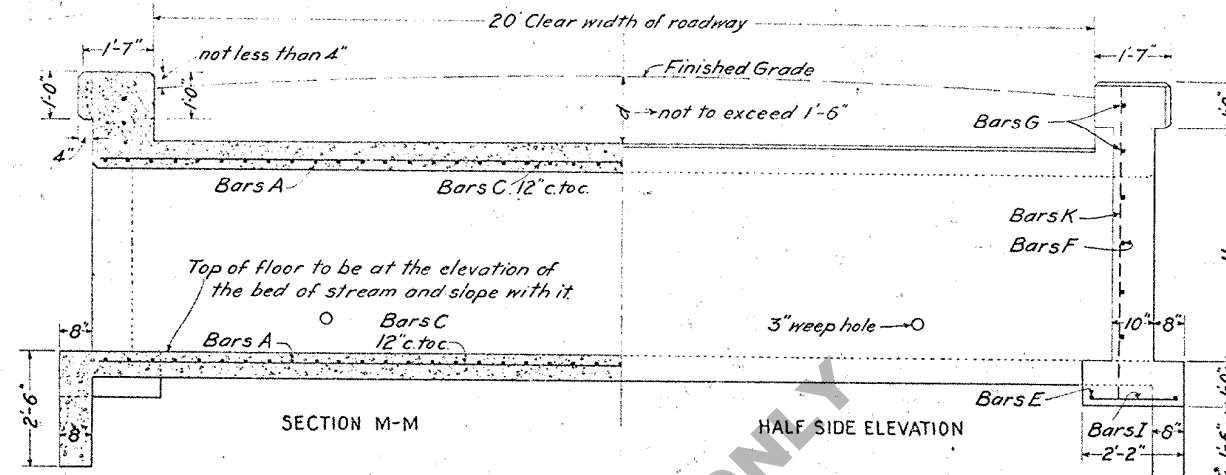
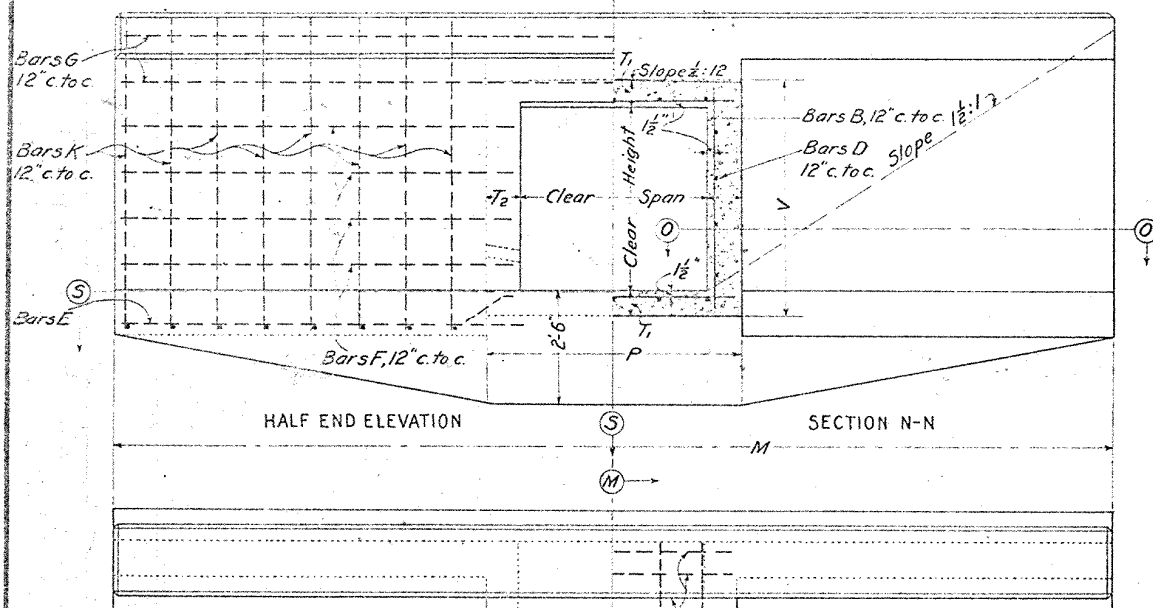




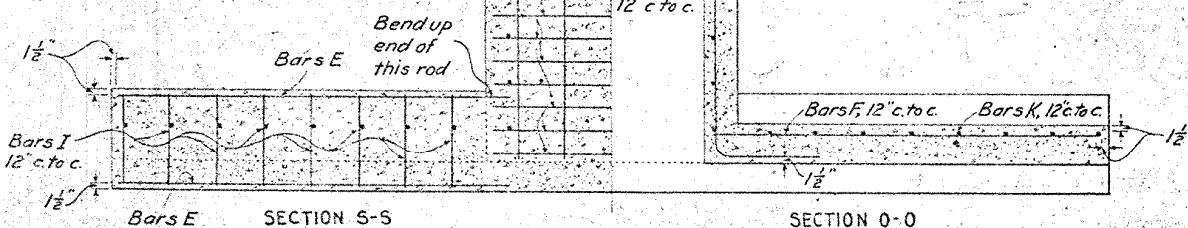
DESIGN DATA
 Concentrated Load, 15 ton typical truck.
 Impact Allowance, 30% of live Load.
 Steel in Tension, 16,000 lbs per sq in.
 Concrete in Compression, 600 lbs per sq in.
 Weight of Paving or Ballast not to exceed 180 lbs per sq ft.

TABLE OF DIMENSIONS AND ESTIMATED QUANTITIES OF CONCRETE BOX CULVERTS FOR 20 FT. ROADWAY

WATERWAY			BARREL OF CULVERT														TWO HEADWALLS														TOTAL OF ALL STEEL LBS.	TOTAL OF ALL CONCRETE CU YDS.			
CLEAR SPAN FT.	CLEAR HEIGHT FT.-IN.	AREA OF OPENING SQ. FT.	T ₁	T ₂	V	P	STEEL REINFORCEMENT										CONCRETE 1-2-4		M	H	STEEL REINFORCEMENT												CONCRETE 1-2-4		
							BARS A		BARS B		BARS C		BARS D		WEIGHT		PER LINEAL FOOT CU YDS.	TOTAL LBS.			BARS E		BARS F		BARS G		BARS K		BARS I				WEIGHT TOTAL LBS.	TOTAL CU YDS.	
NO.	SPACING REQ'D C. TO C.	LENGTH	NO.	REQ'D	LENGTH	NO.	REQ'D	LENGTH	NO.	REQ'D	PER LINEAL FOOT TOTAL LBS.	CONCRETE 1-2-4	CU YDS.	LENGTH	NO.	REQ'D			LENGTH	NO.	REQ'D	LENGTH	NO.	REQ'D	LENGTH	NO.	REQ'D	LENGTH	NO.	REQ'D	CONCRETE 1-2-4	CU YDS.			
2	2-0	4.0	6'	6'	3-0	3-0	2-9	68	8	2-9	44	22-3	6	26-8	4	20	470	183	41	13-0	3-0	5-8	8	5-3	8	12-9	4	4-9	20	1-11	20	230	5.9	700	10.0
3	2-0	6.0	6'	6'	3-0	4-0	3-9	78	7	2-9	44	22-3	8	26-8	4	26	590	219	49	14-0	3-0	5-7	8	5-3	8	13-9	4	4-9	20	1-11	20	240	6.1	830	11.0
	2-6	7.5	6'	6'	3-6	4-0	3-9	78	7	3-3	44	22-3	8	26-8	6	28	660	238	54	15-6	3-6	6-4	8	6-0	12	15-3	4	5-3	24	1-11	24	300	7.2	950	12.6
	3-0	9.0	6'	6'	4-0	4-0	3-9	78	7	3-9	44	22-3	8	26-8	6	29	680	256	58	17-0	4-0	7-2	8	6-9	12	16-9	4	5-9	28	1-11	28	360	8.4	1040	14.2
4	2-0	8.0	6½'	6'	3-1	5-0	4-9	90	6	2-10	44	22-3	10	26-8	4	33	750	270	61	15-3	3-1	5-8	8	5-4	8	15-0	4	4-10	20	1-11	20	240	6.6	990	12.7
	2-6	10.0	6½'	6'	3-7	5-0	4-9	90	6	3-4	44	22-3	10	26-8	6	35	810	289	65	16-9	3-7	6-6	8	6-0	12	16-6	4	5-4	24	1-11	24	310	7.7	1120	14.2
	3-0	12.0	6½'	6'	4-1	5-0	4-9	90	6	3-10	44	22-3	10	26-8	6	36	830	307	69	18-3	4-1	7-3	8	6-10	12	18-0	4	5-10	28	1-11	28	370	8.9	1200	15.8
5	4-0	16.0	6½'	8'	5-1	5-4	4-9	90	6	4-10	44	22-3	10	26-8	8	40	920	406	91	21-3	5-1	8-9	8	8-5	16	21-0	4	6-10	32	1-11	32	480	11.6	1400	20.7
	2-6	12.5	7½'	6'	3-9	6-0	5-9	90	6	3-6	44	22-3	12	26-8	6	41	930	364	82	18-0	3-8	6-6	8	6-3	12	17-9	4	5-5	24	1-11	24	320	8.2	1250	16.4
	3-0	15.0	7½'	6'	4-3	6-0	5-9	90	6	4-0	44	22-3	12	26-8	8	42	950	382	86	19-6	4-2	7-3	8	7-0	12	19-3	4	5-11	28	1-11	28	370	9.6	1320	18.2
5	4-0	20.0	7½'	8'	5-3	6-4	5-9	90	6	5-0	44	22-3	12	26-8	8	45	1040	483	109	22-6	5-2	8-10	8	8-6	16	22-3	4	6-11	32	1-11	32	490	12.1	1530	23.0
	5-0	25.0	7½'	8'	6-3	6-4	5-9	90	6	6-0	44	22-3	12	26-8	10	48	1120	532	120	25-6	6-2	10-3	8	10-0	20	25-3	4	7-11	40	1-11	40	660	15.2	1780	27.2

NOTES

The above tables are based on the use of $\frac{1}{2}$ in square bars (net area = 0.25 sq in). Other sizes may be used provided that they are spaced so as to give the same net area of steel per foot width of slab. All reinforcing bars shall be of the deformed type.
 In computing the total quantities for the "Barrel of Culvert" above, the barrel was assumed as extending from face to face of headwalls. The quantities for "Headwalls" include the remaining concrete and steel up to the top of curb.
 Exposed edges of concrete to be chamfered $\frac{3}{4}$ in.
 All concrete to be 1:2:4.



BOX CULVERTS

SPANS 2 TO 5 FT. IN CLEAR REINFORCED CONCRETE BASED ON 20 FT. CLEAR ROADWAY
 (U. S. OFFICE OF PUBLIC ROADS STANDARD G-223)

HIGHWAY DEPARTMENT
 BOARD OF STATE ENGINEERS
 New Orleans, La.
 Nov., 1917.

Approved: _____
 State Highway Engineer

DESIGNED BY: L. W. A. L. S. C. DATE: 5-25-17
 DRAWN BY: L. S. C. DATE: 7-1-17
 CHECKED BY: L. S. C. DATE: 7-23-17