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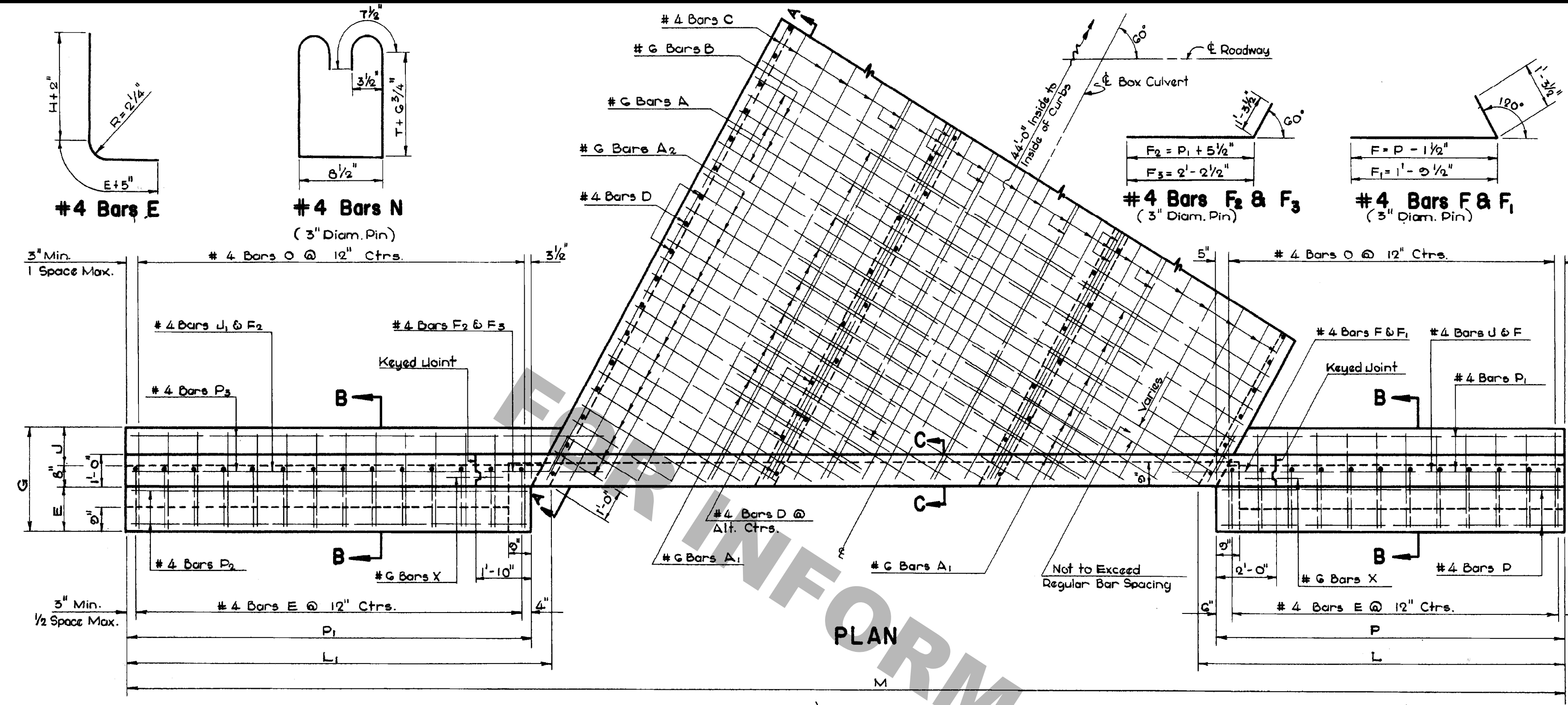
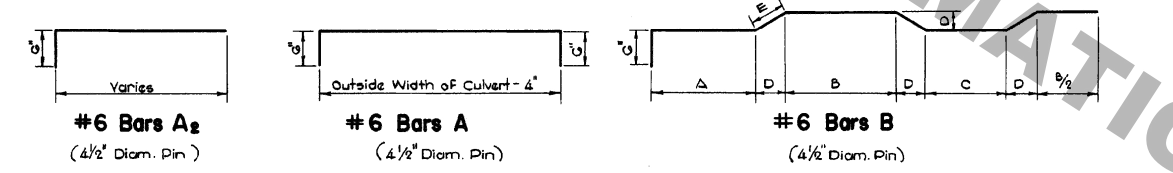
F.A.P.	STATE PROJECT	PARISH	SHEET NO.

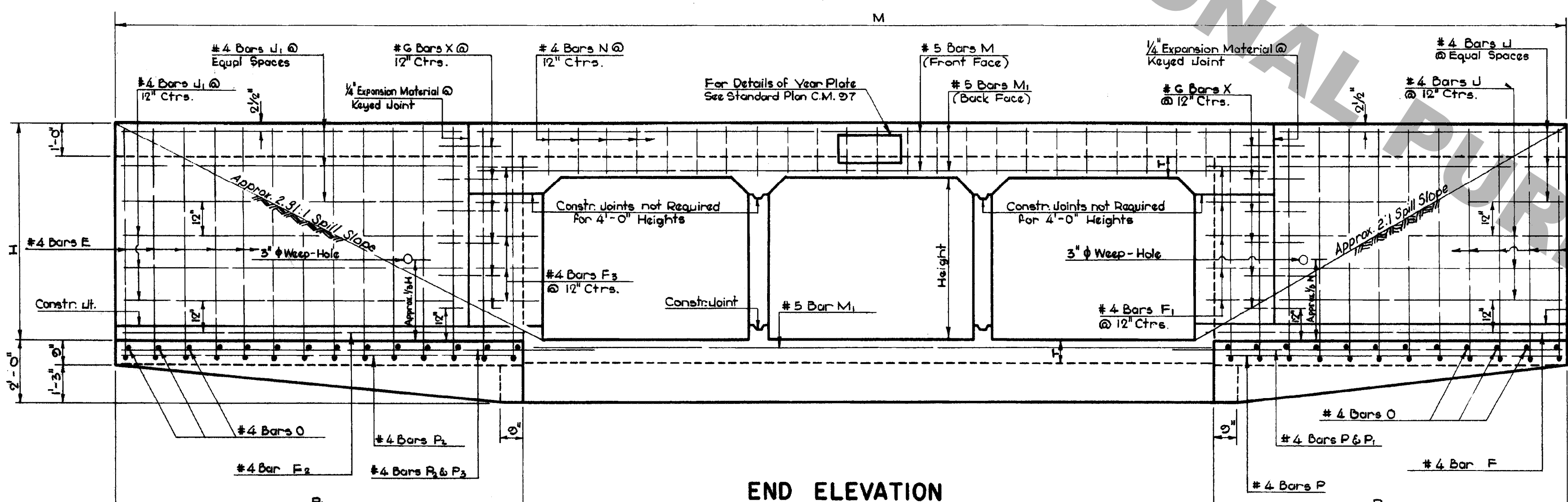
FOR INFORMATIONAL PURPOSES ONLY

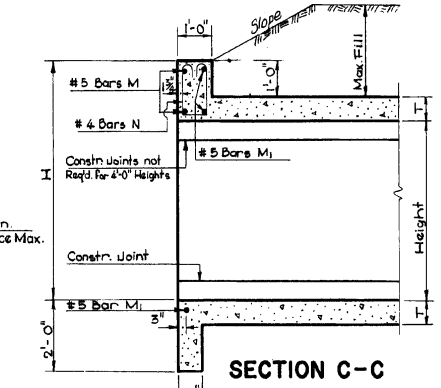


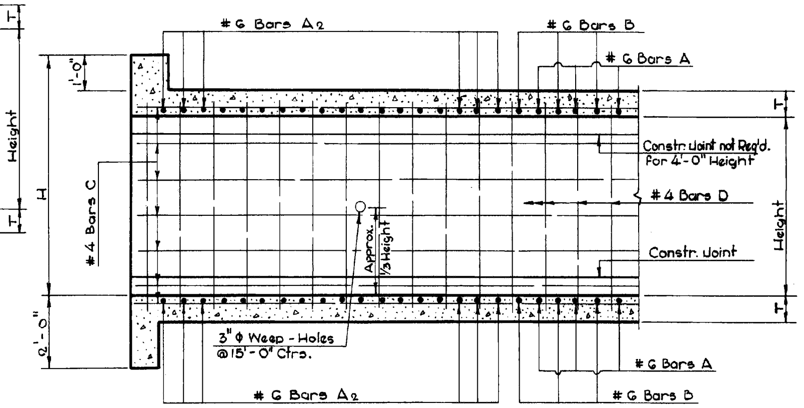


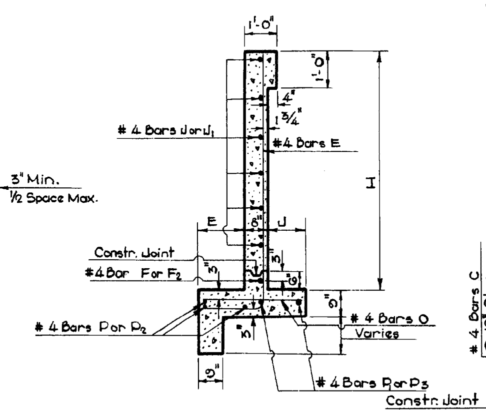
DIMENSIONS FOR BARS B

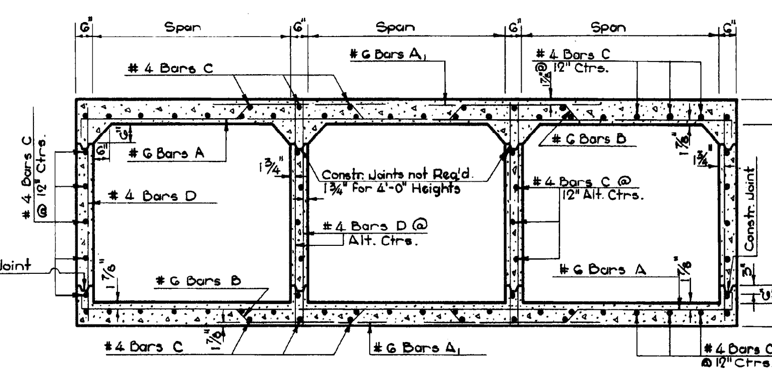
SPAN	A	B	C	D	E
6'-0"	4'-7 7/8	3'-1 3/4"	2'-7 3/4	4 1/4"	6"
7'-0"	5'-4 5/8	3'-7 1/4	3'-1 1/4	4 3/4"	6 3/4"











DIMENSIONS / QUANTITIES

OPENINGS SIZE (Ft.)	No	AREA (Sq. Ft.)	MAX. FILL SLAB (Ft.)	MAX. FILL WALLS (Ft.)	BBL. T (In.)	E (Ft.-In.)	J (Ft.-In.)	G (Ft.-In.)	H (Ft.-In.)	L (Ft.-In.)	L_1 (Ft.-In.)	P (Ft.-In.)	P_1 (Ft.-In.)	M (Ft.-In.)	Per Linear Foot of Barrel STEEL (Pounds)	Per Linear Foot of Barrel CONC. (Cu. Yds.)	44'-0" Culvert STEEL (Pounds)	44'-0" Culvert CONC. (Cu. Yds.)	OPENINGS No	OPENINGS SIZE (Ft.)
6x4	2	48	16	12	8	1-3	0-10	2-9	5-8	10-3 15/16	12-1 15/16	9-9	11-7	36-11 1/16	127.76	0.9074	6898	55.05	2	6x4
	3	72	20											44-5 1/8	193.32	1.3117	10148	74.89	3	
	4	96												51-11 3/4	258.88	1.7161	13568	94.72	4	
	5	120												59-5 1/4	324.45	2.1204	16965	114.56	5	
	6	144												66-11 5/8	401.17	2.5247	20946	134.40	6	
6x5	2	60	15	7	8	1-5	1-2	3-3	6-8	12-3 15/16	14-2 15/16	11-9	13-8	41-0 1/16	131.76	0.9630	7305	61.62	2	6x5
	3	90	20											48-6 1/8	198.66	1.3858	10617	82.31	3	
	4	120												56-0 3/16	265.56	1.8087	14099	103.01	4	
	5	150												63-6 1/4	332.46	2.2315	17558	123.70	5	
	6	180												71-0 5/16	410.52	2.6544	21602	144.39	6	
7x4	2	56	12	12	8 1/2	1-3	0-10	2-9	5-8 1/2	10-4 15/16	12-1 15/16	9-10	11-7	39-3 3/4	140.88	1.0540	7966	62.23	2	7x4
	3	84	16											47-11 1/16	227.54	1.5309	11865	85.57	3	
	4	112												56-7 5/8	305.20	2.0077	15887	108.92	4	
	5	140												65-3 9/16	382.86	2.4846	20062	132.26	5	
	6	168												73-11 1/16	472.54	2.9614	24665	155.61	6	

APPROVED BY:
Dempsey D. White — CHIEF ENGINEER — 1-11-78 DATE

BILL OF REINFORCING STEEL FOR 44'-0" CULVERT

BARREL REINFORCEMENT

SIZE (Ft.)	No	#6 Bars A No	A Length Ft.-In.	A Spc. In.	#6 Bars A_1 No	A_1 Length Ft.-In.	A_1 Spc. In.	#6 Bars A_2 No	A_2 Short Bar Ft.-In.	A_2 Var. In.	A_2 Long Bar Ft.-In.	A_2 Spc. In.	#6 Bars B No	B Length Ft.-In.	B Spc. In.	#4 Bars C No	C Length (1) Ft.-In.	#4 Bars D No	D Length Ft.-In.	D Spc. In.
6x4	2	66	14-2	14	82	5-2	7 1/4	46	2-3	12.0909	13-4	7	66	14-5 1/2	14	46	47-5	138	5-0	12
	3	60	20-8	14	176	5-2	7 1/4	72	2-3	12.1176	19-5	7	60	21-3	14	68	47-5	184	5-0	12
	4	52	27-2	14	284	5-2	7 1/4	100	2-3	12.1250	26-6	7	54	28-0 1/2	14	90	47-5	230	5-0	12
	5	46	33-8	14	400	5-2	7 1/4	124	2-3	12.1000	32-6	7	48	34-10	14	112	47-5	276	5-0	12
	6	40	(2)42-4	14	544	5-2	7 1/4	152	2-3	12.1081	39-7	7	40	(2)43-9 1/2	14	134	47-5	322	5-0	12
6x5	2	66	14-2	14	82	5-2	7 1/4	46	2-3	12.0909	(4)13-4	7	66	14-5 1/2	14	49	47-5	138	6-0	12
	3	60	20-8	14	176	5-2	7 1/4	72	2-3	12.1176	19-5	7	60	21-3	14	72	47-5	184	6-0	12
	4	52	27-2	14	284	5-2	7 1/4	100	2-3	12.1250	26-6	7	54	28-0 1/2	14	96	47-5	230	6-0	12
	5	46	33-8	14	400	5-2	7 1/4	124	2-3	12.1000	32-6	7	48	34-10	14	118	47-5	276	6-0	12
	6	40	(2)42-4	14	544	5-2	7 1/4	152	2-3	12.1081	39-7	7	40	(2)43-9 1/2	14	141	47-5	322	6-0	12
7x4	2	68	16-2	13	88	5-8	6 3/4	60	2-3	11.2143	15-4	6 1/2	70	16-6	13	50	47-5	138	5-1	12
	3	60	23-8	13	192	5-8	6 3/4	92	2-3	11.2273	22-10	6 1/2	62	24-4	13	74	47-5	184	5-1	12
	4	52	31-2	13	312	5-8	6 3/4	124	2-3	11.2333	30-4	6 1/2	54	32-2	13	98	47-5	230	5-1	12
	5	44	38-8	13	448	5-8	6 3/4	156	2-3	11.2368	37-10	6 1/2	46	40-0	13	122	47-5	276	5-1	12
	6	36	(2)46-4	13	600	5-8	6 3/4	188	2-3	11.2391	(4)45-4	6 1/2	38	(2)50-0	13	146	47-5	322	5-1	12

WINGS AND CURBS REINFORCEMENT

SIZE (Ft.)	No	#4 Bars E No	E Length	#4 Bars F No	F Length	#4 Bars F_1 No	F_1 Length	#4 Bars F_2 No	F_2 Length	#4 Bars F_3 No	F_3 Length	#4 Bars J No	J Length	#4 Bars J_1 No	J_1 Length	#4 Bars O No	O Length	#4 Bars P No	P Length	#4 Bars P_1 No	P_1 Length	#4 Bars P_2 No	P_2 Length	#4 Bars P_3 No	P_3 Length	#5 Bars M No	M Length	#5 Bars M_1 No	M_1 Length	#4 Bars N No	N Length	#6 Bars X (A) No	X Length
6x4	2	44	7-6	2	10-11	8	3-1	2	13-4	8	3-6	10	7-5	10	9-5	44	2-4	6	9-5	4	10-10	6	11-3	4	13-8	4	18-10	6	15-2	32	4-5	20	2-0
	3																									4	26-4	6	22-8	46	4-5	20	2-0
	4																									4	33-10	6	30-2	62	4-5	20	2-0
	5																									4	(3)43-3	6	37-8	76	4-5	20	2-0
	6																									4	(3)50-9	6	(3)47-0	92	4-5	20	2-0
6x5	2	52	8-8	2	12-11	10	3-1	2	15-5	10	3-6	12	9-5	12	11-6	52	2-10	6	11-5	4	12-10	6	13-4	4	15-9	4	18-10	6	15-2	32	4-5	24	2-0
	3																									4	26-4	6	22-8	46	4-5	24	2-0
	4																									4	33-10	6	30-2	62	4-5	24	2-0
	5																									4	(3)43-3	6	37-8	76	4-5	24	2-0
	6																									4	(3)50-9	6	(3)47-0	92	4-5	24	2-0
7x4	2	44	7-6 1/2	2	11-0	8	3-1	2	13-4	8	3-6	10	7-6	10	9-5	44	2-4	6	9-6	4	10-11	6	11-3	4	13-8	4	21-2	6	17-6	36	4-6	20	2-0
	3																									4	29-10	6	26-2	54	4-6	20	2-0
	4																									4	38-6	6	34-10	70	4-6	20	2-0
	5																									4	(3)49-0	6	(3)45-4	88	4-6	20	2-0
	6																									4	(3)57-8	6	(3)54-0	106	4-6	20	2-0

(1) Includes 1-1'-6" Lap Splice (2) Includes 1-2'-2" Lap Splice (3) Includes 1-1'-10" Lap Splice (A) #6 Bars X to be 3/4" φ Smooth and Greased For 1'-0" of Length

(4) Does not Include Lap Splice. When Bar Length Exceeds 40'-0", Add 1-2'-2" Lap Splice.

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: HS20-44 or Military, Whichever is Greater.
All Concrete to be Class "A".
All Exposed Corners to have 3/4" Chamfer, Unless Otherwise Noted.
Reinforcement Shall be Billet-Steel A.S.T.M. A615 or Rail-Steel A.S.T.M. A616 or Axle-Steel A.S.T.M. A617.
Dimensions Relating to Reinforcing Steel are to Bar Centers.
Place about 2 Cu. Ft. of Large Size Gravel or Loose Rock 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.

C·C·S·M·6-7·R·60°·1

DATE	DESCRIPTION	BY
1-11-78	Rev. Weep Hole Note	W.T.J.
2-20-75	Rev. Slope Intercept	W.T.J.
6-8-72	Rev. General Notes For Steel	W.E.M.
4-27-67	Added Axle Steel	W.E.M.

REVISIONS

STANDARD PLAN
MULTIPLE OPENINGS
REINFORCED CONCRETE BOX CULVERTS
STRAIGHT WINGS — 60° CROSSING
2:1 SPILL SLOPE NORMAL TO CHANNEL
DATED DEC. 31, 1964 — 6'x 4', 6'x 5' & 7'x 4'

STATE OF LOUISIANA
DEPARTMENT OF HIGHWAYS

DESIGNED N.K.B.	DETAILED W.E. Grice	TRACED T. WILLIAMS
CHECKED W.E.M.	CHECKED W.E. Marcum	CHECKED W.E. Marcum
IN CHARGE OF		