

NOTE: THE DESIGN OF CULVERT SHALL BE DETERMINED BY THE MAXIMUM HEIGHT OF FILL WITH ONLY A SINGLE DESIGN BEING USED FOR THE ENTIRE INSTALLATION.

DATA CHART

DESIGN	7-6-10	7-6-20	7-6-30	7-6-40	7-6-50	7-6-60	7-6-70	7-6-80
CLEAR SPAN "S"	7'-0"	7'-0"	7'-0"	7'-0"	7'-0"	7'-0"	7'-0"	7'-0"
CLEAR HEIGHT "H"	6'-0"	6'-0"	6'-0"	6'-0"	6'-0"	6'-0"	6'-0"	6'-0"
T ₁	8"	10"	14"	17"	17"	18"	20"	22"
T ₂	9"	9"	9"	11"	14"	16"	16"	18"
BARS "A"	501 AT 12"	601 AT 12"	601 AT 8"	605 AT 8"	808 AT 12"	809 AT 12"	809 AT 12"	811 AT 12"
BARS "B"	502 AT 12"	602 AT 12"	505 AT 8"	508 AT 8"	722 AT 12"	723 AT 12"	810 AT 12"	812 AT 12"
BARS "C"	503 AT 12"	603 AT 12"	506 AT 8"	509 AT 8"	650 AT 12"	648 AT 12"	651 AT 12"	653 AT 12"
NO. BARS "D" IN 2 SLABS	24	24	24	24	24	24	24	24
BARS "E"	401 AT 12"	402 AT 12"	403 AT 12"	404 AT 12"	404 AT 12"	409 AT 12"	405 AT 12"	427 AT 12"
NO. BARS "F" IN 2 WALLS	10 AT 14"	10 AT 14"	10 AT 14"	10 AT 14"	10 AT 14"	10 AT 14"	10 AT 14"	10 AT 14"
NO. BARS "G" IN 2 WALLS	8 AT 14"	8 AT 14"	8 AT 14"	8 AT 14"	8 AT 14"	8 AT 14"	8 AT 14"	8 AT 14"
BARS "H"	504 AT 12"	604 AT 12"	507 AT 8"	510 AT 8"	616 AT 12"	647 AT 12"	652 AT 12"	654 AT 12"
NO. BARS "J" PER CORNER	0	0	0	0	1	2 AT 9"	2 AT 9"	2 AT 8"
CU. YDS. CONCRETE PER FT.	0.761	0.893	1.077	1.343	1.607	1.795	2.034	2.034
LB. REINF. STEEL PER FT.	112.32	149.35	169.93	178.10	207.54	220.42	247.28	257.99
HEIGHT OF FILL OVER TOP	10'	20'	30'	40'	50'	60'	70'	80'

DESIGN	7-8-10	7-8-20						
CLEAR SPAN "S"	7'-0"	7'-0"						
CLEAR HEIGHT "H"	8'-0"	8'-0"						
T ₁	8"	11"						
T ₂	12"	12"						
BARS "A"	511 AT 11 1/2"	408 AT 11 1/2"						
BARS "B"	512 AT 11 1/2"	608 AT 11 1/2"						
BARS "C"	606 AT 11 1/2"	609 AT 11 1/2"						
NO. BARS "D" IN 2 SLABS	24	24						
BARS "E"	405 AT 11 1/2"	407 AT 11 1/2"						
NO. BARS "F" IN 2 WALLS	12 AT 16"	12 AT 16"						
NO. BARS "G" IN 2 WALLS	10 AT 16"	10 AT 16"						
BARS "H"	607 AT 11 1/2"	610 AT 11 1/2"						
NO. BARS "J" PER CORNER	0	0						
CU. YDS. CONCRETE PER FT.	1.046	1.213						
LB. REINF. STEEL PER FT.	150.18	167.17						
HEIGHT OF FILL OVER TOP	10'	20'						

DESIGN	8-7-10	8-7-20	8-7-30	8-7-40	8-7-50	8-7-60	8-7-70	8-7-80
CLEAR SPAN "S"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"
CLEAR HEIGHT "H"	7'-0"	7'-0"	7'-0"	7'-0"	7'-0"	7'-0"	7'-0"	7'-0"
T ₁	9"	12"	15"	17"	19"	21"	24"	27"
T ₂	10"	12"	12"	14"	14"	16"	16"	18"
BARS "A"	611 AT 12"	701 AT 12"	701 AT 12"	801 AT 12"	801 AT 12"	901 AT 12"	901 AT 12"	805 AT 8"
BARS "B"	513 AT 12"	614 AT 12"	702 AT 12"	703 AT 12"	802 AT 12"	803 AT 12"	804 AT 12"	712 AT 8"
BARS "C"	612 AT 12"	615 AT 12"	617 AT 12"	704 AT 12"	706 AT 12"	708 AT 12"	710 AT 12"	619 AT 8"
NO. BARS "D" IN 2 SLABS	24	24	24	24	24	24	24	24
BARS "E"	408 AT 12"	409 AT 12"	410 AT 12"	411 AT 12"	412 AT 12"	413 AT 12"	414 AT 12"	415 AT 12"
NO. BARS "F" IN 2 WALLS	10 AT 18"	10 AT 18"	10 AT 18"	10 AT 18"	10 AT 18"	10 AT 18"	10 AT 18"	10 AT 18"
NO. BARS "G" IN 2 WALLS	8 AT 18"	8 AT 18"	8 AT 18"	8 AT 18"	8 AT 18"	8 AT 18"	8 AT 18"	8 AT 18"
BARS "H"	613 AT 12"	616 AT 12"	618 AT 12"	705 AT 12"	707 AT 12"	709 AT 12"	711 AT 12"	620 AT 9"
NO. BARS "J" PER CORNER	0	0	0	1	3 AT 7 1/2"	4 AT 4"	3 AT 7 1/2"	3 AT 7 1/2"
CU. YDS. CONCRETE PER FT.	0.978	1.269	1.454	1.698	1.826	2.093	2.281	2.620
LB. REINF. STEEL PER FT.	149.39	181.53	204.39	250.28	290.97	324.48	326.86	353.55
HEIGHT OF FILL OVER TOP	10'	20'	30'	40'	50'	60'	70'	80'

DESIGN	8-6-10	8-6-20	8-6-30	8-6-40	8-6-50	8-6-60		
CLEAR SPAN "S"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"		
CLEAR HEIGHT "H"	6'-0"	6'-0"	6'-0"	6'-0"	6'-0"	6'-0"		
T ₁	8"	11"	14"	16"	18"	20"		
T ₂	9"	11"	12"	14"	14"	16"		
BARS "A"	621 AT 12"	713 AT 12"	701 AT 12"	801 AT 12"	801 AT 12"	901 AT 12"		
BARS "B"	514 AT 12"	624 AT 12"	714 AT 12"	721 AT 12"	806 AT 12"	807 AT 12"		
BARS "C"	622 AT 12"	625 AT 12"	627 AT 12"	644 AT 12"	646 AT 12"	648 AT 12"		
NO. BARS "D" IN 2 SLABS	24	24	24	24	24	24		
BARS "E"	416 AT 12"	417 AT 12"	403 AT 12"	426 AT 12"	409 AT 12"	405 AT 12"		
NO. BARS "F" IN 2 WALLS	10 AT 14"	10 AT 14"	10 AT 14"	10 AT 14"	10 AT 14"	10 AT 14"		
NO. BARS "G" IN 2 WALLS	8 AT 14"	8 AT 14"	8 AT 14"	8 AT 14"	8 AT 14"	8 AT 14"		
BARS "H"	623 AT 12"	626 AT 12"	628 AT 12"	645 AT 12"	647 AT 12"	649 AT 12"		
NO. BARS "J" PER CORNER	0	0	1	2 AT 9"	2 AT 9"	2 AT 10"		
CU. YDS. CONCRETE PER FT.	0.841	1.084	1.318	1.549	1.676	1.919		
LB. REINF. STEEL PER FT.	140.62	171.03	200.53	226.37	253.96	279.51		
HEIGHT OF FILL OVER TOP	10'	20'	30'	40'	50'	60'		

DESIGN	8-8-10	8-8-20	8-8-30	8-8-40	8-8-50	8-8-60		
CLEAR SPAN "S"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"		
CLEAR HEIGHT "H"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"		
T ₁	9"	12"	15"	17"	19"	21"		
T ₂	10"	12"	12"	14"	14"	16"		
BARS "A"	515 AT 12"	701 AT 12"	701 AT 12"	801 AT 12"	801 AT 13"	819 AT 12"		
BARS "B"	629 AT 12"	630 AT 12"	716 AT 12"	716 AT 12"	817 AT 13"	820 AT 12"		
BARS "C"	516 AT 12"	631 AT 12"	632 AT 12"	717 AT 12"	730 AT 13"	731 AT 12"		
NO. BARS "D" IN 2 SLABS	24	24	24	24	28	30		
BARS "E"	410 AT 12"	406 AT 12"	413 AT 12"	418 AT 12"	446 AT 13"	447 AT 12"		
NO. BARS "F" IN 2 WALLS	12 AT 16"	12 AT 16"	12 AT 16"	12 AT 16"	12 AT 16"	12 AT 16"		
NO. BARS "G" IN 2 WALLS	10 AT 16"	10 AT 16"	10 AT 16"	10 AT 16"	10 AT 16"	10 AT 16"		
BARS "H"	517 AT 12"	618 AT 12"	633 AT 12"	718 AT 12"	818 AT 13"	732 AT 12"		
NO. BARS "J" PER CORNER	0	0	0	1	1	2 AT 9"		
CU. YDS. CONCRETE PER FT.	1.040	1.343	1.628	1.785	1.913	2.182		
LB. REINF. STEEL PER FT.	148.55	191.55	216.16	263.48	283.24	315.64		
HEIGHT OF FILL OVER TOP	10'	20'	30'	40'	50'	60'		

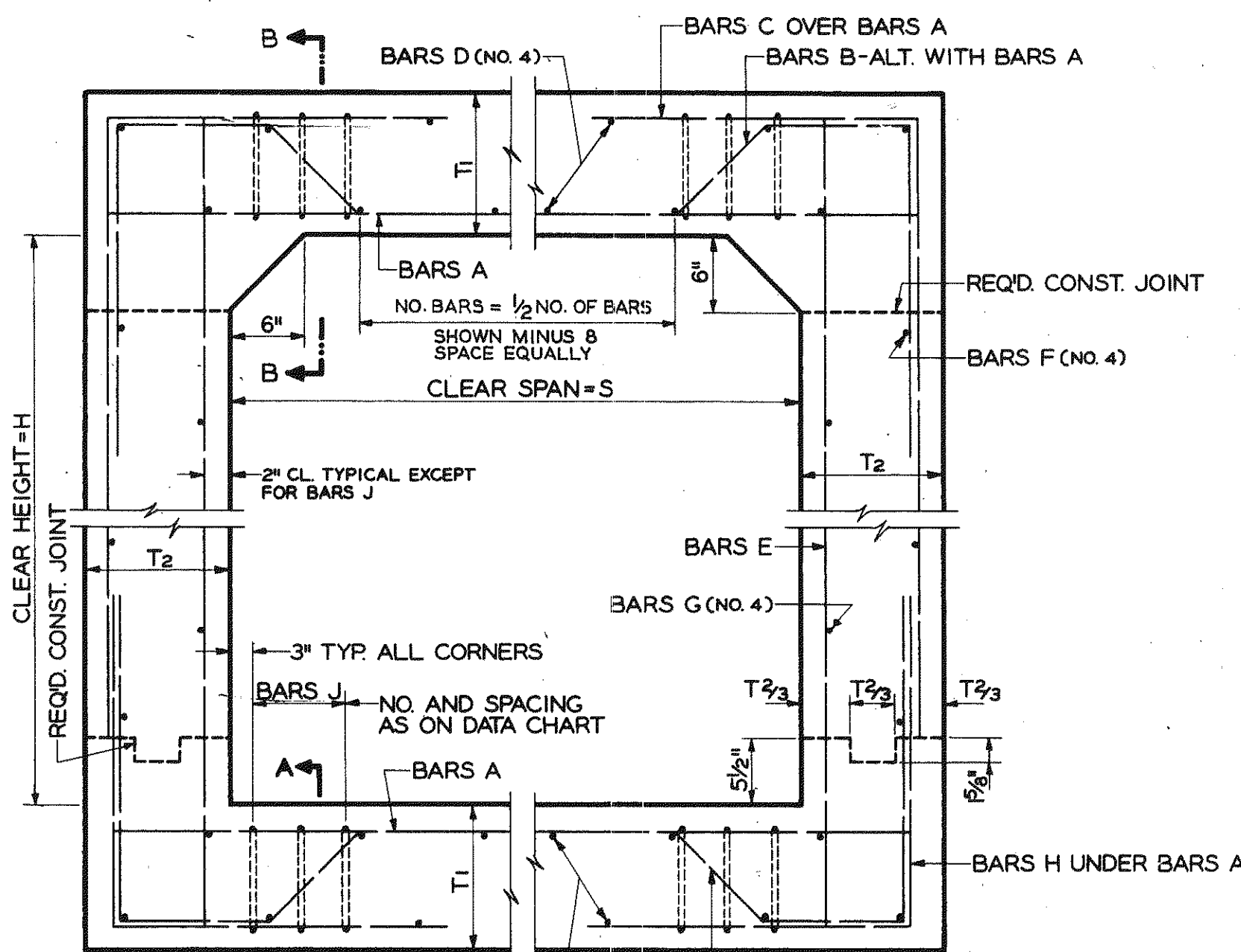
DESIGN	6-5-10	6-5-20	6-5-30	6-5-40	6-5-50	6-5-60	6-5-70	6-5-80
CLEAR SPAN "S"	6'-0"	6'-0"	6'-0"	6'-0"	6'-0"	6'-0"	6'-0"	6'-0"
CLEAR HEIGHT "H"	5'-0"	5'-0"	5'-0"	5'-0"	5'-0"	5'-0"	5'-0"	5'-0"
T ₁	7 1/2"	9"	12"	15"	18"	21"	24"	24"
T ₂	9"	9"	9"	10"	12"	12"	12"	15 1/2"
BARS "A"	419 AT 12"	519 AT 12"	635 AT 12"	719 AT 12"	720 AT 12"	720 AT 12"	720 AT 12"	662 AT 12"
BARS "B"	518 AT 12"	634 AT 12"	636 AT 12"	637 AT 12"	638 AT 12"	641 AT 12"	661 AT 12"	663 AT 12"
BARS "C"	420 AT 12"	520 AT 12"	522 AT 12"	524 AT 12"	639 AT 12"	642 AT 12"	733 AT 12"	449 AT 12"
NO. BARS "D" IN 2 SLABS	24	24	24	24	24	24	24	24
BARS "E"	421 AT 12"	423 AT 12"	424 AT 12"	419 AT 12"	425 AT 12"	408 AT 12"	448 AT 12"	448 AT 12"
NO. BARS "F" IN 2 WALLS	8 AT 14"	8 AT 14"	8 AT 14"	8 AT 14"	8 AT 14"	8 AT 14"	8 AT 14"	8 AT 14"
NO. BARS "G" IN 2 WALLS	6 AT 14"	6 AT 14"	6 AT 14"	6 AT 14"	6 AT 14"	6 AT 14"	6 AT 14"	6 AT 14"
BARS "H"	422 AT 12"	521 AT 12"	523 AT 12"	525 AT 12"	640 AT 12"	643 AT 12"	734 AT 12"	450 AT 12"
NO. BARS "J" PER CORNER	0	0	0	0	0	0	1	1
CU. YDS. CONCRETE PER FT.	0.634	0.704	0.843	1.028	1.269	1.417	1.565	1.745
LB. REINF. STEEL PER FT.	83.41	110.85	121.89	135.66	157.34	162.51	184.23	129.16
HEIGHT OF FILL OVER TOP	10'	20'	30'	40'	50'	60'	70'	80'

DESIGN	4-3-10	4-3-20	4-3-30	4-3-40	4-3-50	4-3-60		
CLEAR SPAN "S"	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"		
CLEAR HEIGHT "H"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"		
T ₁	8"	7"	9"	11"	13"	15"		
T ₂	8"	8"	8"	9"	10"	12"		
BARS "A"	428 AT 14"	528 AT 14"	529 AT 12"	529 AT 13"	531 AT 12"	555 AT 14"		
BARS "B"	429 AT 14"	433 AT 14"	435 AT 12"	530 AT 13"	532 AT 12"	533 AT 14"		
BARS "C"	430 AT 14"	527 AT 14"	436 AT 12"	439 AT 12"	442 AT 12"	534 AT 14"		
NO. BARS "D" IN 2 SLABS	22	22	22	22	22	22		
BARS "E"	431 AT 14"	434 AT 14"	437 AT 12"	440 AT 13"	443 AT 12"	445 AT 14"		
NO. BARS "F" IN 2 WALLS	6 AT 12"	6 AT 12"	6 AT 12"	6 AT 12"	6 AT 12"	6 AT 12"		
NO. BARS "G" IN 2 WALLS	4 AT 14"	4 AT 14"	4 AT 14"	4 AT 14"	4 AT 14"	4 AT 14"		
BARS "H"	432 AT 14"	528 AT 14"	438 AT 12"	441 AT 13"	444 AT 12"	535 AT 14"		
NO. BARS "J" PER CORNER	0	0	0	0	0	0		
CU. YDS. CONCRETE PER FT.	0.355	0.388	0.481	0.549	0.649	0.787		
LB. REINF. STEEL PER FT.	50.48	60.25	62.18	67.18	74.20	81.81		
HEIGHT OF FILL OVER TOP	10'	20'	30'	40'	50'	60'		

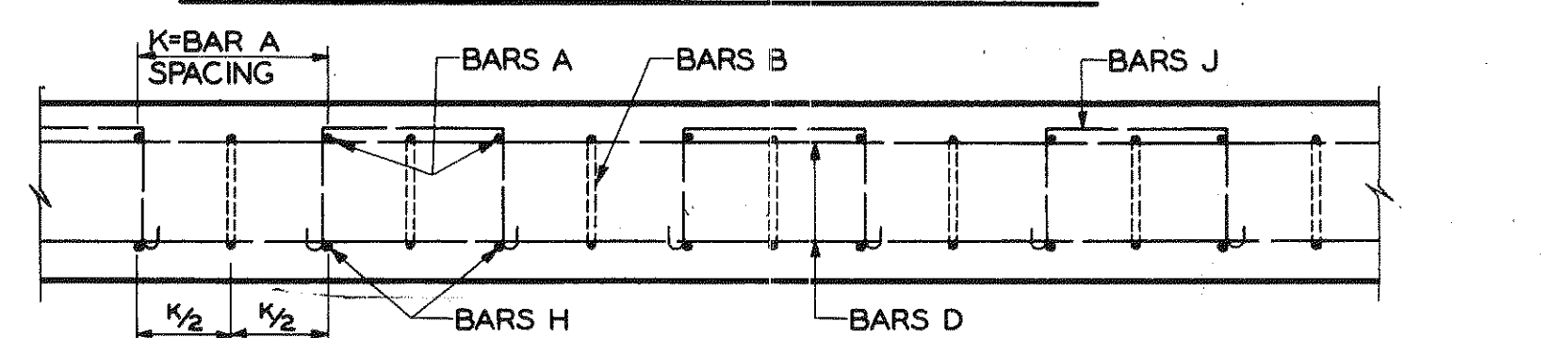
DESIGN	10-10-10	10-10-20	10-10-30	10-10-40	10-10-50			
CLEAR SPAN "S"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"			
CLEAR HEIGHT "H"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"			
T ₁	10"	13"	18"	18"	18"			
T ₂	10"	12"	13"	15"	18 1/2"			
BARS "A"	656 AT 12"	813 AT 12"	902 AT 13"	903 AT 12"	821 AT 9"			
BARS "B"	724 AT 12"	725 AT 12"	814 AT 13"	904 AT 12"	735 AT 9"			
BARS "C"	657 AT 12"	726 AT 12"	815 AT 13"	728 AT 12"	736 AT 9"			
NO. BARS "D" IN 2 SLABS	32	32	32	32	32			
BARS "E"	538 AT 12"	537 AT 12"	559 AT 13"	680 AT 12"	538 AT 12"			
NO. BARS "F" IN 2 WALLS	20 AT 13"	20 AT 13"	20 AT 13"	20 AT 13"	20 AT 13"			
NO. BARS "G" IN 2 WALLS	18 AT 13"	18 AT 13"	18 AT 13"	18 AT 13"	18 AT 13"			
BARS "H"	658 AT 12"	727 AT 12"	816 AT 13"	729 AT 12"	737 AT 9"			
NO. BARS "J" PER CORNER	0	2 AT 12"	2 AT 12"	3 AT 8"	6 AT 5 1/2"			
CU. YDS. CONCRETE PER FT.	1.347	1.713	2.013	2.324	2.605			
LB. REINF. STEEL PER FT.	237.98	307.65	370.78	420.44	436.82			
HEIGHT OF FILL OVER TOP	10'	20'	30'	40'	50'			

NOTE: BEND LONGITUDINAL BARS INTO WINGS AND PARAPETS SIMILAR TO STANDARDS. IF CULVERT IS SKEWED CUT TRANSVERSE STEEL AND BEND 12" INTO PARAPET OR TOE WALL AND HOOK.

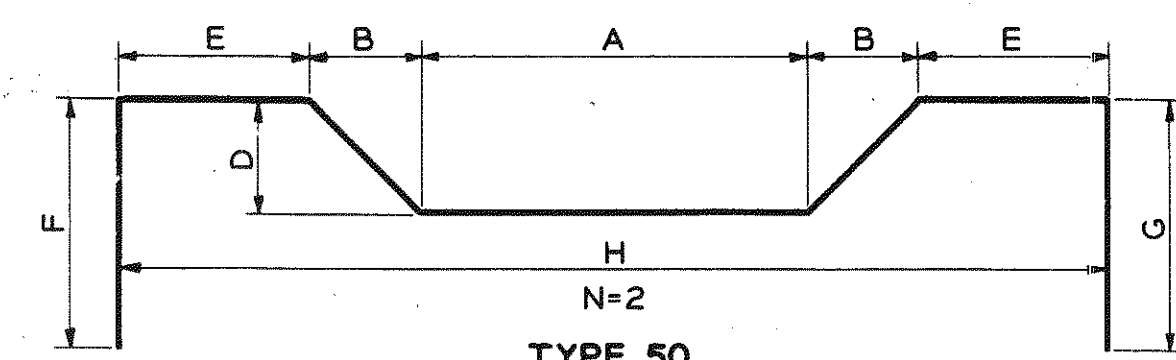
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



TYPICAL BARREL SECTION-ALL DESIGNS



SECTION A-A



TYPE 50

