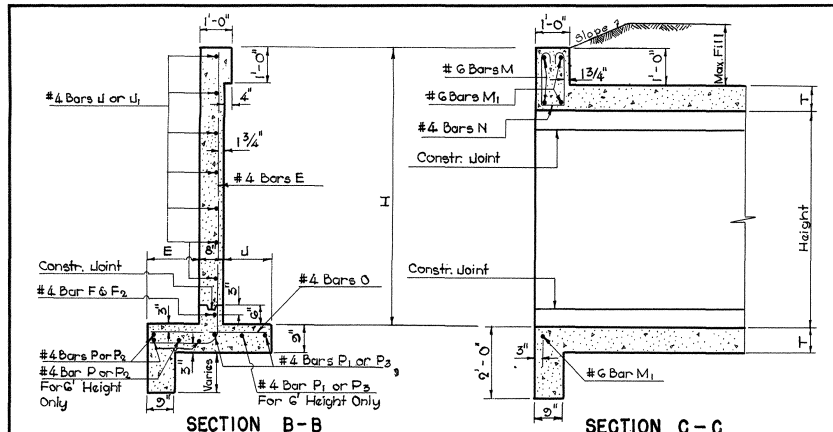
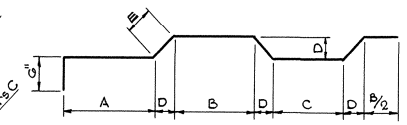
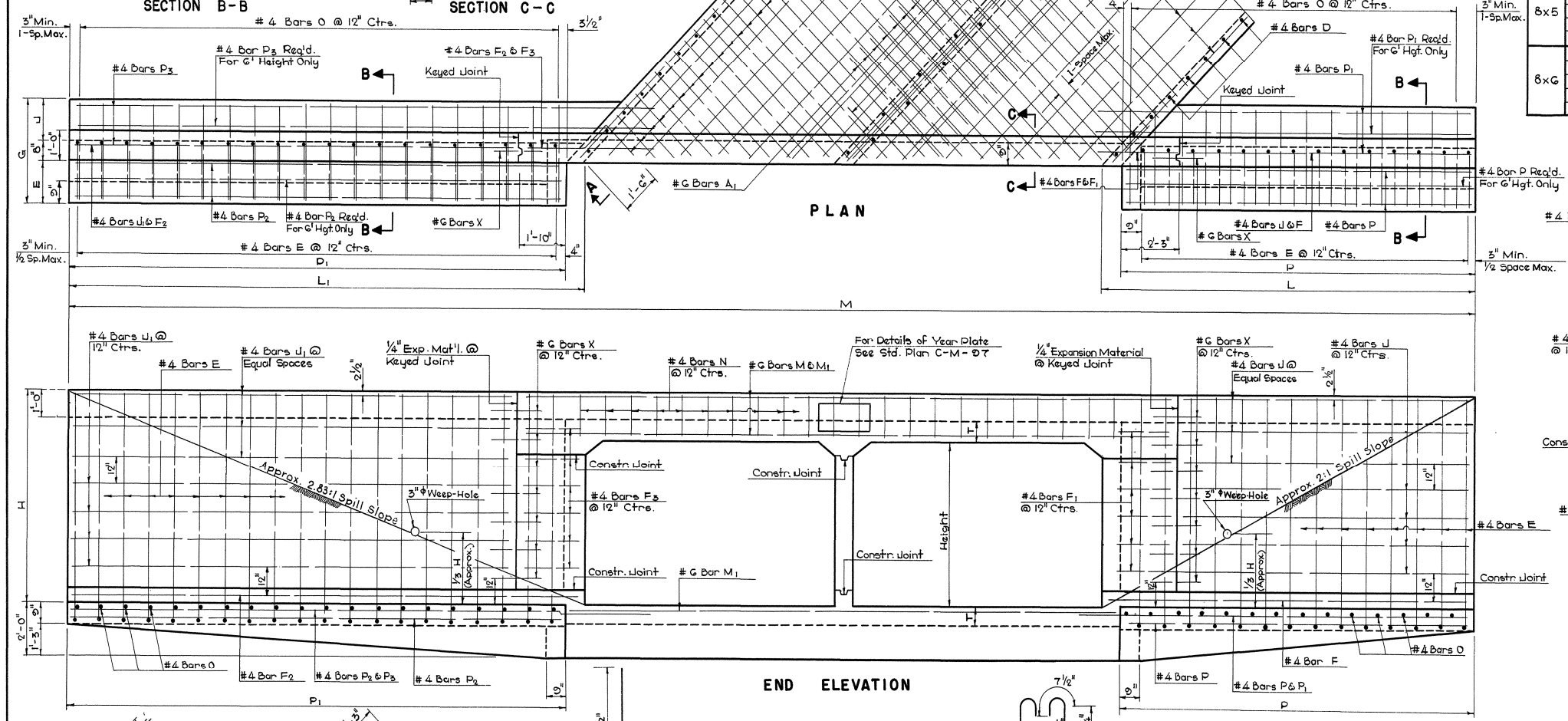
STATE PROJECT	PARISH	SHEET NO.

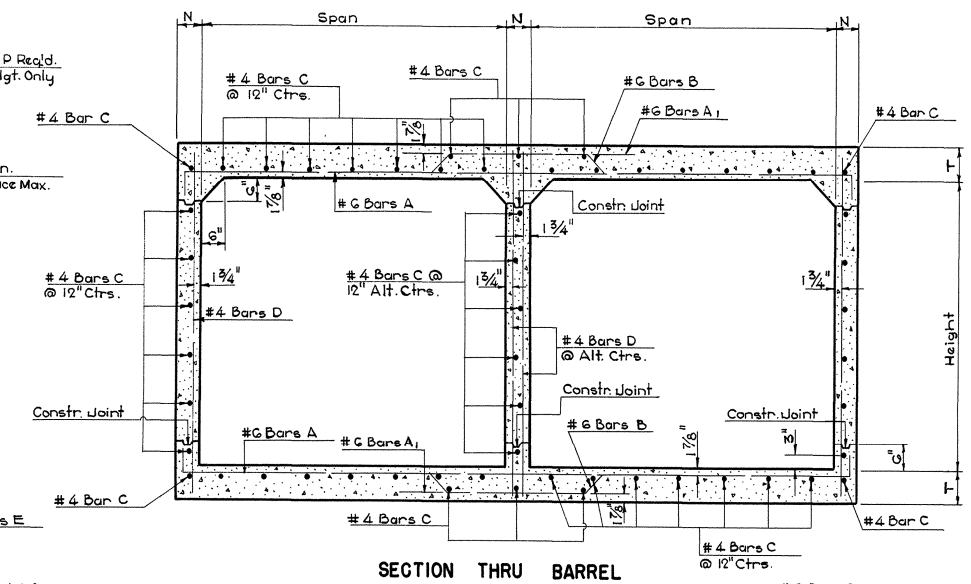


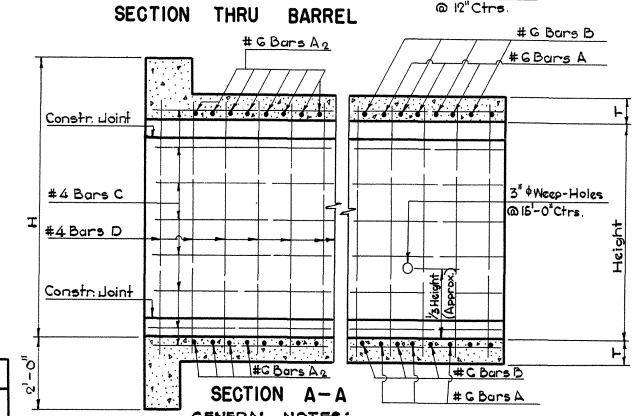
DIMENSION FOR BARS B						
Span	Dim. Pin	A	B	C	D	E
7'-0"	4 1/2"	5'-4 5/8"	3'-7 1/4"	3'-1 1/4"	4 3/4"	6 3/4"
8'-0"	4 1/2"	6'-2 7/8"	4'-1 3/4"	3'-6 3/4"	5 1/4"	7 3/8"

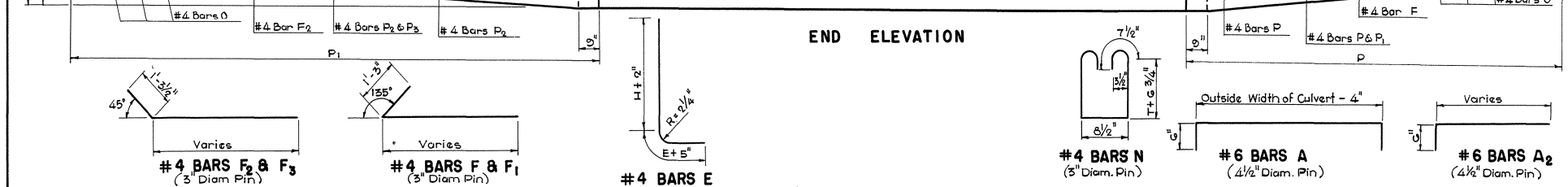


DIMENSIONS																	QUANTITIES			
OPENINGS			MAX. FILL		BARREL		WINGS AND CURBS										PER LIN. FT. OF BARREL		60'-0" CULVERT	
SIZE	Nº	AREA	SLABS	WALLS	T	N	E	J	G	H	L	L1	P	P1	M		STEEL	CONCRETE	STEEL	CONCRETE
Feet		Sq. Ft.	Feet	Feet	In.	In.	Ft.-In.	Ft.-In.	Ft.-In.	Ft.-In.	Ft.-In.	Ft.-In.	Ft.-In.	Ft.-In.	Ft.-In.		Pounds	Cu. Yds.	Pounds	Cu. Yds.
7x5	2	70	12	7	8 1/2	6	1-5	1-2	3-3	6-8 1/2	12-8 1/2	17-6 1/2	12-0	16-10	50-0 1/2		153.80	1.1096	11104	89.63
	3	105													61-4 5/8		232.80	1.6040	16637	122.30
	4	140													71-1 1/8		311.88	2.1003	22206	154.97
	5	175													82-6 7/8		390.88	2.5957	28223	187.64
	6	210													92-2 7/8		461.80	3.0010	34724	220.31
7x6	2	84	11	5	8 1/2	6	1-7	1-6	3-9	7-8 1/2	14-8 1/2	20-5 1/2	14-0	19-9	55-8 7/8		160.74	1.1681	12090	98.56
	3	126													66-3 3/8		242.02	1.6700	17610	132.39
	4	168													76-10 3/8		323.20	2.1920	23416	166.22
	5	210													87-5 7/8		404.57	2.7068	29487	200.06
	6	252													96-1 7/8		497.56	3.2207	36135	233.89
8x5	2	80	10	5	9	7	1-5	1-2	3-3	6-9	12-9 7/8	17-7 7/8	12-0	16-10	53-11 1/4		180.67	1.3287	12935	103.86
	3	120													66-0 7/8		273.08	1.9228	19389	149.93
	4	160													76-2 3/8		367.30	2.5170	26263	196.00
	5	200													90-4 3/8		473.63	3.1111	33717	221.07
	6	240													102-5 7/8		566.94	3.7053	41227	260.14
8x6	2	96	9	5	9	7	1-7	1-6	3-9	7-9	14-9 7/8	20-5 7/8	14-0	19-8	58 9/16		184.68	1.3935	13576	113.33
	3	144													70-10 7/8		279.33	2.0092	20114	153.75
	4	192													83-0 3/8		373.98	2.6250	27003	194.18
	5	240													95-2 1/4		461.64	3.2407	34612	234.61
	6	288													107-3 3/8		576.28	3.8565	42207	275.04









BILL OF REINFORCING STEEL FOR 60'-0" CULVERT

BARREL REINFORCEMENT

OPENING Size Feet	#6 BARS A Nº	Nº	Length Ft.-In.	Spac. In.	#6 BARS A1 Nº	Length Ft.-In.	Spac. In.	#6 BARS A2 Nº	Short Bar Ft.-In.	Var. In.	Long Bar Ft.-In.	Spac. In.	#6 BARS B Nº	Length Ft.-In.	Spac. In.	#4 BARS C Nº	Length (1) Ft.-In.	Spac. In.	#4 BARS D Nº	Length Ft.-In.	Spac. In.
7x5	2	86	16-2	13	122	5-8	6 1/2 13	104	2-1	6.4800	15-7	6 1/2	88	16-6	13	53	63-10	169	G-1	12
	3	74	23-8	13	268	5-8	6 1/2 13	156	2-1	6.5000	22-8	6 1/2	76	24-4	13	78	63-10	252	G-1	12
	4	60	31-2	13	448	5-8	6 1/2 13	212	2-1	6.5000	30-3	6 1/2	60	32-2	13	103	63-10	315	G-1	12
	5	46	38-8	13	656	5-8	6 1/2 13	268	2-1	6.5000	37-10	6 1/2	46	40-0	13	128	63-10	378	G-1	12
	6	32	②48-4	13	892	5-8	6 1/2 13	324	2-1	6.5000	③45-5	6 1/2	32	②50-0	13	153	63-10	441	G-1	12
7x6	2	86	16-2	13	122	5-8	6 1/2 13	104	2-1	6.4800	15-7	6 1/2	88	16-6	13	56	63-10	228	7-1	10
	3	74	23-8	13	268	5-8	6 1/2 13	156	2-1	6.5000	22-8	6 1/2	76	24-4	13	82	63-10	304	7-1	10
	4	60	31-2	13	448	5-8	6 1/2 13	212	2-1	6.5000	30-3	6 1/2	60	32-2	13	108	63-10	380	7-1	10
	5	46	38-8	13	656	5-8	6 1/2 13	268	2-1	6.5000	37-10	6 1/2	46	40-0	13	134	63-10	456	7-1	10
	6	32	②48-4	13	892	5-8	6 1/2 13	324	2-1	6.5000	③45-5	6 1/2	32	②50-0	13	160	63-10	532	7-1	10
8x5	2	90	18-5	12	154	6-2	6 12	128	2-2	6.0000	17-8	6	90	18-6 1/2	12	57	63-10	169	6-2	12
	3	72	27-0	12	300	6-2	6 12	196	2-2	6.0000	26-3	6	74	27-8 1/2	12	84	63-10	252	6-2	12
	4	56	35-7	12	504	6-2	6 12	264	2-2	6.0000	34-8	6	58	36-7 3/8	12	111	63-10	315	6-2	12
	5	40	②46-4	12	744	6-2	6 12	332	2-2	6.0000	③43-9	6	40	②47-9	12	138	63-10	378	6-2	12
	6	20	②54-11	12	1020	6-2	6 12	404	2-2	6.0000	③52-2	6	22	②56-8 1/2	12	165	63-10	441	6-2	12
8x6	2	90	18-5	12	154	6-2	6 12	128	2-2	6.0000	17-8	6	90	18-6 1/2	12	60	63-10	168	7-2	12
	3	72	27-0	12	300	6-2	6 12	196	2-2	6.0000	26-3	6	74	27-8 1/2	12	88	63-10	252	7-2	12
	4	56	35-7	12	504	6-2	6 12	264	2-2	6.0000	34-8	6	58	36-7 3/8	12	116	63-10	315	7-2	12
	5	40	②46-4	12	744	6-2	6 12	332	2-2	6.0000	③43-9	6	40	②47-9	12	144	63-10	378	7-2	12
	6	20	②54-11	12	1020	6-2	6 12	404	2-2	6.0000	③52-2	6	22	②56-8 1/2	12	172	63-10	441	7-2	12

CURBS AND WINGS REINFORCEMENT

OPENING Size Feet	#4 BARS E Nº	Length Ft.-In.	#4 BARS F Nº	Length Ft.-In.	#4 BARS F1 Nº	Length Ft.-In.	#4 BARS F2 Nº	Length Ft.-In.	#4 BARS F3 Nº	Length Ft.-In.	#4 BARS J Nº	Length Ft.-In.	#4 BARS J1 Nº	Length Ft.-In.	#4 BARS O Nº	Length Ft.-In.	#4 BARS P Nº	Length Ft.-In.	#4 BARS P1 Nº	Length Ft.-In.	#4 BARS P2 Nº	Length Ft.-In.	#4 BARS P3 Nº	Length Ft.-In.	#4 BARS N Nº	Length Ft.-In.	#6 BARS M Nº	Length Ft.-In.	#6 BARS M1 Nº	Length Ft.-In.	Ⓐ #6 BARS X Nº	Length Ft.-In.
7x5	58	8-8 1/2	2	13-0	10	3-2	2	18-10	10	3-9	12	9-5	12	14-8	58	2-10	6	11-8	4	12-10	6	16-6	4	19-9	44	4-6	4	25-5	6	21-5	24	2-0
																									64	4-6	4	36-1	6	32-0	24	2-0
																									86	4-6	4	②48-10	6	②44-10	24	2-0
																									106	4-6	4	②50-5	6	②55-5	24	2-0
																									126	4-6	4	②70-0	6	②66-0	24	2-0
7x6	68	9-10 1/2	2	15-0	12	3-2	2	21-9	12	3-9	14	11-5	14	17-7	68	3-4	8	13-8	6	14-10	8	19-5	6	23-0	44	4-6	4	25-5	6	21-5	28	2-0
																									64	4-6	4	36-1	6	32-0	28	2-0
																									86	4-6	4	②48-10	6	②44-10	28	2-0
																									106	4-6	4	②50-5	6	②55-5	28	2-0
																									126	4-6	4	②70-0	6	②66-0	28	2-0
8x5	58	8-9	2	13-2	10	3-3 1/2	2	19-0	10	3-10 1/2	12	9-5	12	14-8	58	2-10	6	11-8	4	12-10	6	16-6	4	19-9	50	4-7	4	28-8	6	24-7	24	2-0
																									74	4-7	4	②42-11	6	36-9	24	2-0
																									98	4-7	4	②55-1	6	②51-1	24	2-0
																									122	4-7	4	②67-2	6	②63-2	24	2-0
																									146	4-7	4	②79-4	6	②75-4	24	2-0
8x6	68	9-11	2	15-2	12	3-3 1/2	2	21-10	12	3-10 1/2	14	11-5	14	17-6	68	3-4	8	13-8	6	14-10	8	19-4	6	22-11	50	4-7	4	28-8	6	24-7	28	2-0
																									74	4-7	4	②42-11	6	36-9	28	2-0
																									98	4-7	4	②55-1	6	②51-1	28	2-0
																									122	4-7	4	②67-2	6	②63-2	28	2-0
																									146	4-7	4	②79-4	6	②75-4	28	2-0

① Includes one 1'-6" Lap Splice ② Includes one 2'-2" Lap Splice ③ Does not include Lap Splice; When Bar length exceeds 40'-0" add one 2'-2" Lap Splice. Ⓐ #6 Bars X to be 3/4" ϕ Smooth and Greased For 1'-0" Length

GENERAL NOTES:

CONSTRUCTION SPECIFICATIONS: Latest Approved La. Dept. of Hwy. Standard Specifications.
DESIGN SPECIFICATIONS: A.A.S.H.O. 1961 as amended by INT. SPECIFICATIONS 1964.
LIVE LOAD: HS 20-44 or Military; Whichever is Greater.
All Concrete to be Class "A".
All Exposed Corners to have 3/4" Chamfer, Unless Otherwise Noted.
Reinforcement Bars 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.
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.

STANDARD PLAN
MULTIPLE OPENINGS
REINFORCED CONCRETE BOX CULVERT
STRAIGHT WINGS 45° CROSSING
2:1 SPILL SLOPE NORMAL TO CHANNEL
7'x5' 7'x6' 8'x5' 8'x6'

DATED JANUARY 20, 1965

DATE	DESCRIPTION	BY
1-11-78	Rev. Weep Hole Note	W.T.J.
5-30-75	Revised Spill Slope	W.T.J.
4-8-72	Rev. Gen. Notes For Steel	W.E.M.
5-2-81	Added Axle Steel	W.E.M.

REVISIONS

STATE OF LOUISIANA
DEPARTMENT OF HIGHWAYS

DESIGNED W.E.M.	DETAILED BARL MARTEL	TRACED T. WILLIAMS
CHECKED N.K.D.	CHECKED W.E. MARCUM	CHECKED W.E. Marcum
IN CHARGE OF		

APPROVED BY: Original Signed by Chief Engineer — DATE
CHIEF ENGINEER

CC·S·M·7-8·R·45°-1