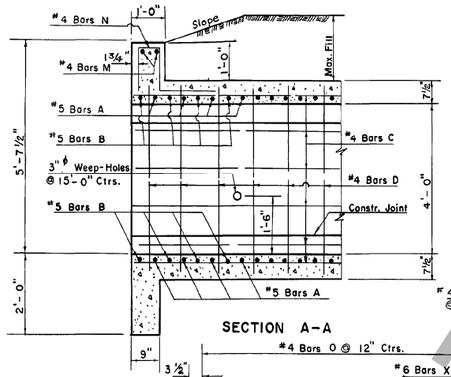
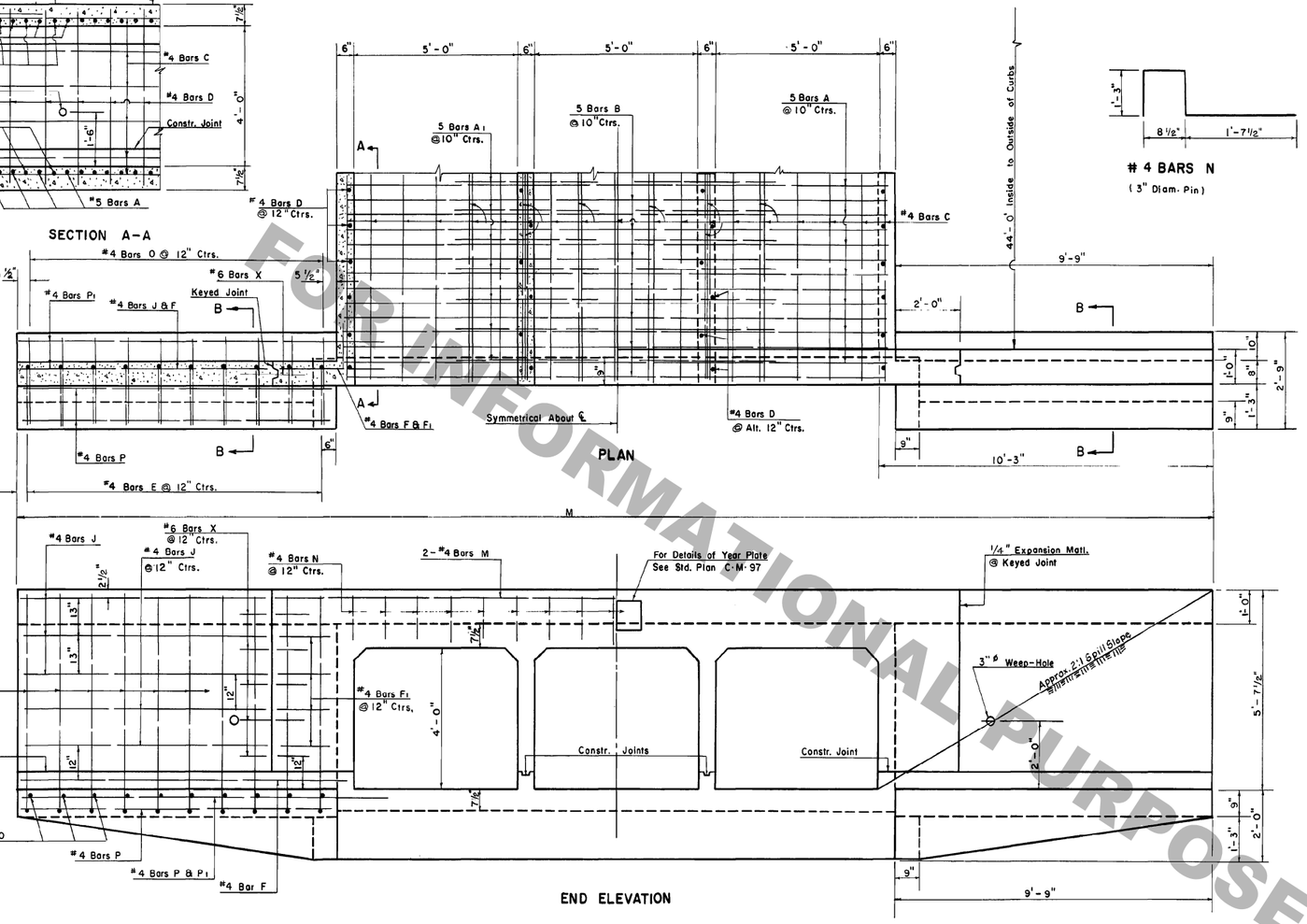
F.A.P.	STATE PROJECT	PARISH	SHEET NO.



SECTION A-A

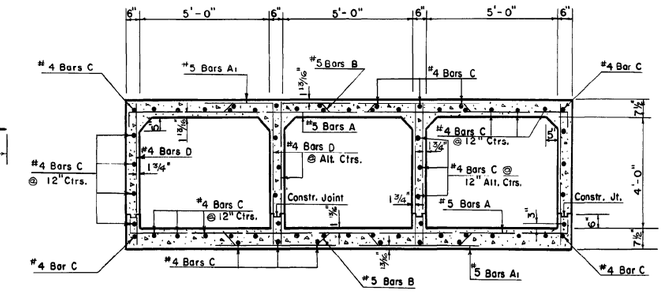


PLAN

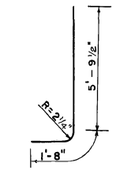
END ELEVATION

4 BARS N

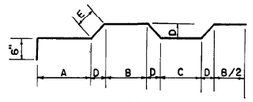
(3" Diam. Pin)



SECTION THRU BARREL

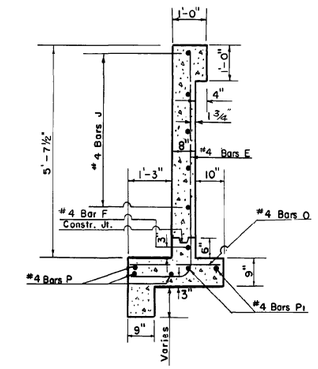


4 BARS E

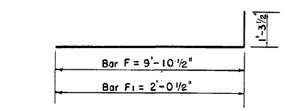


5 BARS B

DIMENSION FOR BARS B						
SIZE	PIN DIAM	A	B	C	D	E
5'X4'	3¾	3-11⅛	2-8⅛	2'-2⅛	3⅞	5½

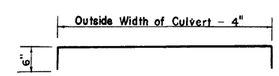


SECTION B-B



4 BARS F & F1

(3" Diam. Pin)



5 BARS A

(3¾" Diam. Pin)

DIMENSIONS						QUANTITIES				OPENINGS	
OPENINGS			MAX. FILL		WINGS & CURBS	PER LINEAR FT. OF BARREL		FOR 44'-0" OF CULVERT			
SIZE	NO.	AREA	SLAB	WALL	M	STEEL	CONCRETE	STEEL	CONCRETE	NO.	SIZE
FEET		SQ.FT.	FEET	FEET	FT.-IN.	LBS.	CU.YDS.	LBS.	CU. YDS.		FEET
5 X 4	2	40	21	13	31-0	110.35	0.7675	5835	46.81	2	5 X 4
	3	60	27		36-6	166.05	1.1026	8453	63.06	3	
	4	80			42-0	221.75	1.4377	11078	79.30	4	
	5	100			47-6	277.46	1.7729	13697	95.55	5	
	6	120			53-0	333.16	2.1080	16322	111.79	6	

BILL OF REINFORCING STEEL FOR 44'-0" CULVERT

OPENINGS		BARREL REINFORCEMENT										WINGS AND CURBS REINFORCEMENT																				OPENINGS	
		#5 BAR A		#5 BARS A1		#5 BARS B		#4 BARS C		#4 BARS D		#4 BARS E		#4 BARS F		#4 BARS F1		#4 BARS J		#4 BARS M		#4 BARS N		#4 BARS O		#4 BARS P		#4 BARS P1		#6 BARS X (A)			
SIZE	NO.	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH (1)	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	SIZE
FEET			FT.-IN.		FT.-IN.		FT.-IN.		FT.-IN.		FT.-IN.		FT.-IN.		FT.-IN.		FT.-IN.		FT.-IN.		FT.-IN.		FT.-IN.		FT.-IN.		FT.-IN.		FT.-IN.		FT.-IN.		FEET
5X4	2	110	12- 2	110	4- 4	110	12-5¼	42	47- 2	138	4- 11	40	7 -5½	4	11-2	16	3- 4	20	7-5	4	14- 11	24	4- 10	40	2- 4	12	9- 5	8	11- 1	20	2- 0	2	5X4
	3	110	17- 8	220	4- 4	110	18-2½	62	47- 2	184	4- 11	40	7 -5½	4	11-2	16	3- 4	20	7-5	4	20- 5	34	4- 10	40	2- 4	12	9- 5	8	11- 1	20	2- 0	3	
	4	110	23- 2	330	4- 4	110	23-11¾	82	47- 2	230	4- 11	40	7 -5½	4	11-2	16	3- 4	20	7-5	4	25- 11	46	4- 10	40	2- 4	12	9- 5	8	11- 1	20	2- 0	4	
	5	110	28- 8	440	4- 4	110	29- 9	102	47- 2	276	4- 11	40	7 -5½	4	11-2	16	3- 4	20	7-5	4	31- 5	56	4- 10	40	2- 4	12	9- 5	8	11- 1	20	2- 0	5	
	6	110	34- 2	550	4- 4	110	35- 6¼	122	47- 2	322	4- 11	40	7- 5½	4	11-2	16	3- 4	20	7-5	4	36- 11	68	4- 10	40	2- 4	12	9- 5	8	11- 1	20	2- 0	6	

(1) Includes One 1'-6" Lap Splice.

(A) #6 Bars X to be ¾" 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. 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.

APPROVED BY:
Dempsey D. Lirette Jr. 1-11-78
CHIEF ENGINEER DATE

C·C·S·M· 5·R·90º-1

STANDARD PLAN
MULTIPLE OPENINGS
REINFORCED CONCRETE BOX CULVERTS
STRAIGHT WINGS 2:1 SPILL SLOPE
2 THRU 6-5'X4'
DATED Sept. 7, 1965

DATE	DESCRIPTION	BY
1-11-78	Rev. Weep Hole Note	W.T.J.
1-28-76	Rev. Slope Interceptor	W.T.J.
6-8-72	Rev. General Notes for Steel	W.E.M.
9-5-67	Steel & Conc. Quant. Rev.	W.E.M.
5-2-67	Added A-1-c Steel	W.E.M.

REVISIONS

STATE OF LOUISIANA
DEPARTMENT OF HIGHWAYS

DESIGNED W.E. Marcum	DETAILED Earl J. Martel	TRACED E.P. Eickmeier
CHECKED N.K. Brown	CHECKED W.E. Marcum	CHECKED Al Shows
IN CHARGE OF		

FOR INFORMATIONAL PURPOSES ONLY

28-NOV-2007 09:54
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