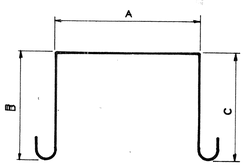
STATE	PROJECT NUMBER	SHEET No.	TOTAL SHEETS
GA.			

BARREL SECTION BAR REINFORCEMENT DETAILS

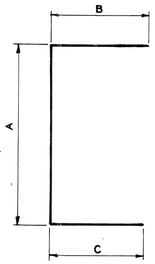
MARK	LENGTH	TYPE	A	B	C	D	E	F
401	8'-4"	1						
402	8'-8"	1						
403	7'-0"	1						
404	7'-0"	1						
405	8'-8"	1						
406	7'-3"	1						
407	7'-3"	1						
408	3'-0 3/8"	6	1'-1 3/8"	0'-5 1/2"	0'-5 1/2"			
409	POUR - 4"	1						
410	7'-6"	1						
411	7'-8 1/2"	1						
412	7'-10 1/2"	1						
413	3'-3 5/8"	6	1'-1 5/8"	0'-7"	0'-7"			
414	3'-6 3/8"	6	1'-1 5/8"	0'-8 1/4"	0'-8 1/4"			
415	3'-8 1/8"	6	1'-1 5/8"	0'-9 1/4"	0'-9 1/4"			
416	8'-1"	1						
417	8'-3"	1						
418	8'-5"	1						
419	4'-0 5/8"	6	1'-1 5/8"	0'-11 1/2"	0'-11 1/2"			
420	4'-2 5/8"	6	1'-1 5/8"	1'-0 1/2"	1'-0 1/2"			
421	4'-4 5/8"	6	1'-1 5/8"	1'-1 1/2"	1'-1 1/2"			
501	11'-8"	8	7'-0"	2'-4"	2'-4"			
502	28'-10"	7	1'-1"	4'-8"	3'-2"	0'-4"	2'-0"	4'-2"
503	29'-3"	7	0'-10"	4'-9"	3'-0"	0'-5 1/2"	2'-1"	4'-1"
504	11'-6"	8	7'-6"	2'-0"	2'-0"			
505	30'-1"	7	0'-10"	4'-6 3/8"	3'-0"	0'-7"	2'-3"	3'-10"
506	8'-8"	1						
507	11'-10 1/2"	8	7'-8 1/2"	2'-1"	2'-1"			
508	30'-7 1/2"	7	0'-10"	4'-5"	3'-0"	0'-8 1/2"	2'-4"	3'-7 1/2"
509	12'-0 1/2"	8	7'-10 1/2"	2'-1"	2'-1"			
510	31'-2"	7	0'-10"	4'-4"	3'-0"	0'-9 1/4"	2'-5"	3'-5 1/2"
511	31'-11"	7	1'-0"	3'-11"	3'-4"	0'-10 1/2"	2'-6 1/2"	2'-11"
512	32'-6 1/2"	7	1'-0"	3'-10 1/2"	3'-4"	0'-11 1/2"	2'-7 1/2"	2'-9"
513	33'-2 1/2"	7	1'-0"	3'-10 1/4"	3'-4"	1'-0 1/2"	2'-8 1/2"	2'-7"
601	6'-0"	1						
602	6'-1"	1						
603	8'-4"	1						
604	8'-8"	1						
701	12'-5"	8	7'-3"	2'-7"	2'-7"			
702	6'-4"	1						
703	8'-4 3/4"	1						
704	6'-4"	1						
705	15'-9"	8	8'-1"	3'-10"	3'-10"			
706	15'-11"	8	8'-3"	3'-10"	3'-10"			
707	16'-1"	8	8'-5"	3'-10"	3'-10"			
708	8'-8"	1						
709	8'-9 1/2"	1						
710	8'-11 1/4"	1						
801	8'-5 1/2"	1						
802	6'-8"	1						
901	8'-6 1/2"	1						



TYPE 6

STRAIGHT

TYPE 1



TYPE 8

BOX CULVERT REQUIREMENTS:

MINIMUM FILL HEIGHT FROM TOP OF CULVERT T'O BOTTOM OF BASE WITHIN TRAVELWAY SHALL BE 12 INCHES.

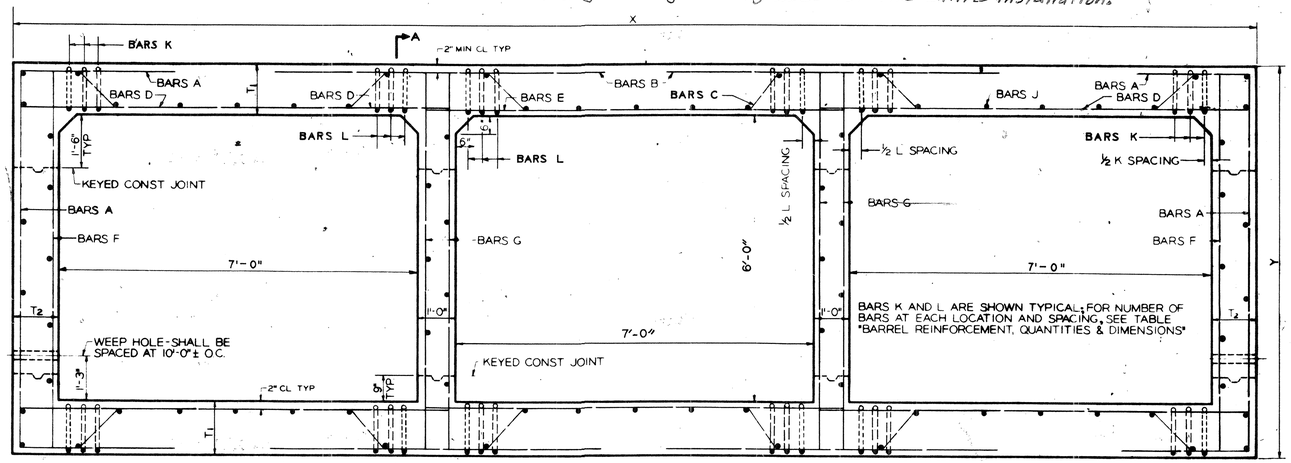
MAXIMUM POUR LENGTH SHALL NOT EXCEED 30 FEET ALONG THE LENGTH OF THE CULVERT.

TRANSVERSE CONSTRUCTION JOINTS SHALL BE PLACED IN THE BARREL, NORMAL TO THE CENTERLINE OF CULVERT, AT THE OUTSIDE SHOULDER BREAK POINTS. LONGITUDINAL BARREL REINFORCING STEEL SHALL NOT BE CONTINUOUS THROUGH THESE JOINTS, PROVIDED THAT THE JOINTS ARE MORE THAN 15 FEET FROM THE BARREL ENDS.
WHEN TRANSVERSE CONSTRUCTION JOINTS OCCUR WITHIN 15 FEET OF THE BARREL ENDS OR WITHIN THE LIMITS OF THE PAVEMENT, THE LONGITUDINAL BARREL REINFORCING SHALL THEN BE CONTINOUS THROUGH SUCH JOINTS. THE MINIMUM LENGTH OF LAP SPLICE FOR LONGITUDINAL REINFORCING SHALL BE 24 INCHES.

TRANSVERSE CONSTRUCTION JOINTS PLACED AT ANY OTHER LOCATION NOT SPECIFIED ABOVE SHALL BE FORMED WITH NO LONGITUDINAL REINFORCING STEEL PASSING THROUGH THE JOINTS.

NOTE BARS B THAT ARE SHOWN AS TWO BETWEEN BARS C SHALL BE EQUALLY SPACED BETWEEN BARS C.

NOTE:
The Design of culvert shall be determined by the maximum height of fill over culvert top with only a single design being used for the entire installation.

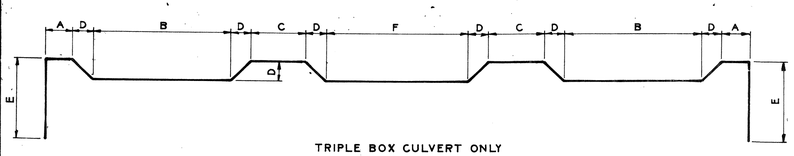


BOTTOM SLAB REINFORCEMENT SAME AS TOP

BARREL SECTION

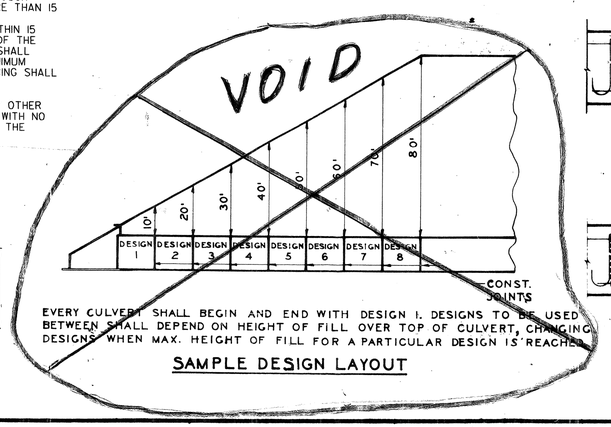
TRIPLE 7'X 6' BOX CULVERT
BARREL REINFORCEMENT QUANTITIES AND DIMENSIONS

DESIGN	1	2	3	4	5	6	7	8
HEIGHT OF FILL OVER TOP	0' TO 10'	10' TO 20'	20' TO 30'	30' TO 40'	40' TO 50'	50' TO 60'	60' TO 70'	70' TO 80'
A	501 AT 12"	701 AT 12"	504 AT 12"	507 AT 12"	509 AT 12"	705 AT 12"	706 AT 12"	707 AT 12"
B	601 AT 12"	2-602 BETWEEN	2-702 BETWEEN	2-704 BETWEEN	2-802 BETWEEN	2-802 BETWEEN	2-802 BETWEEN	2-802 BETWEEN
C	502 AT 12"	503 AT 12"	505 AT 12"	508 AT 12"	510 AT 12"	511 AT 12"	512 AT 12"	513 AT 12"
D	401 AT 12"	603 AT 12"	703 AT 12"	801 AT 12"	901 AT 12"	2-708 BETWEEN	2-709 BETWEEN	2-710 BETWEEN
E	402 AT 12"	405 AT 12"	506 AT 12"	506 AT 12"	506 AT 12"	604 AT 12"	604 AT 12"	604 AT 12"
F	403 AT 12"	406 AT 12"	410 AT 12"	411 AT 12"	412 AT 12"	416 AT 12"	417 AT 12"	418 AT 12"
G	404 AT 12"	407 AT 12"	410 AT 12"	411 AT 12"	412 AT 12"	416 AT 12"	417 AT 12"	418 AT 12"
J	78-409	78-409	78-409	78-409	78-409	78-409	78-409	78-409
K	--	--	--	--	1-415 AT 7" O.C.	2-419 AT 6" O.C.	3-420 AT 4" O.C.	4-421 AT 4" O.C.
L	--	2-408 AT 9" O.C.	2-413 AT 8" O.C.	3-414 AT 5" O.C.	4-415 AT 4" O.C.	5-419 AT 3 1/2" O.C.	7-420 AT 3" O.C.	8-421 AT 2 3/4" O.C.
X	24'-4"	24'-4"	24'-5 1/2"	24'-7"	24'-9"	25'-0"	25'-3"	25'-6 1/4"
Y	7'-4"	7'-7"	7'-10"	8'-0 1/2"	8'-2 1/2"	8'-5"	8'-7"	8'-9"
T_1	0'-8"	0'-9 1/2"	0'-11"	1'-0 1/4"	1'-1 1/4"	1'-2 1/2"	1'-3 1/2"	1'-4 1/2"
T_2	0'-8"	0'-8"	0'-8 3/4"	0'-9 1/2"	0'-10 1/2"	1'-0"	1'-1 1/2"	1'-3 1/4"
CU. YDS. CONCRETE PER FT.	1.970	2.195	2.457	2.683	2.885	3.154	3.388	3.638
LBS. BAR REINF. STEEL PER FT.	234.536	343.988	376.838	411.769	494.658	590.583	626.134	652.620



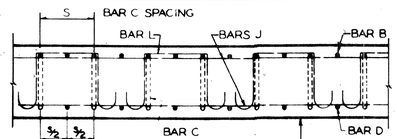
TRIPLE BOX CULVERT ONLY

TYPE 7

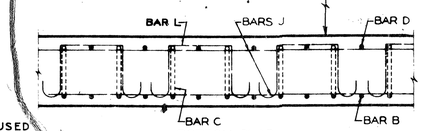


EVERY CULVERT SHALL BEGIN AND END WITH DESIGN 1. DESIGNS TO BE USED BETWEEN SHALL DEPEND ON HEIGHT OF FILL OVER TOP OF CULVERT, CHANGING DESIGNS WHEN MAX. HEIGHT OF FILL FOR A PARTICULAR DESIGN IS REACHED.

SAMPLE DESIGN LAYOUT



TOP SLAB



BOTTOM SLAB

SECTION A-A

NOTE: BARS B AND D ARE SHOWN IN SECTION A - A AS ONE BAR EQUALLY SPACED BETWEEN BARS C. TWO BARS B OR D EQUALLY SPACED BETWEEN BARS C SHALL BE USED WHEN REQ'D.

△ 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.

ADD REQUIREMENT NOTE 11-26-01
RM4 - REM. FILL HT. LAYOUT 5-25-99

BY	REVISIONS	DATE
R.J.S	DELETE BAR INCREASE TO #9	2-28-80
R.J.S	REINFORCEMENT DETAILS	6-10-70
R.J.S	ADDED DESIGNS 6 7 & 8	12-30-71
R.J.S	REARRANGED #09 BARS	7-25-72
R.J.S.	ADD NOTE	△ 5-72

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

REINFORCED CONCRETE BOX CULVERT TRIPLE 7'X 6'

NO SCALE — OCTOBER 1968

DESIGNED	JTK-RJS-GCL	TRACED	GMB-LR	REVIEWED	F.B.
DRAWN	PDP	CHECKED	L.D.P.	APPROVED	