GENERAL DATA & ESTIMATED QUANTITIES FOR BOX CULVERTS UNDER HIGH COVER

MAX. 20 FT. COVER ~ L = 150 FT.

AREA OF OPENING SQ. FT.	SIZE OF CULVERT	MOD. DWG. NO.	"T"	"V"	"W"	BARS "A" SIZE	BARS "A" SPAC. IN.	BARS "B" SIZE	BARS "B" SPAC. IN.	BARS "C" SIZE	BARS "C" SPAC. IN.	BARS "D" SIZE	BARS "D" SPAC. IN.	ESTIMATED QUANTITIES TOTAL CULVERT CONC. CU.YDS.	TOTAL CULVERT REINF. LBS.	PER LIN. FT. BARREL CONC. CU.YDS.	PER LIN. FT. BARREL REINF. LBS.	1 AUX. SLAB "J" CONC. CU.YDS.	1 AUX. SLAB "J" REINF. LBS.
32	4x4																		
40	5x4		6"	6"	1'-0"	#5	1'-2"	#4	8"	#5	1'-2"	#6	1'-2"	112.91	18,825	0.6687	116.22	0.57	34
48	6x4		6½"	6"	1'-0½"	#5	11"	#4	6"	#5	11"	#6	11"	132.21	25,050	0.7886	156.97	0.67	39
64	8x4		8½"	6"	1'-2½"	#6	1'-0"	#4	5"	#6	1'-0"	#8	1'-0"	192.62	36,368	1.1734	230.97	0.86	50
80	10x4		10½"	6½"	1'-4½"	#5	11"	#5	6½"	#7	11"	#8	11"	271.92	47,250	1.6835	302.26	1.07	62
96	12x4		1'-1"	6½"	1'-7"	#6	1'-0"	#5	6½"	#8	1'-0"	#9	1'-0"	374.11	61,880	2.3461	397.90	1.27	73
50	5x5		6"	6"	1'-4"	#4	11"	#4	5"	#5	11"	#5	11"	124.21	22,336	0.7243	137.59	0.57	34
60	6x5		6½"	6"	1'-4½"	#4	11"	#5	7"	#6	11"	#6	11"	143.65	28,356	0.8441	176.80	0.67	39
80	8x5		9"	6½"	1'-7"	#5	11"	#5	7"	#6	11"	#7	11"	217.12	37,369	1.3130	234.94	0.87	51
100	10x5		11"	7"	1'-9"	#5	11"	#5	8"	#7	11"	#8	11"	299.58	50,218	1.8421	319.16	1.07	62
120	12x5		1'-1½"	7"	1'-11½"	#6	11"	#5	6½"	#7	11"	#9	11"	404.24	62,671	2.5193	400.28	1.27	73
72	6x6		6½"	7"	1'-1½"	#4	1'-0"	#5	6½"	#6	1'-0"	#6	1'-0"	170.58	30,412	0.9653	186.53	0.68	40
96	8x6		8½"	7½"	1'-3½"	#5	11"	#6	8"	#6	11"	#7	11"	238.10	41,695	1.3875	259.55	0.88	51
120	10x6		11"	8"	1'-6"	#5	11"	#6	7½"	#7	11"	#8	11"	331.16	54,809	1.9794	344.99	1.09	62
144	12x6		1'-1"	8"	1'-8"	#5	10"	#6	7½"	#7	10"	#9	10"	425.37	67,449	2.5803	427.04	1.28	73
168	14x6		1'-4½"	8"	1'-11½"	#6	1'-0"	#6	7"	#8	1'-0"	#10	1'-0"	576.26	82,286	3.5576	523.31	1.48	85
128	8x8		8½"	8"	1'-8½"	#5	10"	#6	6"	#6	10"	#7	10"	289.34	53,798	1.5864	327.35	0.89	51
160	10x8		10½"	9"	1'-10½"	#6	10"	#7	7"	#7	10"	#8	10"	383.78	74,504	2.1705	462.23	1.09	62
192	12x8		1'-0"	9½"	2'-0"	#7	10"	#7	7"	#7	10"	#9	10"	474.52	90,808	2.7315	568.30	1.30	74
224	14x8		1'-2½"	10"	2'-2½"	#7	10"	#7	7"	#8	10"	#10	10"	605.45	111,718	3.5571	704.87	1.51	85
256	16x8		1'-5	10"	2'-5"	#7	10"	#7	7"	#8	10"	#10	10"	747.87	122,978	4.4598	777.15	1.70	96
200	10x10		10"	10"	2'-10"	#6	10"	#7	7"	#6	10"	#8	10"	427.22	76,817	2.3766	466.24	1.11	63
240	12x10		1'-0½"	10½"	3'-0½"	#6	10"	#7	7"	#7	10"	#9	10"	542.14	93,054	3.1007	571.43	1.31	74
280	14x10		1'-3"	10½"	3'-3"	#6	10"	#7	7"	#8	10"	#9	10"	667.48	109,431	3.8943	677.51	1.51	85
320	16x10		1'-7"	11"	3'-7"	#7	10"	#8	8"	#8	10"	#10	10"	869.61	135,161	5.1929	846.27	1.72	97
360	18x10		1'-10"	11"	3'-10"	#7	10"	#8	8"	#8	10"	#10	10"	1056.27	146,842	6.3920	921.00	1.91	108
288	12x12		1'-0½"	11½"	3'-0½"	#7	10"	#8	7"	#7	10"	#9	10"	615.18	114,840	3.4255	699.56	1.33	74
336	14x12		1'-4"	1'-0"	4'-1"	#7	10"	#8	7"	#8	10"	#9	10"	781.34	133,128	4.4815	817.81	1.53	86
384	16x12		1'-7"	1'-0"	4'-4"	#7	10"	#8	7"	#8	10"	#10	10"	947.15	149,038	5.5371	920.20	1.73	97
432	18x12		1'-11"	1'-0½"	4'-8"	#7	10"	#8	7"	#9	10"	#10	10"	1183.20	172,174	7.0547	1070.62	1.93	108
480	20x12		2'-1"	1'-0½"	4'-10"	#7	10"	#8	7"	#9	10"	#11	10"	1357.30	190,306	8.1675	1188.07	2.13	119

MAX. 25 FT. COVER ~ L = 150 FT.

SIZE OF CULVERT	"T"	"V"	"W"	BARS "A" SIZE	BARS "A" SPAC. IN.	BARS "B" SIZE	BARS "B" SPAC. IN.	BARS "C" SIZE	BARS "C" SPAC. IN.	BARS "D" SIZE	BARS "D" SPAC. IN.	ESTIMATED QUANTITIES TOTAL CULVERT CONC. CU.YDS.	TOTAL CULVERT REINF. LBS.	PER LIN. FT. BARREL CONC. CU.YDS.	PER LIN. FT. BARREL REINF. LBS.	1 AUX. SLAB "J" CONC. CU.YDS.	1 AUX. SLAB "J" REINF. LBS.	SIZE OF CULVERT
4x4	6"	6"	1'-0"	#4	1'-0"	#4	6½"	#4	1'-0"	#5	1'-0"	99.90	16,004	0.5905	98.41	0.47	28	4x4
5x4	6"	6"	1'-0"	#6	1'-4"	#4	6½"	#6	1'-4"	#7	1'-4"	112.91	21,343	0.6687	133.11	0.57	34	5x4
6x4	7"	6"	1'-1"	#5	10"	#4	5"	#5	10"	#7	10"	138.51	27,970	0.8303	176.51	0.67	39	6x4
8x4	9½"	6½"	1'-3½"	#6	11"	#5	6½"	#6	11"	#8	11"	212.84	39,793	1.3072	253.70	0.87	51	8x4
10x4	1'-1"	7"	1'-7"	#5	10"	#5	6"	#7	10"	#8	10"	326.50	51,275	2.0458	328.55	1.07	62	10x4
12x4																		12x4
5x5	6"	6½"	1'-4"	#4	1'-0"	#5	7"	#6	1'-0"	#6	1'-0"	128.44	24,687	0.7521	153.12	0.57	34	5x5
6x5	7"	6½"	1'-5"	#4	10"	#5	6½"	#6	10"	#6	10"	154.30	30,142	0.9144	188.87	0.67	39	6x5
8x5	10"	7"	1'-8"	#5	10"	#5	6½"	#6	10"	#7	10"	238.25	39,963	1.4527	252.57	0.88	51	8x5
10x5	1'-0½"	7½"	1'-10½"	#5	11"	#5	5"	#7	11"	#8	11"	334.92	52,493	2.0762	334.15	1.08	62	10x5
12x5	1'-4½"	7½"	2'-2½"	#6	11"	#5	6"	#7	11"	#9	11"	481.50	64,135	3.0320	409.62	1.28	73	12x5
6x6	7"	7½"	1'-2"	#4	11"	#5	6"	#6	11"	#6	11"	182.09	32,199	1.0409	198.35	0.69	40	6x6
8x6	9½"	8"	1'-4½"	#5	10"	#6	7½"	#6	10"	#7	10"	260.15	44,516	1.5329	278.31	0.89	51	8x6
10x6	1'-1"	8½"	1'-8"	#5	11"	#6	7"	#7	11"	#8	11"	377.94	56,215	2.2889	353.97	1.09	62	10x6
12x6	1'-4½"	8½"	1'-11½"	#5	10"	#6	7"	#7	10"	#9	10"	516.28	69,280	3.1825	438.65	1.29	73	12x6
14x6																		14x6
8x8	9"	8½"	1'-9"	#6	10"	#6	5"	#6	10"	#7	10"	304.60	60,031	1.6860	368.86	0.90	51	8x8
10x8	1'-0"	9½"	2'-0"	#6	10"	#7	6"	#7	10"	#8	10"	422.30	78,323	2.4228	487.98	1.11	63	10x8
12x8	1'-2½"	10"	2'-2½"	#6	10"	#7	6"	#7	10"	#9	10"	543.89	90,034	3.1868	563.35	1.31	74	12x8
14x8	1'-6½"	10½"	2'-6½"	#7	10"	#7	6"	#7	10"	#10	10"	727.81	110,057	4.3615	693.84	1.51	85	14x8
16x8	1'-10"	10½"	2'-10"	#7	10"	#7	6"	#7	10"	#10	10"	917.97	120,931	5.5787	763.45	1.71	96	16x8
10x10	11½"	10½"	2'-11½"	#6	10"	#7	6"	#7	10"	#8	10"	467.54	35,171	2.6401	522.22	1.12	63	10x10
12x10	1'-3½"	11"	3'-3½"	#6	10"	#7	6"	#8	10"	#8	10"	626.34	101,268	3.6520	626.28	1.32	74	12x10
14x10	1'-7"	11"	3'-7"	#6	10"	#7	6"	#8	10"	#8	10"	792.10	114,902	4.7115	713.94	1.52	86	14x10
16x10	1'-10"	11½"	3'-10"	#7	10"	#7	5"	#8	10"	#9	10"	977.24	139,203	5.8997	872.76	1.72	97	16x10
18x10																		
12x12	1'-4"	1'-0½"	4'-1"	#6	10"	#8	7"	#7	10"	#9	10"	724.86	111,238	4.1420	674.86	1.34	75	12x12
14x12	1'-7½"	1'-1"	4'-4½"	#7	10"	#8	6"	#7	10"	#10	10"	904.28	137,549	5.2924	847.46	1.54	86	14x12
16x12	1'-11"	1'-1"	4'-8"	#7	10"	#8	6"	#8	10"	#10	10"	1101.44	157,330	6.5478	975.58	1.74	97	16x12
18x12																		
20x12																		

GENERAL NOTES:

This Drawing Shows The Additional Reinforcing Bars And The Increased Dimensions And Reinforcing Bar Sizes Necessary To Modify A Double Cell Culvert For Cover Less Than Or In Excess Of That Provided By Basic Culvert Drawings.

All Other Dimensions, Reinforcement Details And General Requirements Of Basic Culvert Drawings Shall Apply Except As Specifically Modified By This Drawing And Drawing IWD-3.

Barrel Details Shown On This Drawing Shall Be Used With Cover Less Than 2'-6" And More Than Maximum Shown On Basic Culvert Drawings.

Quantities Shown On This Drawing Are For Culverts With Barrels Per This Drawing And Wings With 3:1 Slope Per This Drawing And Drawing IWD-3.

Quantities Shown On This Drawing Are For Culverts Constructed Normal To The Centerline Of The Roadway.

Quantities Shown On This Drawing For "TOTAL CULVERT" Are For Complete Culvert Of The Length Noted And Include Barrel, Parapets, Wings And Aprons, Cut-Off Walls, Auxiliary Slabs "W" Where Required, And Two Auxiliary Slabs "J".

Quantities Shown On This Drawing Will Be Used As A Basis For Final Payment For Culverts Constructed In Accordance With This Drawing, Drawing IWD-3 And Basic Culvert Drawings.

REVISION	BY

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

BOX CULVERT DRAWING
IBD CULVERTS MODIFIED
FOR HIGH COVER
WINGS WITH 3:1 SLOPE

WORKING NUMBER
SD-IBDM-3WA

SHEET NUMBER

DATE | FILENAME: | DESIGN TEAM | CHECKED | DATE

COUNTY:

DESIGN TEAM:

PROJECT NO.:

FILENAME: