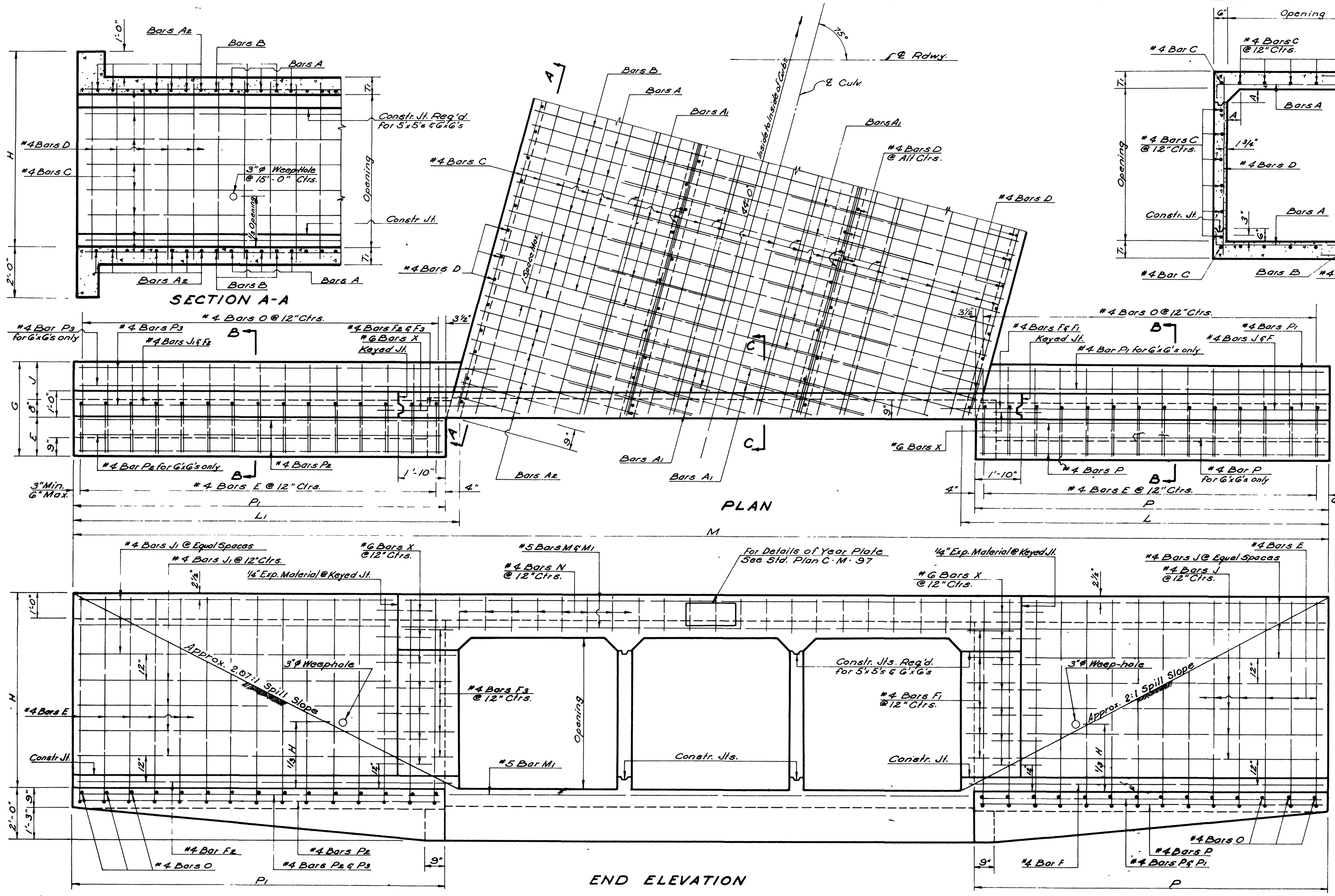
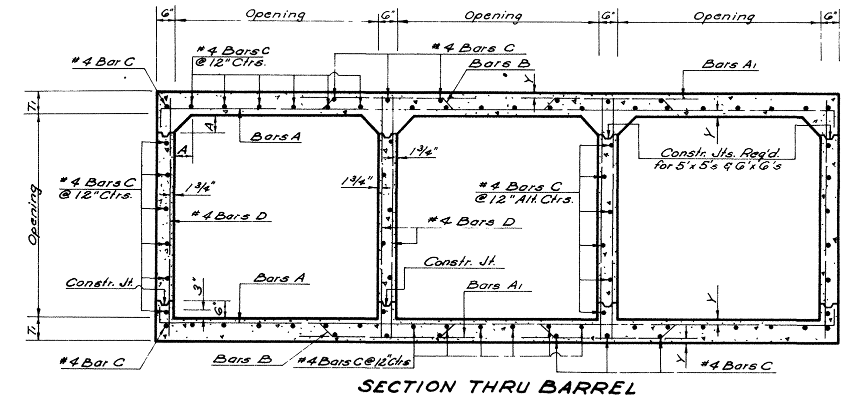
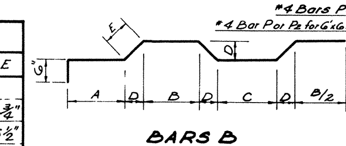
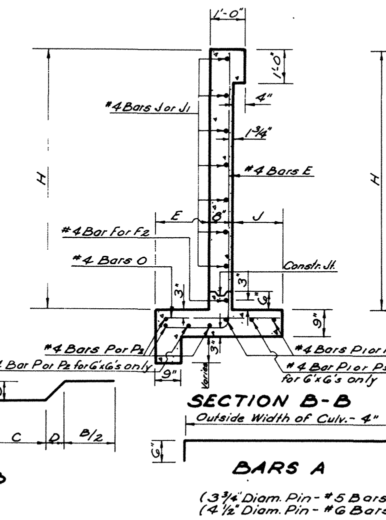
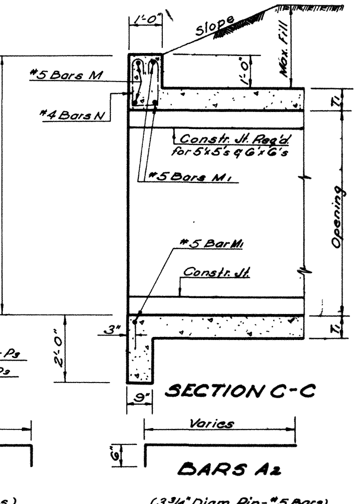




DIMENSIONS FOR BARS B						
SIZE	PIN DIAM.	A	B	C	D	E
4'x4'	3¾	3'-2 5/16"	2'-2 5/8"	1'-8 5/8"	3 3/8"	4¾"
5'x5'	3¾	3'-11 1/16"	2'-8 1/8"	2'-2 1/8"	3 7/8"	5½"
G'xG'	4½	4'-7 7/8"	3'-1 3/4"	2'-7 3/4"	4¼"	6"







OPENINGS			DIMENSIONS														QUANTITIES				OPENINGS	
			MAX. FILL		BARREL			WINGS AND CURB									PER LIN. FT. OF BARREL		44'-0" CULVERT (ALONG ℄)			
SIZE FEET	NO.	AREA SQ.FT.	SLAB FEET	WALL FEET	T1 IN.	A IN.	Y IN.	E FT-IN.	J FT-IN.	G FT-IN.	H FT-IN.	L FT-IN	L1 FT-IN	P FT-IN.	P1 FT-IN.	M FT.-IN.	STEEL LBS.	CONC. CU.YDS.	STEEL LBS.	CONC. CU.YDS.	NO.	SIZE FEET
4x4	2	32	25													29-3 1/8	85.96	0.6409	4,755	40.73	2	4x4
	3	48														33-10 15/16	128.46	0.9136	6,853	54.01	3	
	4	64	32	13	7	4	1 13/16	1-3	0-10	2-9	5-7	10-1/4	10-4¼	9-7	9-10	38-6 13/16	170.96	1.1862	8,917	67.28	4	
	5	80														43-2¾	213.46	1.4589	10,979	80.55	5	
	6	96														47-10⅜	255.96	1.7315	13,145	93.82	6	
5x5	2	50	21													36-1 13/16	114.35	0.8231	6,340	53.71	2	5x5
	3	75														41-10 3/16	171.39	1.1767	9,135	70.87	3	
	4	100	27	7	7½	5	1 13/16	1-5	1-2	3-3	6-7½	12-2¼	13-1/4	11-8	12-7	47-6¼	228.43	1.5303	11,901	88.02	4	
	5	125														53-2⅞	285.48	1.8840	14,777	105.16	5	
	6	150														58-11 5/16	342.52	2.2377	17,547	122.31	6	
GxG	2	72	15													42-4 7/16	138.58	1.0185	7888	67.63	2	GxG
	3	108														49-1 7/16	207.75	1.4599	11264	88.96	3	
	4	144	20	5	8	6	1⅞	1-7	1-6	3-9	7-8	14-4 3/16	15-1 3/16	13-10	14-7	55-10 3/16	276.92	1.9012	14712	110.29	4	
	5	180														62-6 5/16	346.09	2.3426	18158	131.62	5	
	6	216														69-3 1/16	415.26	2.7839	21729	152.96	6	

BILL OF REINFORCING STEEL FOR 44'-0" CULVERT

BARREL REINFORCEMENT

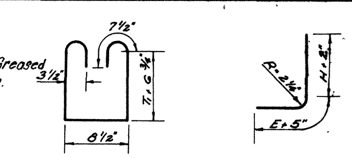
OPENINGS		BARS A				BARS A1				BARS A2						BARS B				#4 BARS D			#4 BARS C	
SIZE FEET	NO.	SIZE	NO.	LGTH. FT-IN.	SPAC. IN.	SIZE	NO.	LGTH. FT-IN	SPAC. IN.	SIZE	NO.	SHORT BAR FT-IN.	VAR. IN.	LONG BAR FT-IN.	SPAC. IN.	SIZE	NO.	LGTH. FT-IN.	SPAC. IN.	NO.	LGTH. FT-IN.	SPAC. IN.	NO.	① LGTH. FT-IN.
4x4	2	#5	86	10-2	12	#5	90	3-10	6/12	#5	16	3-0	22.3333	8-7	6	#5	88	10-4⅜	12	138	4-10	12	38	47-2
	3	#5	84	14-8	12	#5	192	3-10	6/12	#5	28	3-0	22.3333	14-2	6	#5	84	15-1½	12	184	4-10	12	56	47-2
	4	#5	82	19-2	12	#5	294	3-10	6/12	#5	36	3-0	22.3750	17-11	6	#5	82	19-10¼	12	230	4-10	12	74	47-2
	5	#5	80	23-8	12	#5	390	3-10	6/12	#5	44	3-0	22.4000	21-8	6	#5	80	24-7	12	276	4-10	12	92	47-2
	6	#5	76	28-2	12	#5	512	3-10	6/12	#5	56	3-0	22.3846	27-3	6	#5	78	29-3¾	12	322	4-10	12	110	47-2
5x5	2	#5	102	12-2	10	#5	110	4-4	5/10	#5	24	3-0	18.6000	10-9	5	#5	104	12-5¼	10	138	5-11	12	45	47-2
	3	#5	98	17-8	10	#5	232	4-4	5/10	#5	40	3-0	18.6667	17-0	5	#5	100	18-2½	10	184	5-11	12	66	47-2
	4	#5	96	23-2	10	#5	356	4-4	5/10	#5	52	3-0	18.6667	21-8	5	#5	96	23-11¾	10	230	5-11	12	87	47-2
	5	#5	92	28-8	10	#5	496	4-4	5/10	#5	68	3-0	18.6875	27-11	5	#5	92	29-9	10	276	5-11	12	108	47-2
	6	#5	88	34-2	10	#5	624	4-4	5/10	#5	80	3-0	18.6842	32-7	5	#5	90	35-6¼	10	322	5-11	12	129	47-2
GxG	2	#G	74	14-2	14	#G	82	5-2	7/14	#G	20	3-0	26.2500	11-9	7	#G	74	14-5¼	14	168	7-0	10	52	47-2
	3	#G	70	20-8	14	#G	168	5-2	7/14	#G	32	3-0	26.1429	18-3	7	#G	72	21-3	14	224	7-0	10	76	47-2
	4	#G	68	27-2	14	#G	264	5-2	7/14	#G	44	3-0	26.1000	24-9	7	#G	68	28-0½	14	280	7-0	10	100	47-2
	5	#G	64	33-8	14	#G	360	5-2	7/14	#G	56	3-0	26.1538	31-4	7	#G	66	34-10	14	336	7-0	10	124	47-2
	6	#G	62	40-2	14	#G	470	5-2	7/14	#G	68	3-0	26.1250	37-10	7	#G	62	41-7½	14	392	7-0	10	148	47-2

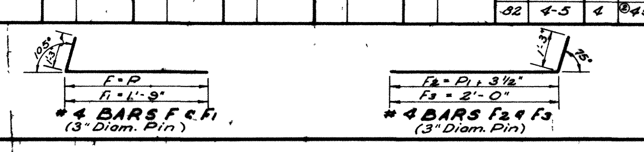
WINGS AND CURBS REINFORCEMENT

OPENINGS		#4 BARS E		#4 BARS F		#4 BARS F1		#4 BARS F2		#4 BARS F3		#4 BARS J		#4 BARS J1		#4 BARS O		#4 BARS P		#4 BARS P1		#4 BARS P2		#4 BARS P3		#4 BARS N		#5 BARS M		#5 BARS M1		#6 BARS X (A)	
SIZE FEET	NO.	NO.	LGTH FT-IN	NO.	LGTH. FT-IN.	NO.	LGTH. FT-IN.	NO.	LGTH. FT-IN.	NO.	LGTH. FT-IN.	NO.	LGTH. FT-IN.	NO.	LGTH. FT-IN.	NO.	LGTH. FT-IN.	NO.	LGTH. FT-IN.	NO.	LGTH. FT-IN.	NO.	LGTH. FT-IN.	NO.	LGTH. FT-IN.	NO.	LGTH. FT-IN.	NO.	LGTH. FT-IN	NO.	LGTH. FT-IN.	NO.	LGTH. FT-IN.
4x4	2	40	7-5	2	10-10	8	3-0	2	11-4½	8	3-3	10	7-5	10	7-8	40	2-4	6	9-3	4	10-10	6	9-6	4	11-6	20	4-3	4	12-11	6	9-6	20	2-0
	3																									30	4-3	4	17-7	6	14-1	20	2-0
	4																									38	4-3	4	22-3	6	18-9	20	2-0
	5																									48	4-3	4	26-11	6	23-5	20	2-0
	6																									58	4-3	4	31-7	6	28-1	20	2-0
5x5	2	50	8-7½	2	12-11	10	3-0	2	14-1½	10	3-3	12	9-6	12	10-5	50	2-10	6	11-4	4	12-11	6	12-3	4	14-4	24	4-4	4	15-0	6	11-6	24	2-0
	3																									36	4-4	4	20-8	6	17-3	24	2-0
	4																									48	4-4	4	26-5	6	22-11	24	2-0
	5																									58	4-4	4	32-1	6	28-7	24	2-0
	6																									70	4-4	4	37-9	6	34-4	24	2-0
GxG	2	58	9-10	2	15-1	12	3-0	2	16-1½	12	3-3	14	11-8	14	12-5	58	3-4	8	13-6	6	15-1	8	14-3	6	16-5	28	4-5	4	17-1	6	13-7	28	2-0
	3																									42	4-5	4	23-10	6	20-4	28	2-0
	4																									56	4-5	4	30-6	6	27-1	28	2-0
	5																									68	4-5	4	37-3	6	33-9	28	2-0
	6																									82	4-5	4	②45-10	6	②42-4	28	2-0

① Includes 1'-6" Lap Splice
② Includes 1'-10" Lap Splice

(A) 6 Bars X to be ¾" ø Smooth and Greased for 1'-0" of Length.





GENERAL NOTES:

Construction Specifications: Latest Approved La. Dept. of Highways Standard Specifications.
Design Specifications: A.A.S.H.O. 1961 as amended by Int. Spec. 1964. Live Load HS 20-44, or Military Loading, whichever is greater.
All Concrete to be Class "A".
All exposed Corners to have ¾" Chamfer, unless otherwise noted.
Reinforcement Shall be Billet-Steel A.S.T.M. A 615 or Rail-Steel A.S.T.M. A 616 or Axle-Steel A.S.T.M. A 617.
Dimensions relating to Reinforcing Steel are to bar centers.
A 1'-6" Square of Plastic Filter Cloth (See Qualified Products List) shall be placed in contact with Concrete behind each Weep Hole, in addition to approx. 2 Cu. Ft. of Concrete Sand.
For Detail of Joints, See Std. Plan C.M.-49.

Date	Description	By	Date	Description	By
5-30-75	Revised Spill Slope	W.T.J.	1-11-[illegible]	Rev. Weep Hole Note	W.T.J.
6-8-72	Rev. General Notes for Steel	W.E.M.			
3-2-67	Added Axle Steel	W.E.M.			

DATE	DESCRIPTION	BY
8/15/66	3-4'x4' Revised Total Steel	N.K.B.
12-14-64	4'x 5' Spans Revised to Military Loading	W.E.M.
4-8-64	DEFORMED DOWELS 'X' TO SMOOTH	W.E.M.
3-11-63	4'x4' & 5'x5' Added	W.E.M.

REVISIONS

STANDARD PLAN
MULTIPLE OPENINGS
REINF. CONCRETE BOX CULVERT
STRAIGHT WINGS 75° CROSSING
DATED Jan. 26, 1962 4'x4' 5'x5' 6'x6'

STATE OF LOUISIANA
DEPARTMENT OF HIGHWAYS

DESIGNED M. Yoshii	DETAILED M. Yoshii	TRACED [illegible]
CHECKED A. A. Nestor	CHECKED W.E. Marcum	CHECKED W.E. Marcum

STATE PROJECT	PARISH	SHEET NO.

Original Signed by Chief Engineer

C·C·S·M·4-6·S·75°·1

C·C·S·M·4-6·S·75°·1