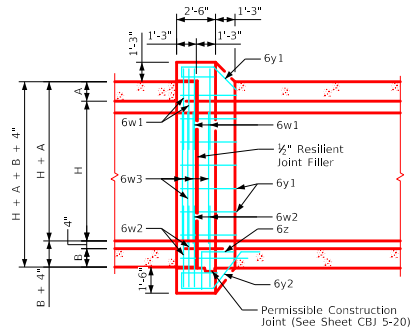
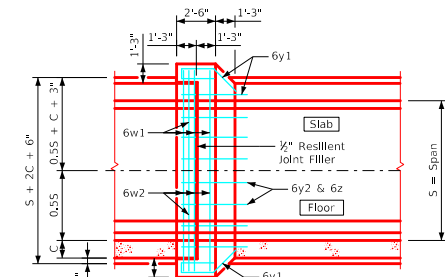


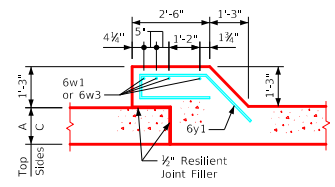
Joint Detail
Section thru Barrel



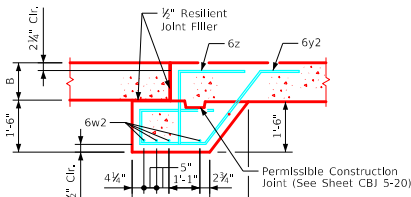
Longitudinal Section



Plan View



Top & Sides - Bars 6y1



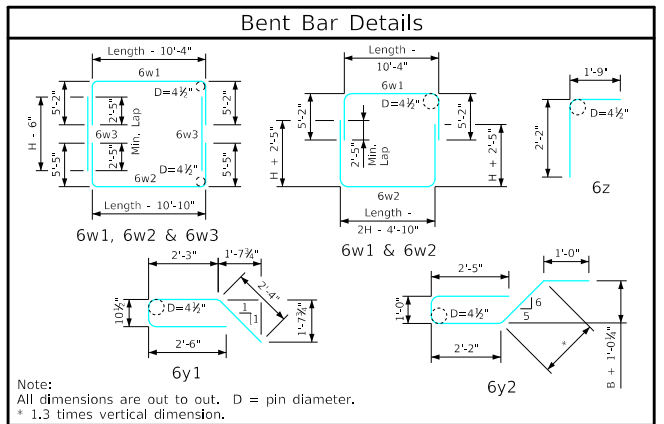
Bottom - Bars 6y2 & 6z

Bill of Reinforcing Steel		10' x 4'		10' x 5'		10' x 6'		10' x 7'		10' x 8'		10' x 9'		10' x 10'		10' x 11'		10' x 12'											
Bar	Location	Shape	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight									
6w1	Slab & Walls		4	23'-10"	143	4	23'-10"	143	4	23'-10"	143	4	23'-11"	144	4	24'-4"	146	4	24'-6"	147	4	24'-9"	149						
6w2	Floor & Walls		4	26'-4"	158	4	28'-4"	170	4	24'-4"	146	4	24'-5"	147	4	24'-10"	149	4	25'-0"	150	4	25'-3"	152						
6w3	Walls		--	--	--	--	--	--	8	5'-6"	66	8	6'-6"	78	8	7'-6"	90	8	8'-6"	102	8	9'-6"	114	8	10'-6"	126	8	11'-6"	138
6y1	Top & Sides		24	8'-0"	288	26	8'-0"	312	28	8'-0"	336	30	8'-0"	360	32	8'-0"	384	34	8'-0"	408	36	8'-0"	432	38	8'-0"	456	40	8'-0"	480
6y2	Bottom		12	9'-6"	171	12	9'-6"	171	12	9'-6"	171	12	9'-7"	173	12	9'-7"	173	12	9'-7"	173	12	9'-7"	173	12	9'-7"	173	12	9'-7"	173
6z	Bottom & Floor		12	3'-11"	71	12	3'-11"	71	12	3'-11"	71	12	3'-11"	71	12	3'-11"	71	12	3'-11"	71	12	3'-11"	71	12	3'-11"	71	12	3'-11"	71
Total Weight (LB)			831		867		933		969		1010		1048		1086		1124		1164		1202		1240						
Total Concrete (CY)			6.2		6.5		6.8		7.1		7.4		7.8		8.1		8.5		8.8		9.2		9.6						

Bill of Reinforcing Steel		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									
6w1	Slab & Walls		4	26'-0"	156	4	26'-0"	156	4	25'-11"	156	4	25'-11"	156	4	26'-4"	158	4	26'-7"	160	4	26'-9"	161	4	26'-9"	161	4	26'-9"	161
6w2	Floor & Walls		4	28'-6"	171	4	30'-6"	183	4	26'-5"	159	4	26'-5"	159	4	26'-10"	161	4	27'-1"	163	4	27'-3"	164	4	27'-3"	164	4	27'-3"	164
6w3	Walls		--	--	--	--	--	--	8	5'-6"	66	8	6'-6"	78	8	7'-6"	90	8	8'-6"	102	8	9'-6"	114	8	10'-6"	126	8	11'-6"	138
6y1	Top & Sides		26	8'-0"	312	28	8'-0"	336	30	8'-0"	360	32	8'-0"	384	34	8'-0"	408	36	8'-0"	432	38	8'-0"	456	40	8'-0"	480	42	8'-0"	504
6y2	Bottom		14	9'-10"	207	14	9'-10"	207	14	9'-10"	207	14	9'-10"	207	14	9'-10"	207	14	9'-10"	207	14	9'-10"	207	14	9'-10"	207	14	9'-10"	207
6z	Bottom & Floor		14	3'-11"	82	14	3'-11"	82	14	3'-11"	82	14	3'-11"	82	14	3'-11"	82	14	3'-11"	82	14	3'-11"	82	14	3'-11"	82	14	3'-11"	82
Total Weight (LB)			928		964		1030		1067		1103		1141		1179		1219		1257		1295		1333						
Total Concrete (CY)			7.0		7.3		7.6		7.9		8.1		8.5		8.8		9.2		9.6		10.0		10.4						

Barrel Size	Barrel Dimension			Bell Joint Quantities (CY)		
	A	B	C	Walls	Walls	Slab
10' x 4'	12.5	14.5	9	2,819	1,047	2,372
10' x 5'	12.5	14.5	9	2,819	1,332	2,372
10' x 6'	12.5	14.5	9	2,819	1,618	2,372
10' x 7'	12.5	14.5	9	2,819	1,903	2,372
10' x 8'	12.5	15	9.5	2,846	2,189	2,383
10' x 9'	12.5	15	10.5	2,874	2,474	2,407
10' x 10'	12.5	15	12	2,917	2,760	2,443
10' x 11'	12.5	15	13	2,946	3,045	2,467
10' x 12'	12.5	15	14.5	2,989	3,331	2,502
12' x 4'	14.5	17	10	3,251	1,047	2,728
12' x 5'	14.5	17	10	3,251	1,332	2,728
12' x 6'	14.5	17	9.5	3,237	1,618	2,717
12' x 7'	14.5	17	9.5	3,237	1,903	2,717
12' x 8'	14.5	17	9.5	3,237	2,189	2,717
12' x 9'	14.5	17	10.5	3,265	2,474	2,740
12' x 10'	14.5	17	12	3,308	2,760	2,776
12' x 11'	14.5	17.5	13.5	3,363	3,045	2,812
12' x 12'	14.5	17.5	14.5	3,392	3,331	2,835

Concrete Placement



Notes:

- Dimensions and quantities shown are based on slab, floor, and wall thicknesses (A, B, and C, respectively). Values for these dimensions, under varying fill conditions, can be found on the RCB culvert barrel detail sheets.
- Change lengths of bars 6w1, 6w2, 6z, and adjust reinforcing steel and concrete quantities accordingly for slab, wall, and floor thicknesses other than shown.
- All bar lengths are estimated with a 2" clearance from concrete edge to outside of bar, except as noted.
- Material and construction to be in accordance with the current Standard Specifications of I.D.O.T.
- See Sheet RCB G2-20 for General Notes, Specifications, and Design Stresses.
- Barrel floor bars m1 & m9 are to be shortened 6" in length at bell joints.
- Dimensions "A", "B" and "C" are in inches. "Length" dimensions in bar lists are in feet and inches.

LATEST REVISION DATE APPROVED BY BRIDGE ENGINEER 	 Standard Design Single Reinforced Concrete Box Culverts July, 2020	
	Culvert Bell Joints	CBJ 3-20
	10' & 12' Spans	