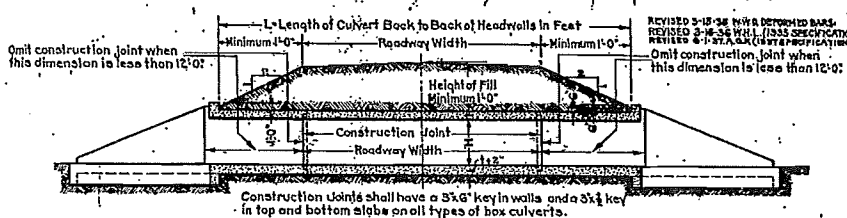
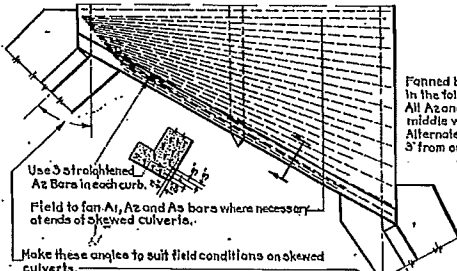


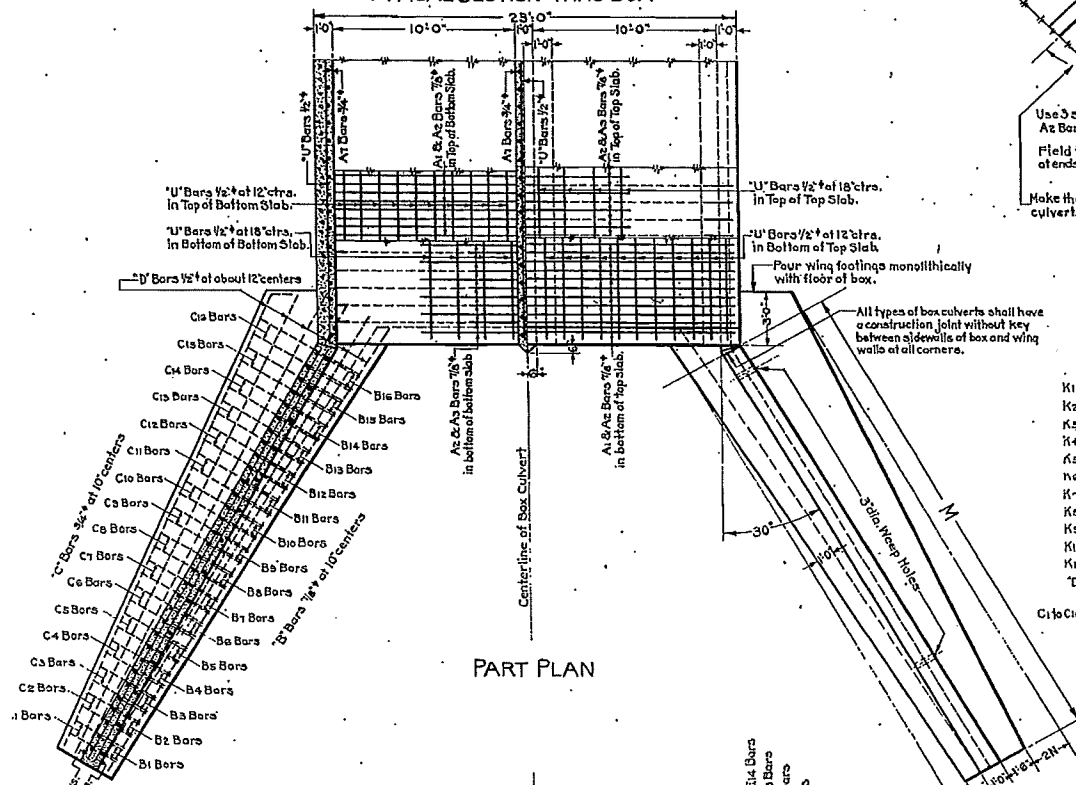
TYPICAL SECTION THRU BOX



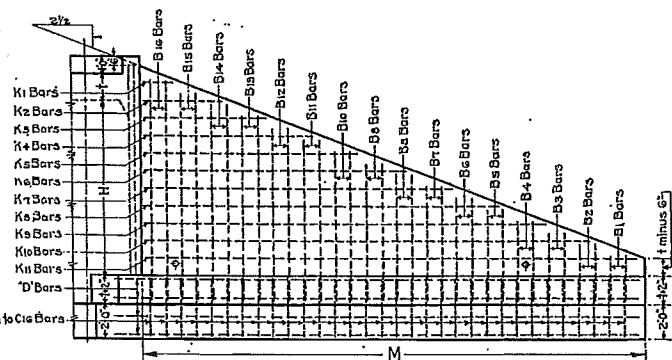
TYPICAL SECTION SHOWING RELATION OF CULVERT TO ROADWAY



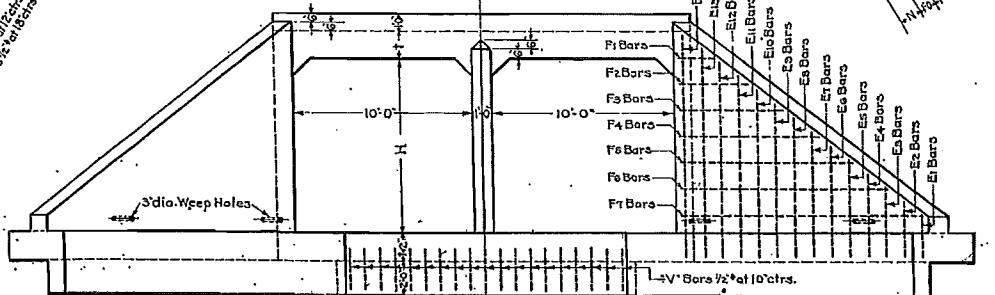
PART PLAN FOR SKEWED HEADWALLS



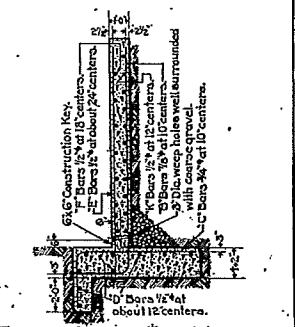
PART PLAN



TRUE SIDE ELEVATION OF WINGWALL



END ELEVATION



TYPICAL SECTION THRU WINGWALL

USE BARS FOR	MARK	SIZE	NUMBER	DIMENSION P	TOTAL LENGTH	BENDING DIAGRAM
All Sizes	A1	1/2"	12(L+2) SPACING	↑ minus 4"	24' 2"	[Diagram]
All Sizes	A2	3/8"	12(L+2) SPACING	↑ minus 4"	24' 2"	[Diagram]
All Sizes	A3	3/8"	12(L+2) SPACING	↑ minus 4"	11' 6"	[Diagram]
All Sizes	A7	3/4"	24(L+2) SPACING	H minus 4"	H+3'-0"	[Diagram]

NOTE FOR 'E' BARS ONLY: Where 1/2" use 0 lengths & total lengths as shown 1-2" odd 1/4"

NOTE FOR 'B' BARS: Where 1/2" use 0 lengths & total lengths as shown 1-2" odd 1/4"

NOTE FOR 'C' & 'V' BARS: Where 1/2" use 0 lengths & total lengths as shown 1-2" odd 1/4"

GENERAL NOTES: ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS OF THE COLORADO STATE HIGHWAY DEPARTMENT, ADJUSTED TO MEET THE REQUIREMENTS OF THIS STANDARD. ALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED BEFORE FRESH CONCRETE IS PLACED. ALL BARS SHALL BE PERFORMED. MINIMUM CLEARANCE FROM CENTERLINE OF BARS TO EDGE OF CONCRETE TO BE 2" LONG BARS WHEN SPICED SHALL BE LAPPED TWO FEET. FOR CURBETS REQUIRED AND OTHERWISE DIMENSIONS SHALL BE SHOWN IN 1/2". ALL REINFORCING BARS SHALL BE TAGGED WITH THE STATION NUMBER AND LETTER IDENTIFICATION. REINFORCEMENT SHALL NOT BE USED WHEN HEIGHT OF FILL OVER BOX EXCEEDS THAT INDICATED AS ALLOWABLE. FOUR WING FOOTINGS MONOLITHICALLY WITH FLOOR OF BOX. FIELD CONDITIONS REQUIRING CONSTRUCTION JOINTS MAY BE MADE ON VERTICAL SUPPORTING SOILS FOR ALL CULVERTS MUST BE COMPOSED OF FIRM AND UNIFORM MATERIAL. THE BOTTOM AND EACH LAYER SHALL BE ROLLED OR HAND TAPPED WHERE INACCESSIBLE TO ROLLER. ALSO MOISTENED WHEN NECESSARY.

HEIGHT OF FILL ALLOWED	INSIDE SPAN EACH BOX	HEIGHT OF SLAB	THICKNESS OF SLAB	QUANTITIES FOR ONE BOX EQUALS THE QUANTITY FOR TWO HEADWALLS PLUS (L) QUANTITY FOR ONE LIN. FT. BOX		QUANTITIES FOR QUANTITIES FOR ONE LIN. FT. BOX				
				U-BARS PER BOX	WINGWALL M	CONCRETE CU.YDS.	STEEL LBS.	CONCRETE LBS.	STEEL LBS.	
4'-0"	10'-0"	10'-0"	18"	88	12'-6"	7'	2,503	280	30.5	2,400
		8'-0"	18"	8	15'-0"	8'	2,814	281	36.6	2,910
		6'-0"	18"	8	17'-6"	9'	2,725	294	43.0	3,480
		5'-0"	18"	8	18'-0"	10'	2,348	308	51.0	4,235
10'-0"	10'-0"	10'-0"	18"	110	21'-0"	12'	3,171	323	73.0	6,130
		8'-0"	18"	88	12'-6"	7'	2,795	354	38.0	2,610
		6'-0"	18"	88	15'-0"	8'	2,304	364	39.5	3,140
		5'-0"	18"	88	17'-6"	9'	3,018	373	46.0	3,720
15'-0"	10'-0"	10'-0"	18"	102	22'-6"	13'	3,231	391	81.5	5,100
		8'-0"	18"	88	21'-6"	12'	3,460	401	76.0	6,425
		6'-0"	18"	88	12'-6"	7'	3,219	416	86.6	2,830
		5'-0"	18"	88	15'-0"	8'	3,350	426	43.0	3,580

**COLORADO**  
**STATE HIGHWAY DEPARTMENT**  
**STANDARD DOUBLE**  
**CONCRETE BOX CULVERT**  
 10 FT. x 4 FT. 10 FT. x 6 FT. 10 FT. x 8 FT.  
 10 FT. x 5 FT. 10 FT. x 10 FT.  
 Designed by A.G.K. Approved by C. G. L. L. L.  
 Made by A.G.K. Bridge Engineer  
 Checked by O.W.C. Date: July 25, 1935