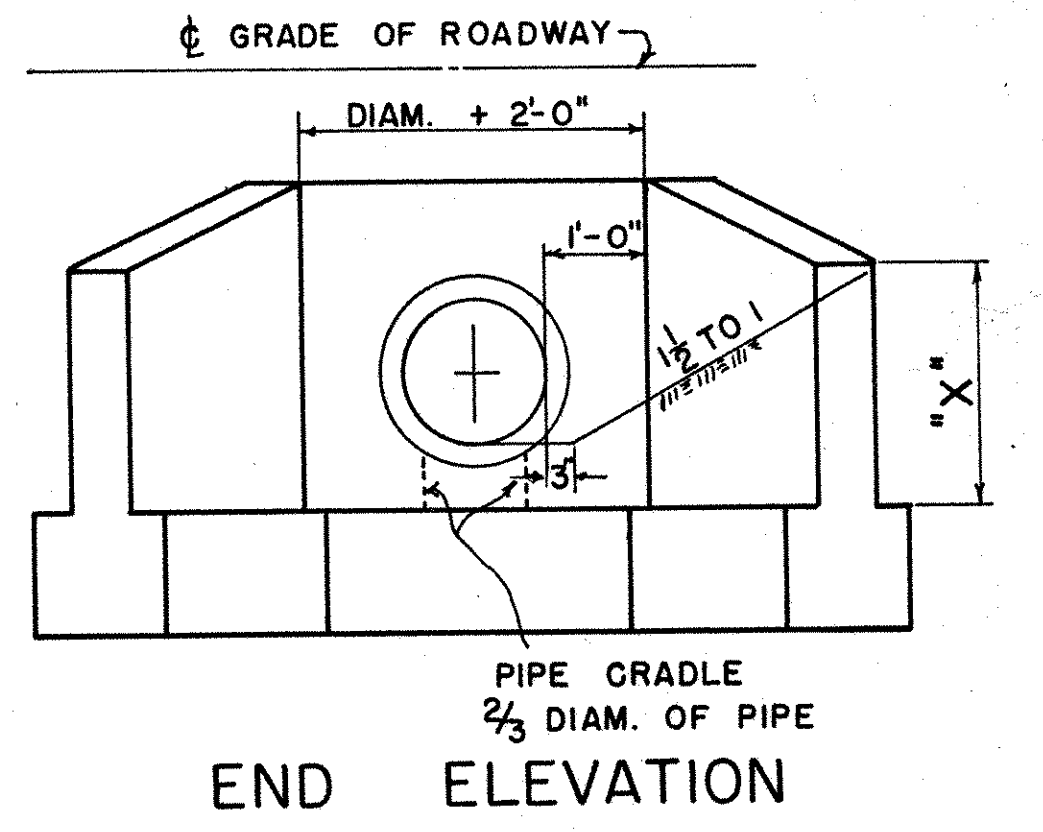
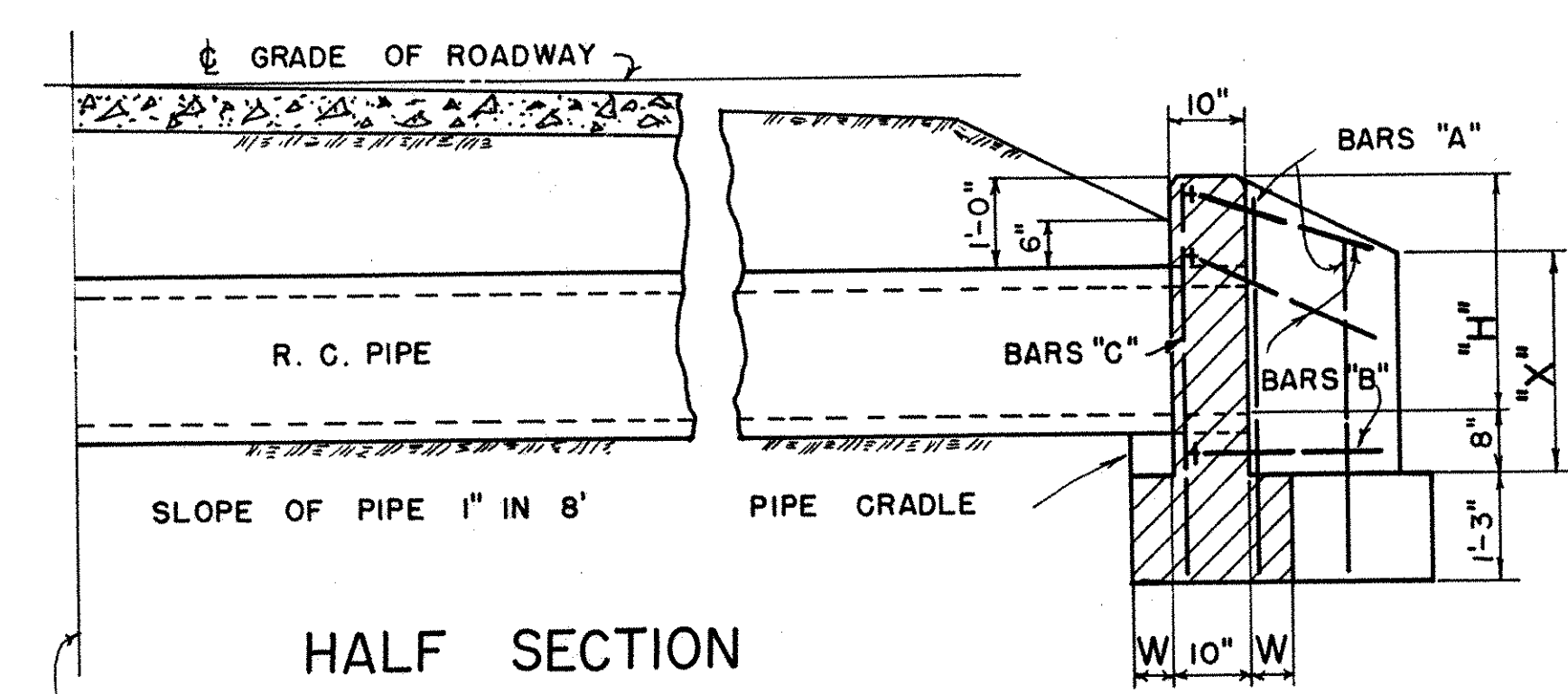
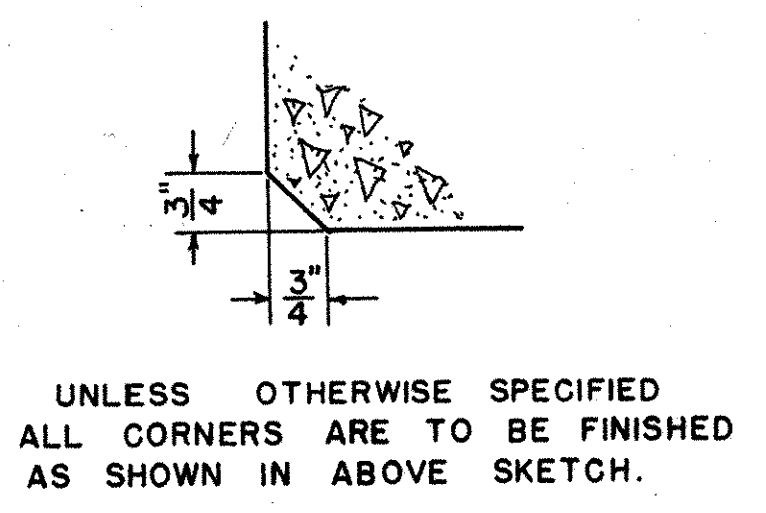


45° STANDARD CULVERT

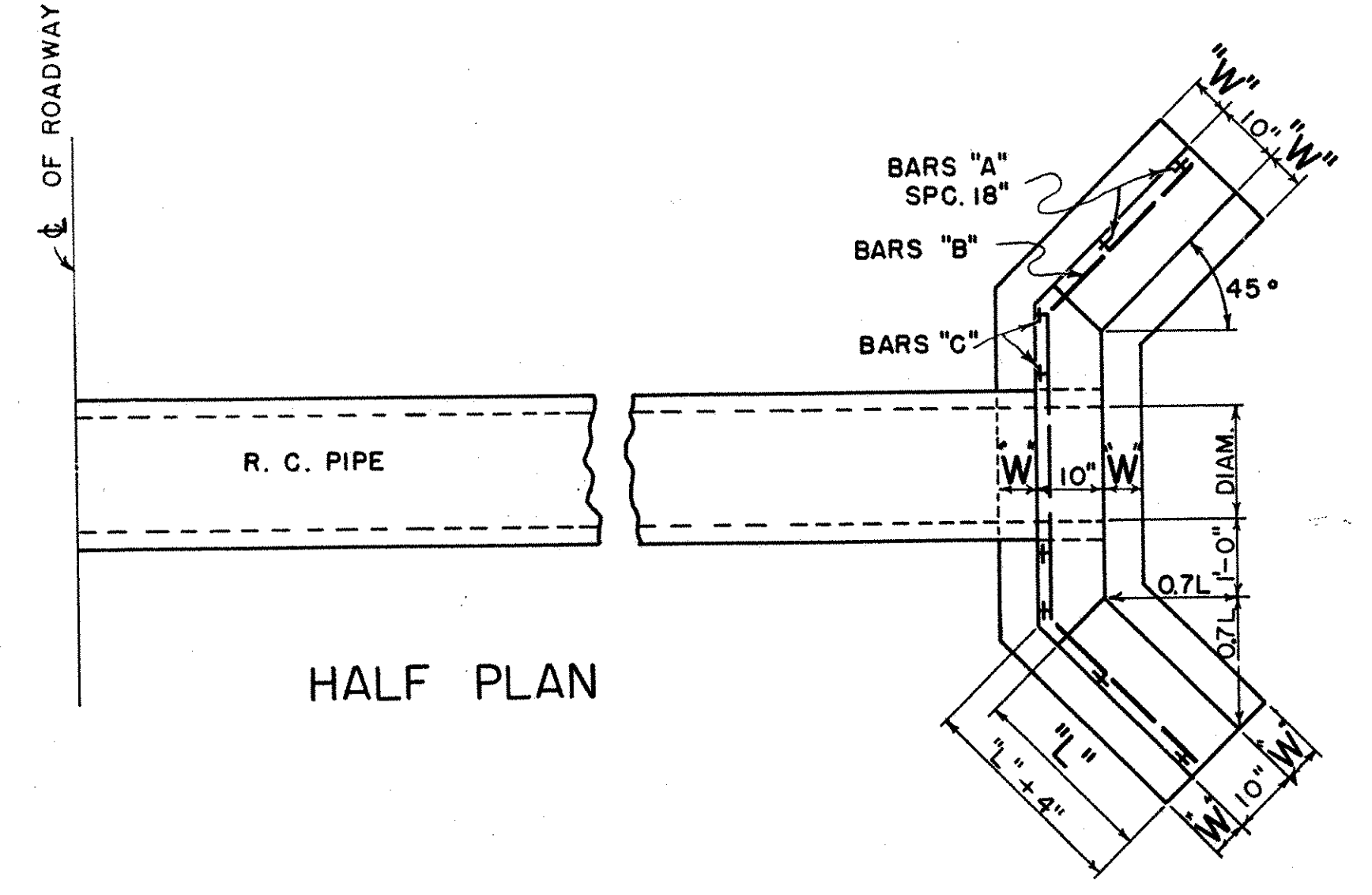
NOTE:
 MINIMUM "H" ∇ GRADE ROADWAY TO DISCHARGE END
 18" PIPE = 3.25'
 24" PIPE = 3.75'
 30" PIPE = 4.25'
 36" PIPE = 4.75'

NOTE:
 BARS "A" INCREASE BY 6" INTERVALS.
 4 BARS OF EACH LENGTH REQUIRED

H	L	X	W	QUANTITIES FOR TWO HEADWALLS												CONCRETE																		
				$\frac{1}{2}$ " REINFORCING RODS												CU. YDS.																		
				BARS "A"		BARS "B"				BARS "C"		TOTAL WGT. POUNDS				WALLS	WINGS	FOOTINGS																
NO.	LENGTH	TOTAL LENGTH	NO.	LENGTH	TOTAL LENGTH	NO.	LENGTH	TOTAL LENGTH	NO.	LENGTH	TOTAL LENGTH	NO.	LENGTH	TOTAL LENGTH	NO.	LENGTH	TOTAL LENGTH	8"	24"	30"	36"	18"	24"	30"	36"									
3.25	2'-6"	2'-6"	6"	8	3'-9"	4'-3"	32	6	9'-6"	57					8	4'-6"	36	84									1.89		1.63					
3.50	2'-9"	2'-9"	7"	8	4'-0"	4'-6"	34	6	10'-0"	60					8	4'-9"	38	88									2.15		1.86					
3.75	3'-0"	3'-0"	8"	12	4'-0"	5'-0"	54	6	10'-6"	63	6	11'-0"	66		8	5'-0"	40	105	107								2.42	2.48	2.12	2.23				
4.00	3'-3"	3'-0"	8"	12	4'-0"	5'-0"	54	6	11'-0"	66	6	11'-6"	69		8	5'-3"	42	108	110								2.66	2.72	2.23	2.33				
4.25	3'-6"	3'-3"	9"	12	4'-6"	5'-6"	60	6	11'-6"	69	6	12'-0"	72	6	12'-6"	75											2.96	3.03	3.08	2.49	2.61	2.72		
4.50	3'-9"	3'-6"	10"	12	4'-6"	5'-6"	60	6	12'-0"	72	6	12'-6"	75	6	13'-0"	78											3.27	3.36	3.41	2.79	2.90	3.03		
4.75	4'-0"	3'-9"	10"	12	5'-0"	6'-0"	66	6	12'-6"	75	6	13'-0"	78	6	13'-6"	81	6	14'-0"	84								3.60	3.69	3.76	3.80	2.89	3.01	3.14	3.26
5.00	4'-3"	3'-9"	11"	16	4'-9"	6'-3"	88	8	13'-0"	104	6	13'-6"	81	6	14'-0"	84	6	14'-6"	87	8	6'-3"	50	162	146	148	150	3.88	3.98	4.06	4.11	3.21	3.34	3.47	3.59
5.25	4'-6"	4'-0"	11"	16	5'-0"	6'-6"	92	8	13'-6"	108	8	14'-0"	112	6	15'-0"	90	8	6'-6"	52	168	171	154	156	4.23	4.34	4.43	4.48	3.34	3.46	3.59	3.72			
5.50	5'-0"	4'-0"	12"	16	5'-0"	6'-6"	92	8	14'-6"	116	8	15'-0"	120	6	15'-6"	93	8	6'-9"	54	175	178	160	162	4.68	4.81	4.90	4.97	3.79	3.93	4.07	4.21			
5.75	5'-3"	4'-3"	12"	16	5'-6"	7'-0"	100	8	15'-0"	120	8	15'-6"	124	8	16'-0"	128	8	7'-0"	56	184	187	190	170	5.08	5.20	5.31	5.39	3.91	4.05	4.19	4.33			
6.00	5'-6"	4'-3"	13"	16	5'-6"	7'-0"	100	8	15'-6"	124	8	16'-0"	128	8	16'-6"	132	6	17'-0"	58	188	191	194	174	5.40	5.53	5.66	5.75	4.29	4.44	4.58	4.73			



45° R. R. TYPE CULVERT



DIAMETER OF PIPE	H	L	X	W	QUANTITIES FOR TWO HEADWALLS												CONCRETE												
					$\frac{1}{2}$ " REINFORCING RODS												CU. YDS.												
					BARS "A"		BARS "B"				BARS "C"		TOTAL WGT. POUNDS				WALLS	WINGS	FOOTINGS										
NO.	LENGTH	TOTAL LENGTH	NO.	LENGTH	TOTAL LENGTH	NO.	LENGTH	TOTAL LENGTH	NO.	LENGTH	TOTAL LENGTH	NO.	LENGTH	TOTAL LENGTH	NO.	LENGTH	TOTAL LENGTH	18"	24"	30"	36"	1.70	1.55	3.25					
18"	2.75	2'-6"	2'-6"	6"	8	3'-6"	4'-0"	30	6	9'-6"	57	6	11'-0"	66	8	4'-6"	36	84									1.70	1.55	3.25
24"	3.25	2'-11"	2'-11"	8"	8	4'-0"	4'-6"	34	6	11'-0"	66	6	11'-6"	69	8	5'-0"	40	95									2.19	2.10	4.29
30"	3.83	3'-4"	3'-4"	9"	12	4'-0"	5'-0"	54	6	12'-0"	72	6	12'-6"	75	8	5'-6"	44	116									2.78	2.54	5.32
36"	4.33	3'-9"	3'-9"	10"	12	4'-6"	5'-6"	60	6	13'-0"	78	6	13'-6"	81	8	6'-0"	48	129									3.38	3.04	6.42

NOTE:
 BARS "A" INCREASE BY 6" INTERVALS
 4 OF EACH LENGTH REQUIRED.

THE PLAN AND PROFILE OF THE CONTRACT SHOWS THE LOCATION AND TYPE OF WALLS REQUIRED. EXISTING STRUCTURES SHALL BE REMOVED AS DIRECTED.

A SUITABLE FOUNDATION FOR HEADWALLS WILL BE REQUIRED. CARRY FOOTINGS TO SUFFICIENT DEPTH FOR FIRM MATERIAL AND FROST ACTION. QUANTITIES IN BILL OF MATERIALS ARE FOR DIMENSIONS SHOWN ON THE SHEET. NOTE MINIMUM "H" FOR VARIOUS PIPES. THIS SHEET IS NOW STANDARD AND SUPERSEDES ALL PREVIOUS SHEETS.