12' x 11'		12' x 12'											
BAR	LOCATION	SHAPE	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT									
6x1	WALLS & FLOOR		4	25'-1	151	4	25'-1	151	4	25'-1	151	4	25'-3	152	4	25'-3	152	4	25'-5	153	4	25'-7	154						
6x3	WALLS VERT.		8	4'-4	52	8	5'-4	64	8	6'-4	76	8	7'-4	88	8	8'-4	100	8	9'-4	112	8	10'-4	124	8	11'-4	136	8	12'-4	148
6y1	WALLS HORIZ.		12	7'-8	138	14	7'-8	161	16	7'-8	184	18	7'-8	207	20	7'-10	235	22	7'-10	259	24	7'-10	282	26	7'-11	309	28	8'-1	340
6y2	FLOOR VERT.		14	9'-2	193	14	9'-2	193	14	9'-2	193	14	9'-2	193	14	9'-2	193	14	9'-2	193	14	9'-2	193	14	9'-2	193	15	9'-2	207
6z1	FLOOR VERT.		14	4'-3	89	14	4'-3	89	14	4'-3	89	14	4'-3	89	14	4'-3	89	14	4'-3	89	14	4'-3	89	14	4'-3	89	15	4'-3	96
TOTAL WEIGHT (LBS.)					623			658			693			728			769			805			840			880			945
FOOTING					3.3			3.3			3.3			3.3			3.3			3.3			3.3			3.4			3.4
CONCRETE (CY)					1.3			1.6			1.9			2.1			2.4			2.7			3.0			3.3			3.6
TOTAL					4.6			4.9			5.2			5.4			5.7			6.0			6.3			6.6			7.0

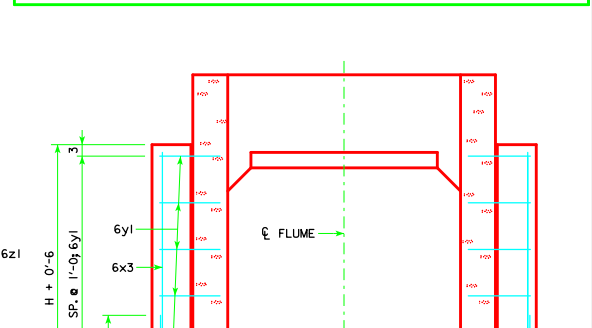
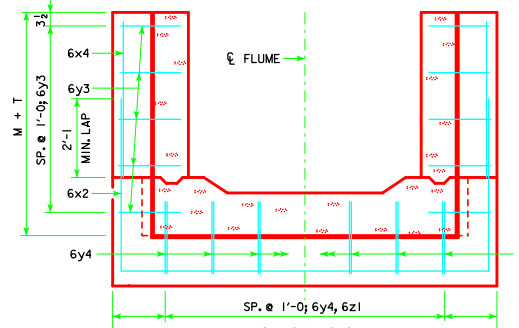
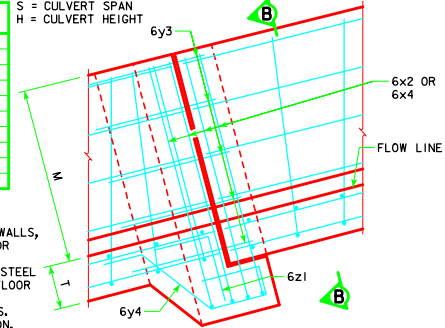
CHUTE BELL JOINT		12' x 4'		12' x 5'		12' x 6'		12' x 7'		12' x 8'		12' x 9'		12' x 10'		12' x 11'		12' x 12'											
BAR	LOCATION	SHAPE	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT									
6x2	WALLS & FLOOR		4	25'-10	155	4	27'-4	164	4	25'-1	151	4	25'-1	151	4	25'-3	152	4	25'-3	152	4	25'-5	153	4	25'-7	154			
6x4	WALLS VERT.		--	--	--	--	--	--	8	4'-0	48	8	4'-9	57	8	5'-6	66	8	6'-3	75	8	7'-0	84	8	7'-9	93	8	8'-6	102
6y3	WALLS HORIZ.		8	7'-8	92	10	7'-8	115	12	7'-8	138	12	7'-8	138	14	7'-10	165	16	7'-10	188	18	7'-10	212	18	7'-11	214	20	8'-1	243
6y4	FLOOR VERT.		14	9'-1	191	14	9'-1	191	14	9'-1	191	14	9'-1	191	14	9'-1	191	14	9'-1	191	14	9'-1	191	14	9'-1	191	15	9'-1	205
6z1	FLOOR VERT.		14	4'-3	89	14	4'-3	89	14	4'-3	89	14	4'-3	89	14	4'-3	89	14	4'-3	89	14	4'-3	89	14	4'-3	89	15	4'-3	96
TOTAL WEIGHT (LBS.)					527			559			617			626			695			728			740			800			800
FOOTING					3.2			3.2			3.2			3.2			3.2			3.2			3.3			3.3			3.3
CONCRETE (CY)					0.8			1.0			1.2			1.4			1.6			1.8			2.0			2.3			2.5
TOTAL					4.0			4.2			4.4			4.6			4.8			5.0			5.2			5.6			5.8

### BENT BAR DETAILS

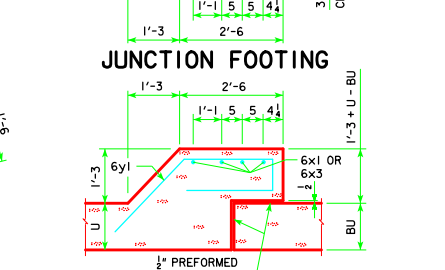
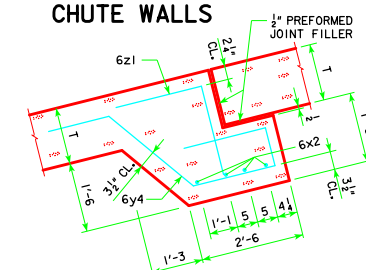
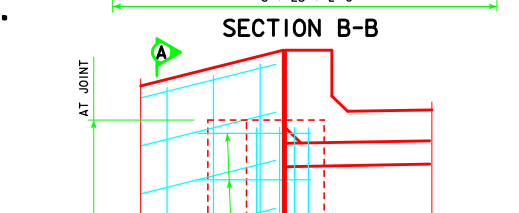
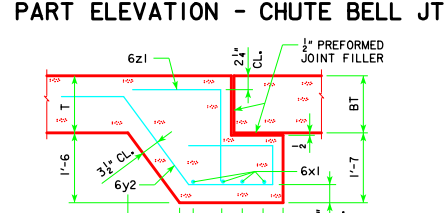
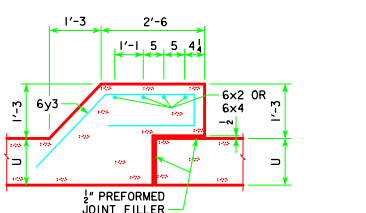


### BARREL & CHUTE DIMENSIONS

S x H	M	T	U	BT	BU
12' x 4'	3'-0	1'-2	0'-9	1'-1	0'-9
12' x 5'	3'-9	1'-2	0'-9	1'-1	0'-9
12' x 6'	4'-6	1'-2	0'-9	1'-1	0'-9
12' x 7'	5'-3	1'-2	0'-9	1'-1	0'-9
12' x 8'	6'-0	1'-2	0'-10	1'-1	0'-9
12' x 9'	6'-9	1'-2	0'-10	1'-1	0'-9
12' x 10'	7'-6	1'-2	0'-10	1'-1	0'-10
12' x 11'	8'-3	1'-2	0'-11	1'-1	0'-11
12' x 12'	9'-0	1'-2	1'-0	1'-1	1'-0



- NOTES:**
- DIMENSIONS AND QUANTITIES SHOWN BASED ON 'U' FLUME WALLS, 'BU' BARREL WALLS, 'T' FLUME FLOOR AND 'BT' BARREL FLOOR THICKNESSES.
  - CHANGE LENGTHS OF BARS 6x1 AND ADJUST REINFORCING STEEL AND CONCRETE QUANTITIES ACCORDINGLY FOR WALL AND FLOOR THICKNESSES OTHER THAN SHOWN.
  - FLOOR BARS m1 ARE TO BE SHORTENED 6" AT BELL JOINTS.
  - SEE STANDARD SHEET RCF-01-12 FOR GENERAL INFORMATION.



ENGLISH:SIGNEDELIMES.DGN - FBJ-05-12 - THIS SHEET ISSUED 04-12.

LATEST REVISION DATE  APPROVED BY BRIDGE ENGINEER 	 STANDARD DESIGN <b>REINFORCED CONCRETE BOX CULVERTS</b> APRIL, 2012	
	<b>FLUME BELL JOINT DETAILS</b> 12' SPAN	<b>FBJ-05-12</b>