GENERAL DATA & ESTIMATED QUANTITIES FOR BOX CULVERTS UNDER HIGH COVER

LESS THAN 2'-6" COVER ~ L = 150 FT.

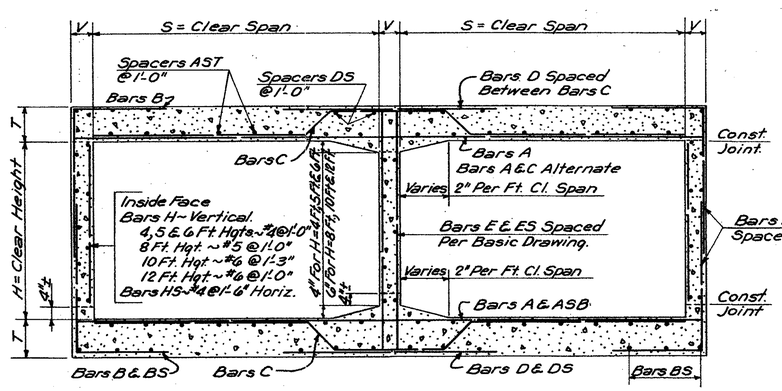
AREA OF OPENING SQ. FT.	SIZE OF CULVERT	MOD. DWG. NO.	"T"	"V"	"W"	BARS "A" SIZE	BARS "A" SPAC. IN.	BARS "B" SIZE	BARS "B" SPAC. IN.	BARS "C" SIZE	BARS "C" SPAC. IN.	BARS "D" SIZE	BARS "D" SPAC. IN.	ESTIMATED QUANTITIES TOTAL CULVERT CONC. CU. YDS.	TOTAL CULVERT REINF. LBS.	PER LIN. FT. BARREL CONC. CU. YDS.	PER LIN. FT. BARREL REINF. LBS.	1 AUX. SLAB "J" CONC. CU. YDS.	1 AUX. SLAB "J" REINF. LBS.	SIZE OF CULVERT
32	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
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	5x4
48	6x4		6"	6"	1'-0"	#5	1'-1"	#4	8"	#5	1'-1"	#6	1'-1"	125.94	22,177	0.7470	138.13	0.67	39	6x4
64	8x4		7½"	6"	1'-1½"	#5	1'-0"	#4	6½"	#5	1'-0"	#7	1'-0"	176.33	29,165	1.0653	183.07	0.86	50	8x4
80	10x4		8"	6"	1'-2"	#5	1'-1"	#4	6½"	#7	1'-1"	#7	1'-1"	217.90	38,521	1.3251	244.39	1.06	62	10x4
96	12x4		10"	6"	1'-4"	#5	1'-0"	#4	6½"	#7	1'-0"	#8	1'-0"	298.70	48,245	1.8457	307.09	1.26	73	12x4
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	5x5
60	6x5		6"	6"	1'-4"	#4	10"	#4	6"	#5	10"	#6	10"	137.36	25,605	0.8025	158.50	0.67	39	6x5
80	8x5		8"	6"	1'-6"	#4	10"	#4	5"	#6	10"	#6	10"	196.23	34,522	1.1749	216.18	0.86	50	8x5
100	10x5		8"	6"	1'-6"	#5	1'-1"	#5	8½"	#7	1'-1"	#7	1'-1"	229.94	41,347	1.3806	260.84	1.06	62	10x5
120	12x5		10"	6"	1'-8"	#5	11"	#5	8½"	#7	11"	#8	11"	311.08	53,905	1.9013	342.52	1.26	73	12x5
140	14x5		1'-0"	6"	1'-10"	#5	10"	#5	8"	#7	10"	#8	10"	407.01	65,301	2.5206	416.08	1.46	84	14x5
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	6x6
96	8x6		7½"	7"	1'-2½"	#4	10"	#5	6½"	#6	10"	#6	10"	216.27	38,050	1.2435	235.49	0.88	51	8x6
120	10x6		8½"	6½"	1'-3½"	#5	1'-2"	#6	9½"	#7	1'-2"	#7	1'-2"	264.13	44,591	1.5369	276.55	1.07	62	10x6
144	12x6		10"	6½"	1'-5"	#5	1'-1"	#6	9½"	#7	1'-1"	#9	1'-1"	336.47	55,019	1.9923	345.20	1.27	73	12x6
168	14x6		1'-0"	7"	1'-7"	#5	10"	#6	9½"	#7	10"	#9	10"	439.35	70,044	2.6502	442.57	1.47	84	14x6
192	16x6		1'-2"	7"	1'-9"	#6	1'-0"	#6	9"	#8	1'-0"	#9	1'-0"	551.62	83,314	3.3714	529.57	1.67	95	16x6
128	8x8		8"	7½"	1'-8"	#5	10"	#6	7"	#5	10"	#7	10"	274.23	48,649	1.4877	292.77	0.88	51	8x8
160	10x8		9½"	8½"	1'-9½"	#6	10"	#7	8"	#6	10"	#8	10"	356.03	67,450	1.9888	415.76	1.09	62	10x8
192	12x8		9½"	8"	1'-9½"	#6	10"	#7	9"	#6	10"	#8	10"	392.13	72,546	2.1913	448.38	1.28	73	12x8
224	14x8		11½"	8½"	1'-11½"	#6	10"	#7	9"	#7	10"	#9	10"	498.46	89,537	2.8546	558.99	1.49	85	14x8
256	16x8		1'-1"	8½"	2'-1"	#7	10"	#7	9"	#7	10"	#9	10"	596.87	104,775	3.4669	658.03	1.69	96	16x8
200	10x10		9"	9"	2'-9"	#6	10"	#7	7"	#6	10"	#8	10"	388.95	76,220	2.1312	462.37	1.10	63	10x10
240	12x10		10½"	8½"	2'-10½"	#6	10"	#7	8"	#6	10"	#8	10"	458.68	81,477	2.5544	495.11	1.29	73	12x10
280	14x10		11½"	8½"	2'-11½"	#6	10"	#7	8"	#7	10"	#8	10"	532.87	95,266	3.0120	584.19	1.49	85	14x10
320	16x10		1'-1½"	9"	3'-1½"	#6	10"	#8	9"	#7	10"	#9	10"	655.24	111,141	3.7863	688.77	1.69	96	16x10
360	18x10		1'-3½"	9½"	3'-3½"	#6	10"	#8	9"	#8	10"	#9	10"	793.02	128,948	4.6624	804.62	1.90	107	18x10
288	12x12		10"	9½"	3'-7"	#6	10"	#8	9"	#6	10"	#8	10"	513.20	92,856	2.7577	555.96	1.30	74	12x12
336	14x12		1'-0"	10"	3'-9"	#6	10"	#8	9"	#7	10"	#9	10"	624.67	110,120	3.4568	667.84	1.51	85	14x12
384	16x12		1'-1½"	10"	3'-10½"	#7	10"	#8	9"	#7	10"	#9	10"	725.37	126,276	4.0849	772.36	1.70	96	16x12
432	18x12		1'-3½"	10½"	4'-0½"	#7	10"	#8	8"	#8	10"	#10	10"	865.74	153,525	4.9733	948.75	1.91	108	18x12
480	20x12		1'-5½"	10½"	4'-2½"	#7	10"	#8	8"	#8	10"	#10	10"	1010.94	165,372	5.8947	1024.40	2.11	119	20x12

MAX. 10 FT. COVER ~ L = 150 FT.

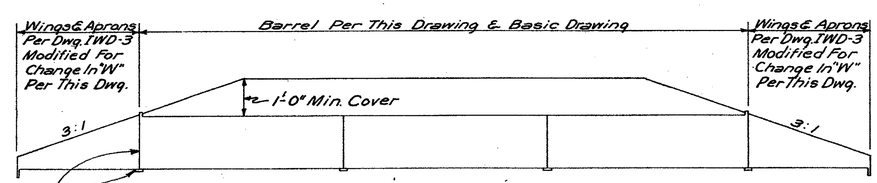
SIZE OF CULVERT	"T"	"V"	"W"	BARS "A" SIZE	BARS "A" SPAC. IN.	BARS "B" SIZE	BARS "B" SPAC. IN.	BARS "C" SIZE	BARS "C" SPAC. IN.	BARS "D" SIZE	BARS "D" SPAC. IN.	ESTIMATED QUANTITIES TOTAL CULVERT CONC. CU. YDS.	TOTAL CULVERT REINF. LBS.	PER LIN. FT. BARREL CONC. CU. YDS.	PER LIN. FT. BARREL REINF. LBS.	1 AUX. SLAB "J" CONC. CU. YDS.	1 AUX. SLAB "J" REINF. LBS.	SIZE OF CULVERT
4x4																		4x4
5x4																		5x4
6x4																		6x4
8x4																		8x4
10x4	8"	6"	1'-2"	#5	1'-1"	#4	6½"	#7	1'-1"	#7	1'-1"	217.90	38,521	1.3251	244.39	1.06	62	10x4
12x4	10"	6"	1'-4"	#5	1'-0"	#4	6½"	#7	1'-0"	#8	1'-0"	298.70	48,245	1.8457	307.09	1.26	73	12x4
5x5																		5x5
6x5																		6x5
8x5																		8x5
10x5	8"	6"	1'-6"	#5	1'-1"	#5	8½"	#7	1'-1"	#7	1'-1"	229.94	41,347	1.3806	260.84	1.06	62	10x5
12x5	10"	6"	1'-8"	#5	11"	#5	8½"	#7	11"	#8	11"	311.08	53,905	1.9013	342.52	1.26	73	12x5
14x5	1'-0"	6"	1'-10"	#5	10"	#5	8"	#7	10"	#8	10"	407.01	65,301	2.5206	416.08	1.46	84	14x5
6x6																		6x6
8x6																		8x6
10x6	8½"	6½"	1'-3½"	#5	1'-2"	#6	9½"	#7	1'-2"	#7	1'-2"	264.13	44,591	1.5369	276.55	1.07	62	10x6
12x6	10"	6½"	1'-5"	#5	1'-1"	#6	9½"	#7	1'-1"	#9	1'-1"	336.47	55,019	1.9923	345.20	1.27	73	12x6
14x6	1'-0"	7"	1'-7"	#5	10"	#6	9½"	#7	10"	#8	10"	439.35	70,044	2.6502	442.57	1.47	84	14x6
16x6	1'-2"	7"	1'-9"	#6	1'-0"	#6	9"	#8	1'-0"	#9	1'-0"	551.62	83,314	3.3714	529.57	1.67	95	16x6
8x8																		8x8
10x8																		10x8
12x8	9½"	8"	1'-9½"	#6	10"	#7	9"	#6	10"	#8	10"	392.13	72,546	2.1913	448.38	1.28	73	12x8
14x8	11½"	8½"	1'-11½"	#6	10"	#7	9"	#7	10"	#9	10"	498.46	89,537	2.8546	558.99	1.49	85	14x8
16x8	1'-1"	8½"	2'-1"	#7	10"	#7	9"	#7	10"	#9	10"	596.87	104,775	3.4669	658.03	1.69	96	16x8
10x10																		10x10
12x10	10½"	8½"	2'-10½"	#6	10"	#7	8"	#6	10"	#8	10"	458.68	81,477	2.5544	495.11	1.29	73	12x10
14x10	11½"	8½"	2'-11½"	#6	10"	#7	8"	#7	10"	#8	10"	532.87	95,266	3.0120	584.19	1.49	85	14x10
16x10	1'-1½"	9"	3'-1½"	#6	10"	#8	9"	#7	10"	#9	10"	655.24	111,141	3.7863	688.77	1.69	96	16x10
18x10	1'-3½"	9½"	3'-3½"	#6	10"	#8	9"	#8	10"	#9	10"	793.02	128,948	4.6624	804.62	1.90	107	18x10
12x12	10"	9½"	3'-7"	#6	10"	#8	9"	#6	10"	#8	10"	513.20	92,856	2.7577	555.96	1.30	74	12x12
14x12	1'-0"	10"	3'-9"	#6	10"	#8	9"	#7	10"	#9	10"	624.67	110,120	3.4568	667.84	1.51	85	14x12
16x12	1'-1½"	10"	3'-10½"	#7	10"	#8	9"	#7	10"	#9	10"	725.37	126,276	4.0849	772.36	1.70	96	16x12
18x12	1'-3½"	10½"	4'-0½"	#7	10"	#8	8"	#8	10"	#10	10"	865.74	153,525	4.9733	948.75	1.91	108	18x12
20x12	1'-5½"	10½"	4'-2½"	#7	10"	#8	8"	#8	10"	#10	10"	1010.94	165,372	5.8947	1024.40	2.11	119	20x12

MAX. 15 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																		4x4
5x4																		5x4
6x4	6"	6"	1'-0"	#5	1'-1"	#4	8"	#5	1'-1"	#6	1'-1"	125.94	22,177	0.7470	138.13	0.67	39	6x4
8x4	7½"	6"	1'-1½"	#5	1'-0"	#4	6½"	#5	1'-0"	#7	1'-0"	176.33	29,165	1.0653	183.07	0.86	50	8x4
10x4	9½"	6"	1'-3½"	#5	1'-0"	#4	5"	#7	1'-0"	#8	1'-0"	247.88	43,307	1.5242	275.62	1.06	62	10x4
12x4	11½"	6"	1'-5½"	#5	10"	#5	7½"	#7	10"	#8	10"	394.21	56,362	2.0817	360.99	1.26	73	12x4
5x5																		5x5
6x5	6"	6"	1'-4"	#4	10"	#4	6"	#5	10"	#6	10"	137.36	25,605	0.8025	158.50	0.67	39	6x5
8x5	8"	6"	1'-6"	#4	10"	#4	5"	#6	10"	#6	10"	196.23	34,522	1.1749	216.18	0.86	50	8x5
10x5	9½"	6½"	1'-7½"	#5	1'-0"	#5	7"	#7	1'-0"	#8	1'-0"	264.62	46,254	1.6103	292.43	1.07	62	10x5
12x5	1'-0"	6½"	1'-10"	#5	10"	#5	7½"	#7	10"	#8	10"	363.42	58,534	2.2485	372.64	1.27	73	12x5
14x5	1'-2"	6½"	2'-0"	#6	1'-0"	#5	6½"	#8	1'-0"	#9	1'-0"	466.98	72,173	2.9188	461.95	1.46	84	14x5
6x6																		6x6
8x6	7½"	7"	1'-2½"	#4	10"	#5	6½"	#6	10"	#6	10"	216.27	38,050	1.2435	235.49	0.88	51	8x6
10x6	9½"	7"	1'-4½"	#5	1'-0"	#6	8"	#7	1'-0"	#8	1'-0"	289.65	51,240	1.7055	321.14	1.07	62	10x6
12x6	1'-0"	7"	1'-7"	#5	1'-0"	#6	8"	#7	1'-0"	#9	1'-0"	389.84	59,800	2.3457	376.11	1.27	73	12x6
14x6	1'-2"	7½"	1'-9"	#6	1'-0"	#6	8"	#8	1'-0"	#9	1'-0"	500.61	77,234	3.0561	490.18	1.48	84	14x6
16x6	1'-4"	7½"	1'-11"	#6	11"	#6	7½"	#8	11"	#10	11"	620.49	94,150	3.8281	601.05	1.67	95	16x6
8x8	8"	7½"	1'-8"	#5	10"	#6	7"	#5	10"	#7	10"	274.23	48,649	1.4877	292.77	0.88	51	8x8
10x8	9½"	8½"	1'-9½"	#6	10"	#7	8"	#6	10"	#8	10"	356.03	67,450	1.9888	415.76	1.09	62	10x8
12x8	10½"	9"	1'-10½"	#6	10"	#7	8"	#7	10"	#8	10"	430.44	80,170	2.4421	498.00	1.30	74	12x8
14x8	1'-1"	9"	2'-1"	#7	10"	#7	8"	#7	10"	#9	10"	548.05	98,179	3.1805	615.28	1.49	85	14x8
16x8	1'-3"	9"	2'-3"	#6	10"	#7	8"	#8	10"	#9	10"	668.29	108,838	3.9369	683.67	1.69	96	16x8
10x10	9"	9"	2'-9"	#6	10"	#7	7"	#6	10"	#8	10"	382.95	76,220	2.1312	462.37	1.10	63	10x10
12x10	11½"	9½"	2'-11½"	#6	10"	#7	7"	#7	10"	#9	10"	500.18	92,400	2.8260	567.19	1.30	74	12x10
14x10	1'-1½"	9½"	3'-1½"	#6	10"	#7	7"	#7	10"	#9	10"	606.91	101,922	3.4973	627.65	1.50	84	14x10
16x10	1'-4"	10"	3'-4"	#7	10"	#8	8"	#7	10"	#10	10"	753.64	126,170	4.4320	786.81	1.70	96	16x10
18x10	1'-6"	10"	3'-6"	#6	10"	#8	8"	#8	10"	#10	10"	892.31	137,642	5.3148	860.32	1.90	107	18x10
12x12	11½"	10½"	3'-10½"	#6	10"	#8	8"	#7	10"	#8	10"	570.00	102,087	3.1307	615.48	1.31	74	12x12
14x12	1'-1½"	11"	3'-10½"	#6	10"	#8	8"	#7	10"	#9	10"	688.04	120,568	3.8712	735.36	1.52	86	14x12
16x12	1'-3½"	11"	4'-0½"	#7	10"	#8	8"	#8	10"	#10	10"	811.11	142,575	4.6460	878.66	1.72	97	16x12
18x12	1'-6"	11½"	4'-3"	#7	10"	#8	8"	#8	10"	#11	10"	977.87	168,123	5.7083	1045.54	1.92	108	18x12
20x12	1'-8"	11½"	4'-5"	#7	10"	#8	8"	#9	10"	#11	10"	1132.86	182,724	6.6945	1139.52	2.12	119	20x12

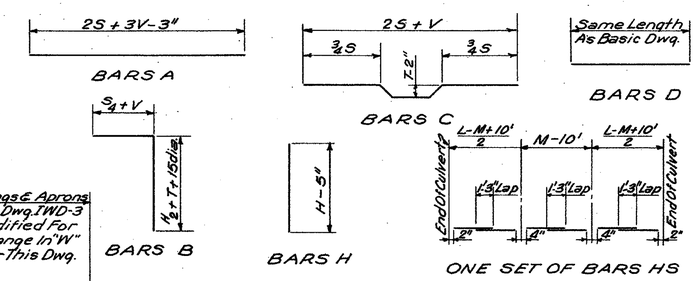


TYPICAL CROSS SECTION



SIDE ELEVATION OF CULVERT
See Drawing IBJL-1 For Joint Locations.

NOTE:
Auxiliary Slabs "W" And Vertical Construction Joints At The Wings Are Required Only Where Called For By The Basic Drawing And Auxiliary Slabs "W" Are Not To Be Used For Culvert Heights Of Less Than 8 Ft.



BAR BENDING DETAILS
Dimensions Are Out To Out

DATE	REVISION	BY

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

BOX CULVERT DRAWING

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

WORKING NUMBER: SD-IBDM-3W

SHEET NUMBER

FILENAME:

DESIGN TEAM _____ CHECKED _____ DATE _____

COUNTY:

DESIGN TEAM:

PROJECT NO.:

FILENAME: