

SINGLE 4'-0" X 3'-0" BOX CULVERT								
BARREL REINFORCEMENT QUANTITIES AND DIMENSIONS								
DESIGN	1	2	3	4	5	6	7	8
BAR A	401A @ 12"	501A @ 12"	401A @ 6"	401A @ 6"	402A @ 6"			
BAR C	501 @ 12"	408 @ 6"	408 @ 6"	501 @ 6"	502 @ 6"			
BAR E	403 @ 12"	403 @ 12"	403 @ 12"	403 @ 12"	404 @ 12"			
BAR G IN 2 SLABS	16 - 401	16 - 401	16 - 401	16 - 401	16 - 401			
BAR H IN 2 WALLS	10 - 402	10 - 402	10 - 402	10 - 402	10 - 402			
BAR J IN EXT. CORNER	0	0	0	3-401B @ 4½"	3-403B @ 5"			
T ₁	8"	8"	8"	8"	9"			
T ₂	9"	9"	9"	9"	10"			
T ₃	8"	8"	8"	8"	9"			
X	5'-4"	5'-4"	5'-4"	5'-4"	5'-6"			
Y	4'-5"	4'-5"	4'-5"	4'-5"	4'-7"			
YD³ CLASS AA CONCRETE/FT	0.437	0.437	0.437	0.437	0.498			
LB BAR REINF STEEL/FT	44.9	54.5	59.7	79.7	82.2			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 90° SKEW - TOTAL								
YD³ CLASS AA CONCRETE	1.9	1.9	1.9	1.9	2.0			
LB BAR REINF STEEL	391	391	391	391	393			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 75° SKEW - TOTAL								
YD³ CLASS AA CONCRETE	2.1	2.1	2.1	2.1	2.2			
LB BAR REINF STEEL	482	482	482	482	487			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 60° SKEW - TOTAL								
YD³ CLASS AA CONCRETE	2.3	2.3	2.3	2.3	2.4			
LB BAR REINF STEEL	511	511	511	511	516			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 45° SKEW - TOTAL								
YD³ CLASS AA CONCRETE	2.9	2.9	2.9	2.9	3.0			
LB BAR REINF STEEL	593	593	593	593	600			

SINGLE 4'-0" X 4'-0" BOX CULVERT								
BARREL REINFORCEMENT QUANTITIES AND DIMENSIONS								
DESIGN	1	2	3	4	5	6	7	8
BAR A	408A @ 12"	505A @ 12"	405A @ 6"	405A @ 6"	407A @ 6"			
BAR C	408 @ 6"	408 @ 6"	408 @ 6"	501 @ 6"	502 @ 6"			
BAR E	408 @ 12"	408 @ 12"	408 @ 12"	408 @ 12"	409 @ 12"			
BAR G IN 2 SLABS	16 - 401	16 - 401	16 - 401	16 - 401	16 - 401			
BAR H IN 2 WALLS	12 - 402	12 - 402	12 - 402	12 - 402	12 - 402			
BAR J IN EXT. CORNER	0	0	0	3-401B @ 4½"	3-403B @ 5"			
T ₁	8"	8"	8"	8"	9"			
T ₂	9"	9"	9"	9"	10"			
T ₃	8"	8"	8"	8"	9"			
X	5'-4"	5'-4"	5'-4"	5'-4"	5'-6"			
Y	5'-5"	5'-5"	5'-5"	5'-5"	5'-7"			
YD³ CLASS AA CONCRETE/FT	0.487	0.487	0.487	0.487	0.554			
LB BAR REINF. STEEL/FT	53.7	61.7	67.7	87.7	90.2			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 90° SKEW - TOTAL								
YD³ CLASS AA CONCRETE	2.2	2.2	2.2	2.2	2.3			
LB BAR REINF STEEL	420	420	420	420	422			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 75° SKEW - TOTAL								
YD³ CLASS AA CONCRETE	2.3	2.3	2.3	2.3	2.5			
LB BAR REINF STEEL	512	512	512	512	517			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 60° SKEW - TOTAL								
YD³ CLASS AA CONCRETE	2.6	2.6	2.6	2.6	2.7			
LB BAR REINF STEEL	540	540	540	540	546			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 45° SKEW - TOTAL								
YD³ CLASS AA CONCRETE	3.3	3.3	3.3	3.3	3.4			
LB BAR REINF STEEL	623	623	623	623	630			

SINGLE 4'-0" X 5'-0" BOX CULVERT								
BARREL REINFORCEMENT QUANTITIES AND DIMENSIONS								
DESIGN	1	2	3	4	5	6	7	8
BAR A	422A @ 12"	511A @ 12"	413A @ 6"	413A @ 6"	415A @ 6"			
BAR C	408 @ 6"	408 @ 6"	501 @ 6"	501 @ 6"	502 @ 6"			
BAR E	414 @ 12"	414 @ 12"	503 @ 12"	503 @ 12"	504 @ 12"			
BAR G IN 2 SLABS	16 - 401	16 - 401	16 - 401	16 - 401	16 - 401			
BAR H IN 2 WALLS	14 - 402	14 - 402	14 - 402	14 - 402	14 - 402			
BAR J IN EXT. CORNER	0	0	0	3-401B @ 4½"	3-403B @ 5"			
T ₁	8"	8"	8"	8"	9"			
T ₂	9"	9"	9"	9"	10"			
T ₃	8"	8"	8"	8"	9"			
X	5'-4"	5'-4"	5'-4"	5'-4"	5'-6"			
Y	6'-5"	6'-5"	6'-5"	6'-5"	6'-7"			
YD³ CLASS AA CONCRETE/FT	0.536	0.536	0.536	0.536	0.610			
LB BAR REINF STEEL/FT	61.5	69.6	88.6	101.1	103.7			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 90° SKEW - TOTAL								
YD³ CLASS AA CONCRETE	2.3	2.3	2.3	2.3	2.4			
LB BAR REINF STEEL	444	444	444	444	446			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 75° SKEW - TOTAL								
YD³ CLASS AA CONCRETE	2.4	2.4	2.4	2.4	2.6			
LB BAR REINF STEEL	537	537	537	537	541			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 60° SKEW - TOTAL								
YD³ CLASS AA CONCRETE	2.7	2.7	2.7	2.7	2.9			
LB BAR REINF STEEL	565	565	565	565	571			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 45° SKEW - TOTAL								
YD³ CLASS AA CONCRETE	3.4	3.4	3.4	3.4	3.6			
LB BAR REINF STEEL	649	649	649	649	656			

SINGLE 4'-0" X 6'-0" BOX CULVERT								
BARREL REINFORCEMENT QUANTITIES AND DIMENSIONS								
DESIGN	1	2	3	4	5	6	7	8
BAR A	435A @ 12"	427A @ 6"	427A @ 6"	522A @ 6"	524A @ 6"			
BAR C	408 @ 6"	408 @ 6"	408 @ 6"	501 @ 6"	502 @ 6"			
BAR E	420 @ 12"	505 @ 12"	505 @ 12"	420 @ 6"	603 @ 12"			
BAR G IN 2 SLABS	16 - 401	16 - 401	16 - 401	16 - 401	16 - 401			
BAR H IN 2 WALLS	18 - 402	18 - 402	18 - 402	18 - 402	18 - 402			
BAR J IN EXT. CORNER	0	0	0	3-402B @ 4½"	3-404B @ 5"			
T ₁	8"	8"	8"	8"	9"			
T ₂	9"	9"	9"	9"	10"			
T ₃	8"	8"	8"	8"	9"			
X	5'-4"	5'-4"	5'-4"	5'-4"	5'-6"			
Y	7'-5"	7'-5"	7'-5"	7'-5"	7'-7"			
YD³ CLASS AA CONCRETE/FT	0.585	0.585	0.585	0.585	0.665			
LB BAR REINF. STEEL/FT	69.0	93.9	93.9	143.0	147.9			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 90° SKEW - TOTAL								
YD³ CLASS AA CONCRETE	2.4	2.4	2.4	2.4	2.6			
LB BAR REINF STEEL	492	492	492	492	494			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 75° SKEW - TOTAL								
YD³ CLASS AA CONCRETE	2.5	2.5	2.5	2.5	2.7			
LB BAR REINF STEEL	586	586	586	586	590			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 60° SKEW - TOTAL								
YD³ CLASS AA CONCRETE	2.8	2.8	2.8	2.8	3.0			
LB BAR REINF STEEL	615	615	615	615	620			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 45° SKEW - TOTAL								
YD³ CLASS AA CONCRETE	3.5	3.5	3.5	3.5	3.7			
LB BAR REINF STEEL	700	700	700	700	707			

		DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
		REVISION	STANDARD REINFORCED CONCRETE SINGLE BOX CULVERT 4'X3', 4'X4', 4'X5' AND 4'X6' NO SCALE SEPTEMBER 2017	
	BY	DES. YSK DRW. FGS TRA. _____ CHK. JWB	(SUBMITTED) <i>B. A. Ste...</i> (APPROVED) <i>Margaret B. Pule...</i> STATE DESIGN POLICY ENGINEER CHIEF ENGINEER	NUMBER 2401 SHEET 2-A OF 3