

WINGWALLS, TOEWALLS AND PARAPETS FOR 45° SKEW																													
CLEAR HEIGHT	N BARS AT 1'-0" C. TO C.						P BARS AT 1'-0" C. TO C. - WING E						P BARS AT 1'-0" C. TO C. - WING F						R BARS AT 1'-0" C. TO C.				M BARS			U BARS			CLEAR HEIGHT
	SIZE	NO. (CONSTANT LENGTH)	*	LENGTH	LENGTH *		SIZE	NO. (CONSTANT LENGTH)	LENGTH	NO. (VARIABLE LENGTH)	LENGTH		SIZE	NO. (CONSTANT LENGTH)	LENGTH	NO. (VARIABLE LENGTH)	LENGTH		SIZE	NO. (VARIABLE LENGTH)	LENGTH **		SIZE	NO. (CONSTANT LENGTH)	LENGTH	SIZE	NO. (CONSTANT LENGTH)	LENGTH	
					SHORTEST	LONGEST					SHORTEST	LONGEST					SHORTEST	LONGEST			SHORTEST	LONGEST							
2'	#4	6	5'-5"	16	4'-4"	5'-4"	#4	10	5'-0"	2	1'-7"	1'-7"	#4	10	3'-5"	2	1'-3"	1'-3"	#6	44	3'-6"	3'-6"	#6	14	X _s + 1'-9"	#6	8	X _s + 1'-9"	2'
3'	#4	6	6'-8"	32	4'-4"	6'-7"	#4	10	9'-11"	4	2'-5"	6'-5"	#4	10	6'-0"	4	1'-9"	4'-0"	#6	76	3'-6"	3'-6"	#6	14	X _s + 1'-9"	#6	8	X _s + 1'-9"	3'
4'	#5	6	8'-2"	50	4'-5"	8'-2"	#4	10	15'-6"	6	4'-2"	12'-11"	#4	10	9'-3"	6	2'-9"	7'-4"	#6	108	3'-6"	3'-6"	#6	14	X _s + 1'-9"	#6	8	X _s + 1'-9"	4'
5'	#5	6	9'-2"	58	4'-9"	9'-2"	#4	10	18'-1"	8	4'-2"	15'-11"	#4	10	10'-11"	8	2'-10"	9'-8"	#6	128	3'-6"	3'-6"	#6	14	X _s + 1'-9"	#6	8	X _s + 1'-9"	5'
6'	#5	6	10'-2"	68	5'-1"	10'-2"	#4	10	20'-9"	10	4'-2"	19'-11"	#4	10	12'-7"	10	2'-10"	12'-2"	#6	148	3'-6"	3'-6"	#6	14	X _s + 1'-9"	#6	8	X _s + 1'-9"	6'
7'	#5	6	11'-3"	76	5'-5"	11'-3"	#4	12	23'-9"	10	4'-4"	20'-3"	#4	12	13'-11"	10	2'-10"	12'-0"	#6	164	3'-6"	4'-7"	#6	14	X _s + 1'-9"	#6	8	X _s + 1'-9"	7'
8'	#6	6	12'-5"	82	5'-10"	12'-3"	#4	12	26'-5"	14	0'-9"	24'-3"	#4	12	15'-6"	14	0'-9"	14'-4"	#6	176	3'-8"	5'-3"	#6	14	X _s + 1'-9"	#6	8	X _s + 1'-9"	8'
9'	#6	6	13'-5"	92	6'-2"	13'-4"	#4	12	29'-3"	16	0'-11"	28'-5"	#4	12	17'-2"	16	0'-11"	16'-9"	#6	196	3'-8"	5'-9"	#6	14	X _s + 1'-9"	#6	8	X _s + 1'-9"	9'
10'	#7	6	14'-7"	102	6'-8"	14'-7"	#4	14	31'-11"	16	0'-11"	28'-6"	#4	14	18'-9"	16	0'-11"	16'-10"	#6	216	3'-8"	6'-3"	#6	14	X _s + 1'-9"	#6	8	X _s + 1'-9"	10'
11'	#7	6	15'-7"	110	6'-11"	15'-7"	#4	14	34'-11"	18	0'-11"	32'-5"	#4	14	20'-5"	18	0'-11"	19'-0"	#6	232	3'-8"	6'-10"	#6	14	X _s + 1'-9"	#6	8	X _s + 1'-9"	11'
12'	#8	6	16'-8"	120	7'-3"	16'-8"	#4	14	37'-6"	20	1'-1"	36'-0"	#4	14	22'-11"	20	1'-0"	21'-4"	#6	248	3'-8"	7'-4"	#6	14	X _s + 1'-9"	#6	8	X _s + 1'-9"	12'

* LENGTH INCLUDES VERTICAL LEG, HORIZONTAL LEG AND 180° STANDARD HOOK.

** LENGTH INCLUDES 2 STANDARD 180° HOOKS.

X_s = TOTAL SKEWED BARREL WIDTH OUT TO OUT (DIMENSION "X" FROM CULVERT SHEET TIMES 1.414)

Y = TOTAL BARREL HEIGHT OUT TO OUT (DIMENSION "Y" FROM CULVERT SHEET)

DIMENSIONS AND QUANTITIES FOR 45° SKEW													
CLEAR HEIGHT	H	W ₁	W ₂	S	M	N	Q	R	T ₄	Z	CY CLASS AA CONCRETE	LB BAR REINF STEEL	CLEAR HEIGHT
2'	3'-1"	1'-1"	2'-0"	1'-1"	4'-3"	2'-8"	-	1'-0"	10"	-	4.5	365	2'
3'	4'-3½"	2'-3½"	2'-0"	2'-1½"	9'-2"	5'-3"	-	1'-0"	10"	-	8.1	669	3'
4'	5'-9"	3'-9"	2'-0"	2'-7"	14'-9"	8'-6"	-	1'-0"	10"	-	13.3	1132	4'
5'	6'-9"	4'-5"	2'-4"	2'-7"	17'-4"	10'-2"	-	1'-0"	10"	-	16.7	1432	5'
6'	7'-9"	5'-1"	2'-8"	2'-7"	20'-0"	11'-10"	-	1'-0"	10"	-	20.4	1736	6'
7'	8'-9½"	5'-9½"	3'-0"	2'-7½"	23'-0"	13'-2"	1'-6"	2'-0"	10"	2'-6"	26.6	2161	7'
8'	9'-10½"	6'-6½"	3'-4"	2'-8½"	25'-8"	14'-9"	2'-0"	2'-6"	12"	3'-6"	36.7	2926	8'
9'	10'-11"	7'-3"	3'-8"	2'-9"	28'-6"	16'-5"	2'-6"	3'-0"	12"	4'-0"	44.2	3459	9'
10'	11'-11"	7'-11"	4'-0"	2'-9"	31'-2"	18'-0"	2'-6"	3'-6"	12"	4'-6"	51.9	4729	10'
11'	12'-11"	8'-8"	4'-3"	2'-9"	34'-2"	19'-8"	3'-0"	4'-0"	12"	5'-0"	62.5	5388	11'
12'	13'-11½"	9'-5½"	4'-6"	2'-9½"	36'-9"	21'-4"	3'-0"	4'-6"	12"	5'-0"	70.2	7102	12'

QUANTITIES SHOWN INCLUDE WINGWALLS, WINGWALL FOOTINGS, AND WINGWALL TOEWALL FOR BOTH ENDS.

		DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA		
		REVISION	STANDARD REINFORCED CONCRETE SKEWED WINGWALLS, TOEWALLS AND PARAPETS FOR 45° SKEW NO SCALE SEPTEMBER 2017		
	BY	DES. <u>WEI</u> TRA. <u>_____</u> CHK. <u>YSK</u>	(SUBMITTED) <i>Ben A. Steg</i> STATE DESIGN POLICY ENGINEER (APPROVED) <i>Margaret B. Purke</i> CHIEF ENGINEER	NUMBER 2405 SHEET 3 OF 3	