

CLASS "A" CONCRETE OR CEMENT RUBBLE MASONRY

**WALL AT FOOT OF SLOPE**

**FRONT ELEVATION**

H = TOTAL HEIGHT OF ENDWALL  
 B = BASE  
 D = INSIDE DIAMETER OF PIPE  
 S = HEIGHT OF SLOPE ABOVE FLOW LINE AT FACE OF WALL - MINIMUM = D + 2  
 L = LENGTH OF WALL = 3S + D  
 ALL EDGES OF EXPOSED SURFACES TO BE CHAMFERED APPROXIMATELY ONE INCH.

DIMENSIONS AND QUANTITIES FOR ONE ENDWALL BASED ON  $S = D + 2'$

D	S	H	L	BATTER	B	VOL.
INS.	FT.&INS.	FT.&INS.	FT.&INS.	INS./ FT.	FT.&INS.	CU.YD.
12"	1'-2"	4'-6"	4'-6"	2 1/2"	1'-11 1/4"	1.10
15"	1'-5"	4'-9"	5'-6"	2 1/2"	1'-11 1/8"	1.45
18"	1'-8"	5'-0"	6'-6"	2 1/2"	2'-0 1/2"	1.83
24"	2'-2"	5'-6"	8'-6"	2 1/2"	2'-1 3/4"	2.72
30"	2'-8"	6'-0"	10'-6"	2 1/2"	2'-3"	3.79
36"	3'-2"	6'-6"	12'-6"	3"	2'-7 1/2"	5.45
42"	3'-8"	7'-0"	14'-6"	3"	2'-9"	6.40 *
48"	4'-2"	7'-6"	16'-6"	3"	2'-10 1/2"	8.00 *

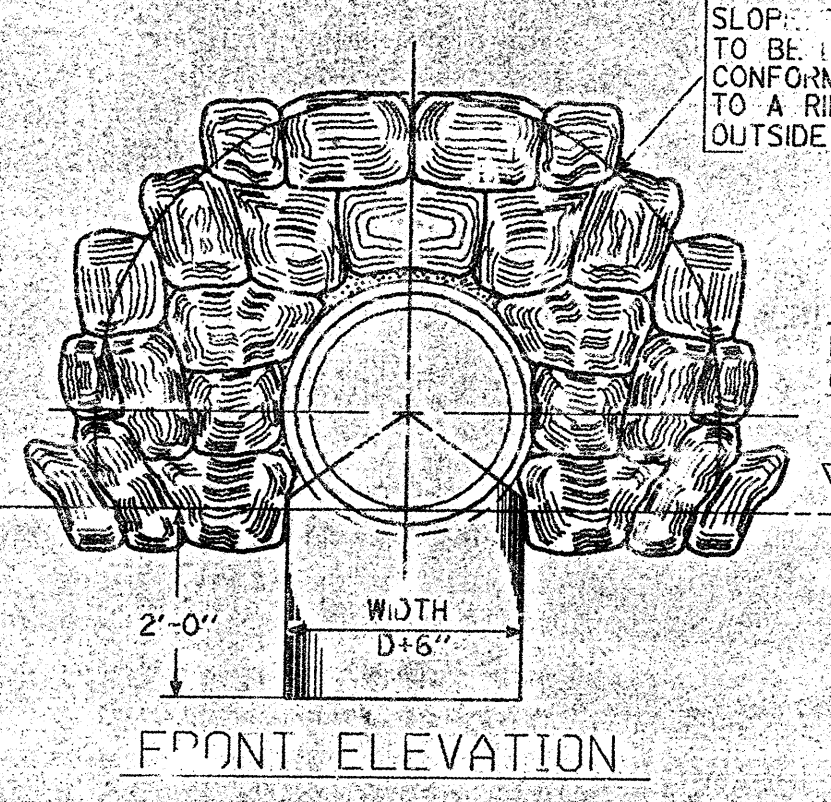
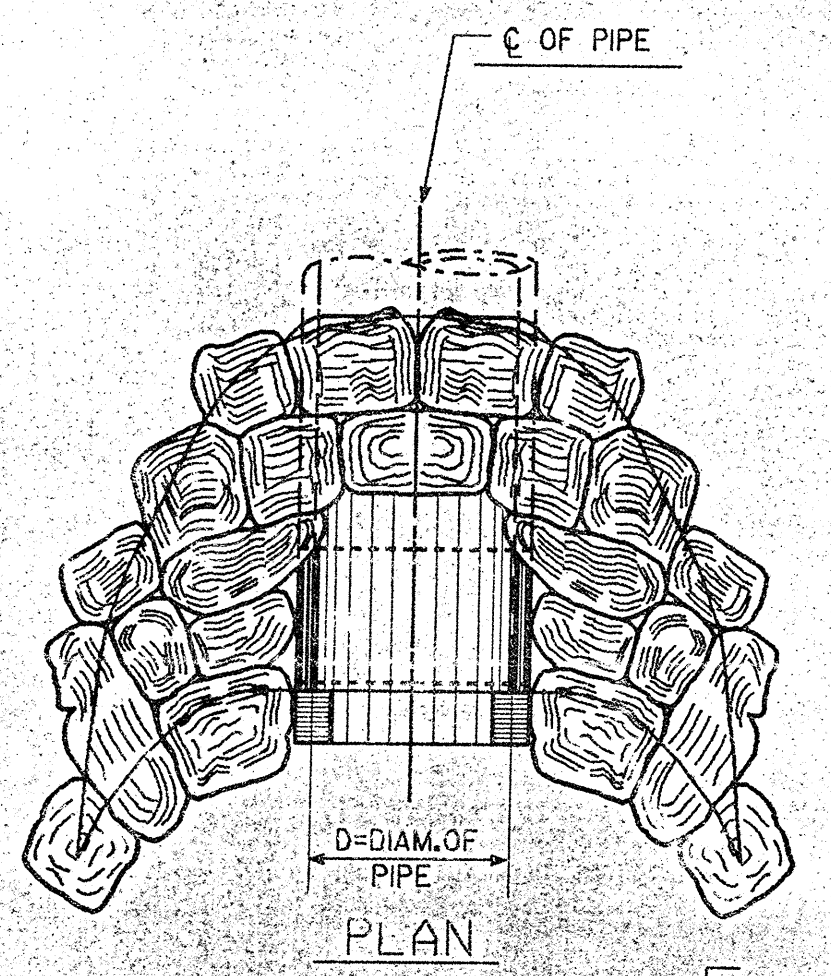
\* VOLUME BASED ON "D" AND WALL THICKNESS AT  $\phi$  OF PIPE HAS BEEN DEDUCTED

**NOTE**

ALL CONSTRUCTION DIMENSIONS ARE NOMINAL.

WHEN ONE ENDWALL IS TO BE USED FOR TWO PIPES, THE DIMENSIONS OF THAT ENDWALL SHALL CONFORM TO THAT REQUIRED FOR THE LARGER PIPE, EXCEPT THE DIMENSION "L" SHALL BE INCREASED BY THE OUTSIDE DIAMETER OF THE SMALLER PIPE PLUS ONE FOOT.

THESE ENDWALLS WILL BE USED ONLY AT LOCATIONS WHERE THEY WILL NOT BE A HAZARD TO VEHICLES THAT RUN OFF THE ROAD. IN NO CASE WILL THE LOCATION OF THESE ENDWALLS BE LESS THAN 30' FROM THE EDGE OF THE TRAVELED WAY.



ISOMETRIC VIEW

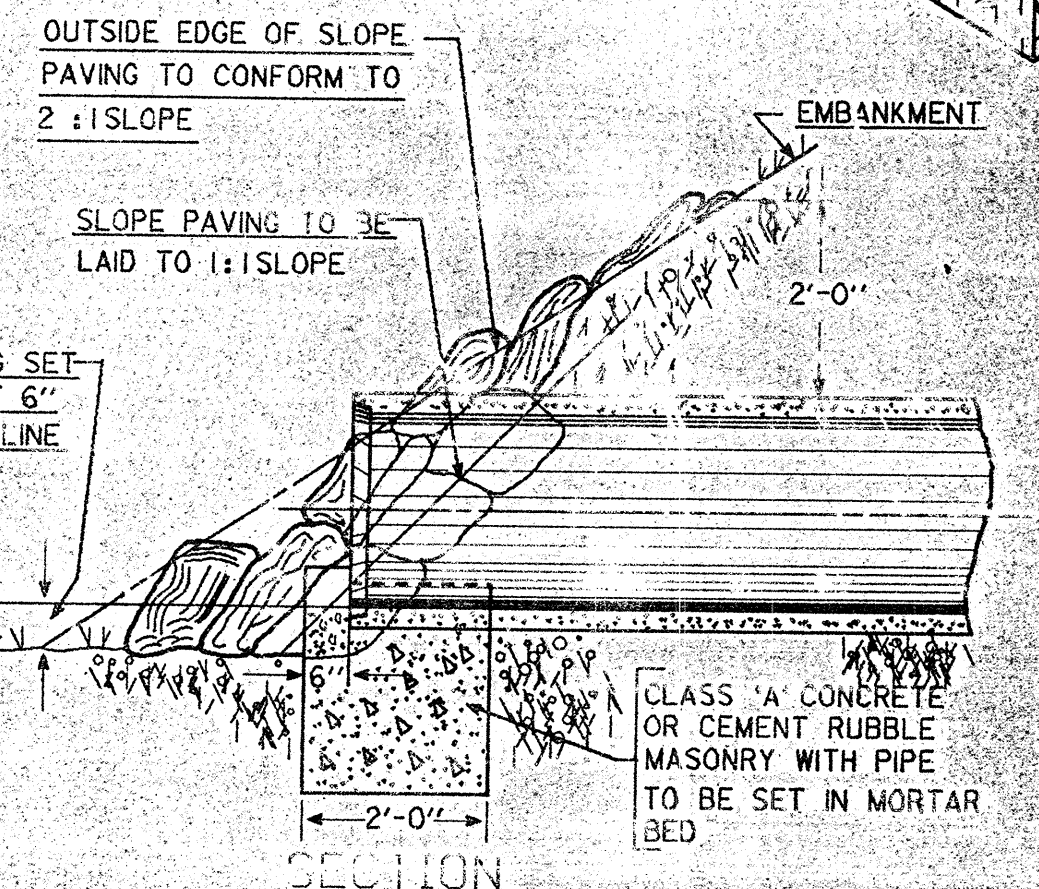
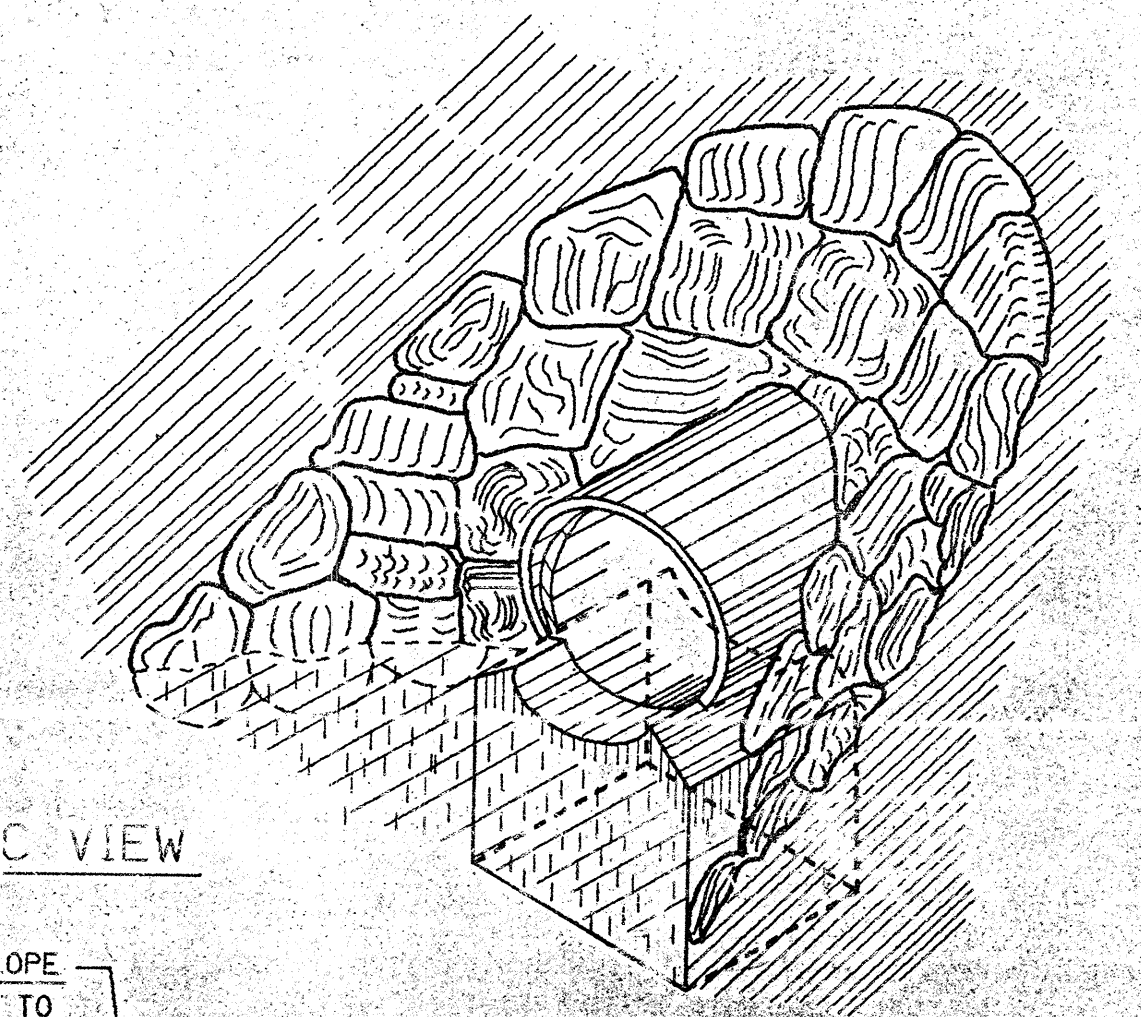
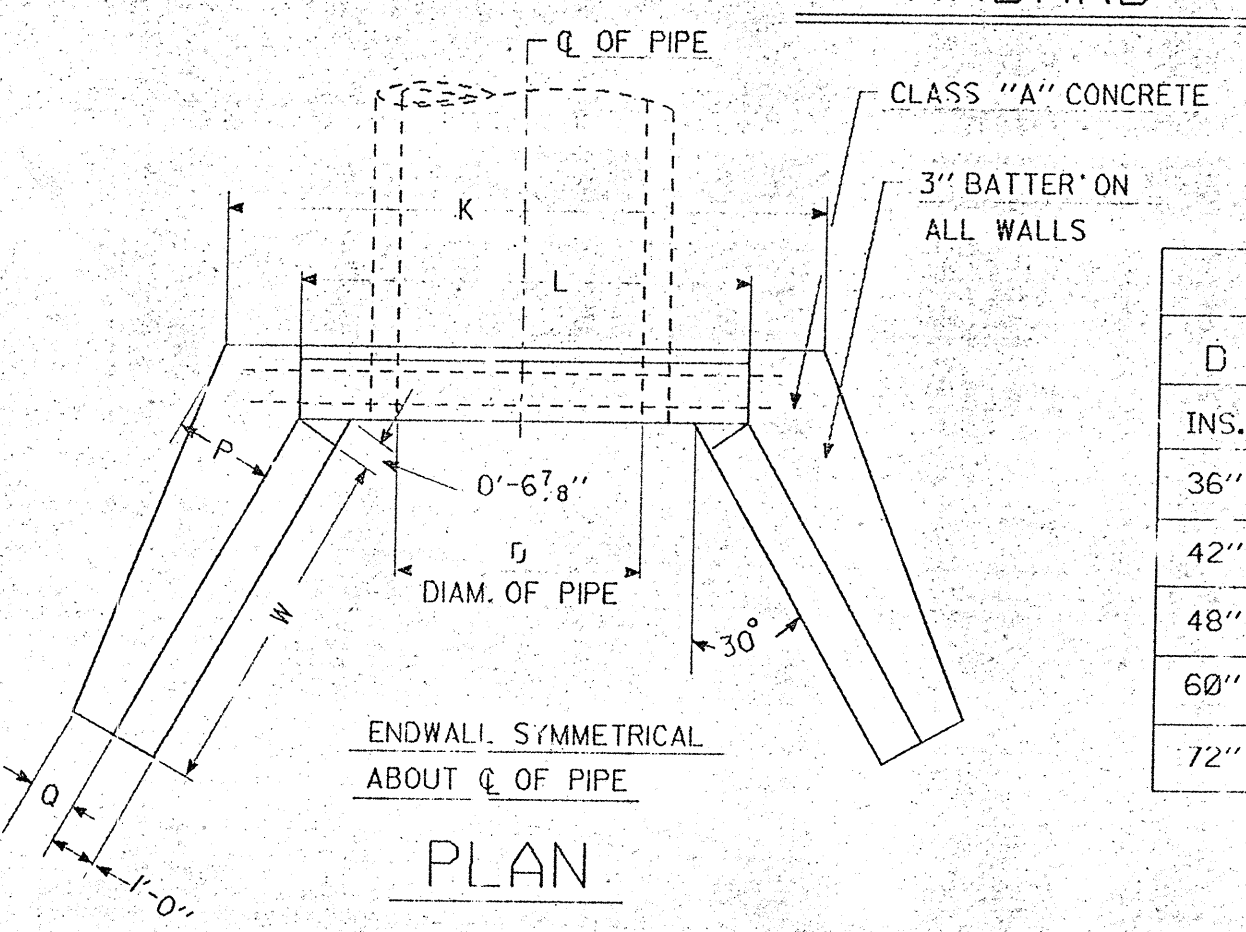


TABLE WITH QUANTITIES

D	VOLUME OF FOOTING	SLOPE PAVING
INS.	C.Y.	S.Y.
15"	0.26	1.2
18"	0.30	3.5
24"	0.37	4.0
30"	0.44	4.5

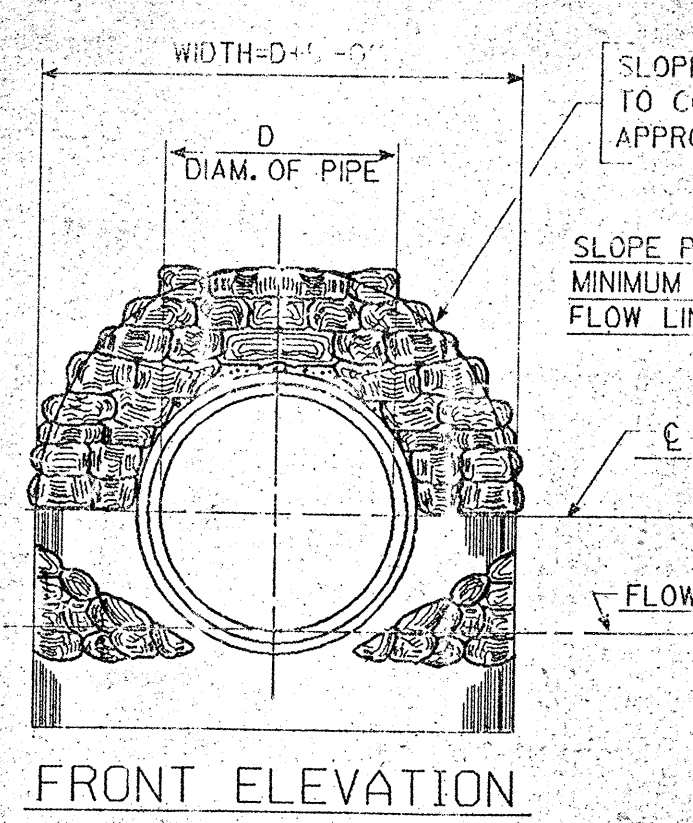
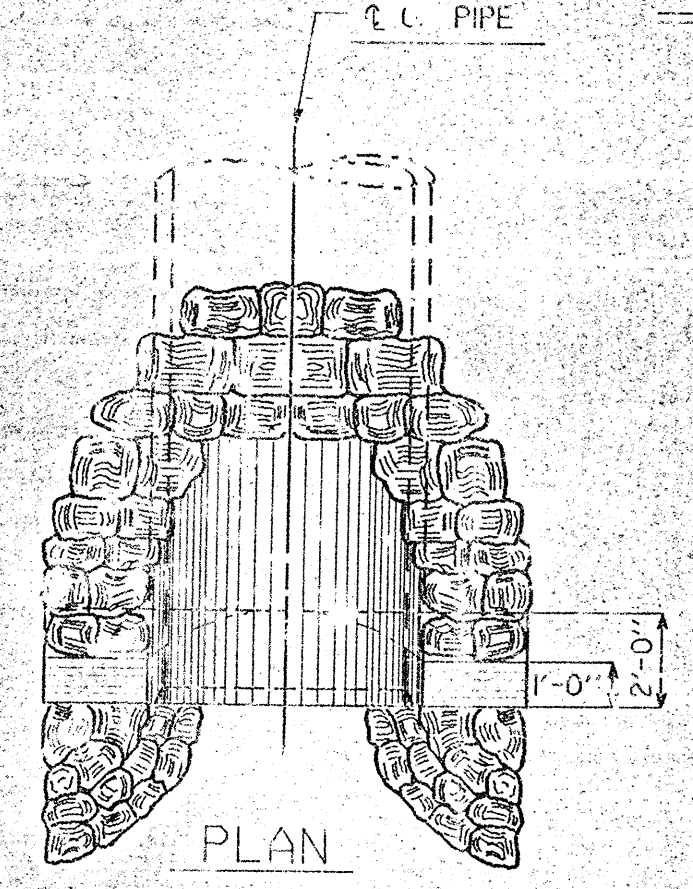
\* APPROXIMATE QUANTITY FOR MINIMUM CONDITION

FOOTING & SLOPE PAVING FOR PIPES 15" TO 30" DIAMETER



DIMENSIONS AND QUANTITIES FOR ONE WING TYPE ENDWALL

D	B	C	G	H	K	L	P	Q	R	W	VOL.
INS.	FT.&INS.	FT.&INS.	FT.&INS.	FT.&INS.	FT.&INS.	FT.&INS.	FT.&INS.	FT.&INS.	FT.&INS.	FT.&INS.	CU.YD.
36"	1'-6"	2'-0"	3'-3"	6'-8"	9'-1 1/2"	7'-3 3/4"	1'-4 7/8"	0'-9 3/4"	3'-4 7/8"	5'-5 3/4"	5.31
42"	1'-6"	2'-0"	3'-3"	7'-2"	9'-10 1/2"	7'-9 3/4"	1'-6 3/8"	0'-9 3/4"	3'-10 1/2"	6'-7 3/4"	6.61
48"	1'-7"	2'-6"	3'-9"	6'-2"	10'-10"	8'-3 3/4"	1'-5 7/8"	0'-11 1/4"	4'-9"	7'-9 1/2"	9.11
60"	1'-7"	2'-6"	3'-9"	9'-2"	12'-4 1/2"	9'-3 3/4"	2'-0 3/8"	0'-11 1/4"	5'-9"	10'-1 1/4"	12.43
72"	1'-7"	2'-6"	3'-9"	10'-2"	13'-10 3/4"	10'-3 3/4"	2'-3 3/8"	0'-11 1/4"	6'-9"	12'-5"	16.30



ISOMETRIC VIEW

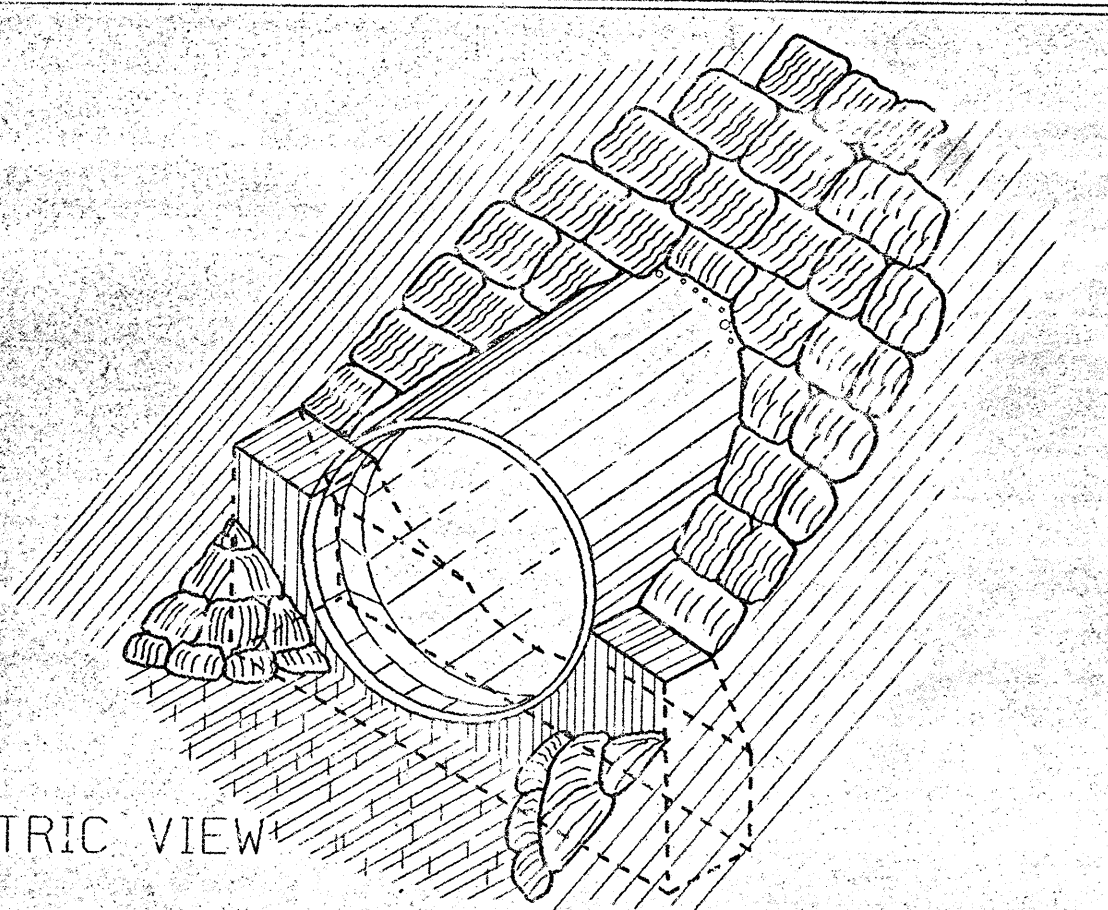
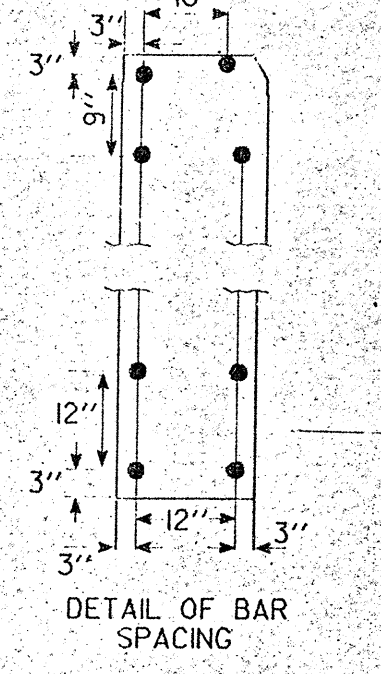
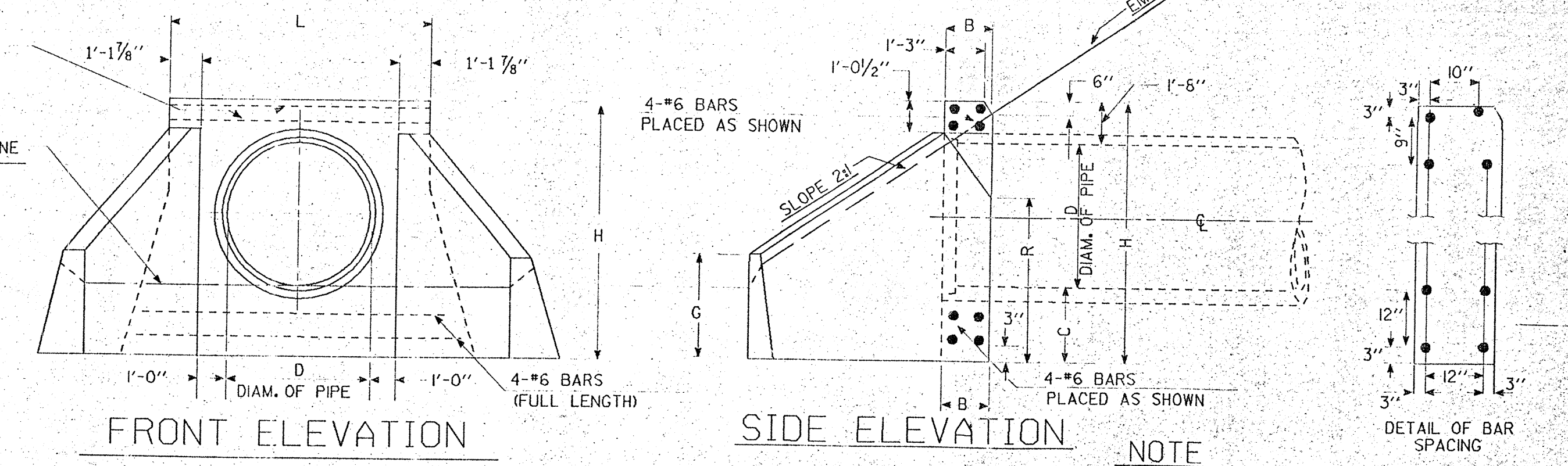


TABLE WITH QUANTITIES

D	VOLUME OF FOOTING	SLOPE PAVING *
INS.	C.Y.	S.Y.
36"	1.55	4.7
42"	1.63	5.4
48"	1.82	6.1
60"	2.08	7.6
72"	2.31	9.3

\* APPROXIMATE QUANTITY FOR MINIMUM CONDITION

FOOTING & SLOPE PAVING FOR PIPES 36" TO 72" DIAMETER



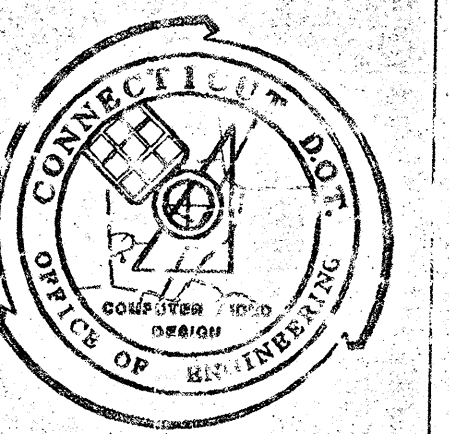
STANDARD WING TYPE ENDWALL

REINFORCEMENT TO BE PLACED FOR 48" PIPE AND UP.

**NOTE**

COST OF REINFORCING BARS TO BE INCLUDED IN THE CONTRACT UNIT PRICE FOR CLASS "A" CONCRETE.

MANUAL REVISIONS TO THIS DOCUMENT ARE PROHIBITED. ALL REVISIONS MUST BE PERFORMED ON CADD FILES: DSA242002001506.DGN



STANDARD SHEET  
 CONN. DEPT. OF TRANSPORTATION

ENDWALLS, SLOPE PAVED INLETS AND OUTLETS

REVISIONS		DESIGNED BY: PERKINS	DATE: 1-82
NO.	DATE	DESCRIPTION	
		Drafted by: A. BOGAT	DATE: 9-88
		Reviewed by: J. BUCHANAN	DATE: 1-5-89
		Approved by: [Signature]	DATE: 2-20-89
		Approved by: [Signature]	DATE: 9-25-89
		F.H.W.A. Approved:	DATE: 9/10/90

Scale: NOT TO SCALE

STANDARD NUMBER: 506