

NO.	DESCRIPTION OF REVISIONS	MADE BY	DATE
1	Original Issue	S.U.H.	2-12
2	Added 3'-4.5' height for existing box extensions only	D.B.B.	5-15
3			
4			

Note to Designer:
The information presented in this Standard Detail has been prepared in accordance with recognized engineering principles and is for general use. It should not be used for specific application without competent professional examination and verification of its suitability and applicability by a licensed professional engineer. Contents within the inner border line shall not be altered.

Span 'S'	Height 'H'	Top Slab 'T'	Walls 'W'	aa		bb		cc	ee		ff		gg	hh								
				Bar Size	Spacing	Bar Size	Spacing		Bar Size	Spacing	Bar Size	Spacing		Bar Size	Spacing	Length	F					
6'	3'	9 1/2"	8"	5	12"	4'-4	5	12"	8'-9	108	5	7"	34'-8	5	7"	34'-8	40	3'-0	4	7"	5'-1	2'-5
	4'	9 1/2"	8"	5	12"	5'-4	5	12"	10'-9	120	5	7"	34'-8	5	7"	34'-8	40	3'-0	4	7"	5'-7	2'-5
	5'	9 1/2"	8"	5	12"	6'-4	5	12"	12'-9	120	5	7"	34'-8	5	7"	34'-8	40	3'-0	4	7"	6'-1	2'-5
	6'	9 1/2"	8"	5	12"	7'-4	5	12"	14'-9	132	5	7"	34'-8	5	7"	34'-8	40	3'-0	4	7"	6'-7	2'-5
	7'	9 1/2"	8"	5	10"	8'-4	5	12"	16'-9	144	5	7"	34'-8	5	6"	34'-8	40	3'-0	4	6"	7'-1	2'-5
8'	3'	12"	9"	5	12"	4'-9	5	12"	9'-7	108	5	7"	44'-10	6	7"	44'-10	50	4'-0	4	7"	5'-5	2'-6
	4'	12"	9"	5	12"	5'-9	5	12"	11'-7	120	5	7"	44'-10	6	7"	44'-10	50	4'-0	4	7"	5'-11	2'-6
	5'	12"	9"	5	12"	6'-9	5	12"	13'-7	120	5	7"	44'-10	6	7"	44'-10	50	4'-0	4	7"	6'-5	2'-6
	6'	12"	9"	5	12"	7'-9	5	12"	15'-7	132	5	7"	44'-10	6	7"	44'-10	50	4'-0	4	7"	6'-11	2'-6
	7'	12"	9"	5	12"	8'-9	5	12"	17'-7	144	5	7"	44'-10	6	7"	44'-10	50	4'-0	5	7"	7'-5	2'-6
10'	3'	15"	11"	5	12"	5'-3	5	12"	10'-5	108	6	8"	55'-2	7	7"	55'-2	60	5'-0	5	7"	6'-0	2'-8
	4'	15"	11"	5	12"	6'-3	5	12"	12'-5	120	6	8"	55'-2	7	7"	55'-2	60	5'-0	5	7"	6'-6	2'-8
	5'	15"	11"	5	12"	7'-3	5	12"	14'-5	120	6	8"	55'-2	7	7"	55'-2	60	5'-0	5	7"	7'-0	2'-8
	6'	15"	11"	5	12"	8'-3	5	12"	16'-5	132	6	8"	55'-2	7	7"	55'-2	60	5'-0	5	7"	7'-6	2'-8
	7'	15"	11"	5	12"	9'-3	5	12"	18'-5	144	6	8"	55'-2	7	7"	55'-2	60	5'-0	5	7"	8'-0	2'-8
12'	8'	18"	13"	5	12"	10'-9	5	12"	21'-1	144	6	6"	65'-6	7	6"	65'-6	70	6'-0	5	6"	9'-6	3'-5
	9'	18"	13"	5	12"	11'-9	5	12"	23'-1	156	6	6"	65'-6	7	6"	65'-6	70	6'-0	5	6"	10'-0	3'-5
	10'	18"	13"	5	10"	12'-9	5	12"	25'-1	168	6	6"	65'-6	7	6"	65'-6	70	6'-0	5	6"	10'-7	3'-5
	11'	18"	13"	5	10"	13'-9	5	12"	27'-1	168	6	6"	65'-6	7	6"	65'-6	70	6'-0	6	6"	11'-1	3'-5
	12'	18"	13"	5	10"	14'-9	5	12"	29'-1	180	6	6"	65'-6	7	6"	65'-6	70	6'-0	6	6"	11'-7	3'-5

† Total number of bars in the cross-section. * Includes lap splice length.

Span 'S'	Height 'H'	Top Slab 'T'	Walls 'W'	aa		bb		cc	ee		ff		gg	hh								
				Bar Size	Spacing	Bar Size	Spacing		Bar Size	Spacing	Bar Size	Spacing		Bar Size	Spacing	Length	F					
6'	3'	12 1/2"	8"	5	12"	4'-10	5	12"	9'-10	108	5	7"	34'-8	5	6"	34'-8	40	3'-0	4	6"	5'-4	2'-5
	4'	12 1/2"	8"	5	12"	5'-10	5	12"	11'-10	120	5	7"	34'-8	5	6"	34'-8	40	3'-0	4	6"	5'-10	2'-5
	5'	12 1/2"	8"	5	12"	6'-10	5	12"	13'-10	120	5	7"	34'-8	5	6"	34'-8	40	3'-0	4	6"	6'-4	2'-5
	6'	12 1/2"	8"	5	12"	7'-10	5	12"	15'-10	132	5	7"	34'-8	5	6"	34'-8	40	3'-0	4	6"	6'-10	2'-5
	7'	12 1/2"	8"	5	10"	8'-10	5	12"	17'-10	144	5	7"	34'-8	5	6"	34'-8	40	3'-0	5	6"	7'-4	2'-5
8'	3'	16"	9"	5	12"	5'-5	5	12"	10'-11	108	5	6"	44'-10	6	6"	44'-10	50	4'-0	4	6"	5'-9	2'-6
	4'	16"	9"	5	12"	6'-5	5	12"	12'-11	120	5	6"	44'-10	6	6"	44'-10	50	4'-0	4	6"	6'-3	2'-6
	5'	16"	9"	5	12"	7'-5	5	12"	14'-11	120	5	6"	44'-10	6	6"	44'-10	50	4'-0	4	6"	6'-9	2'-6
	6'	16"	9"	5	12"	8'-5	5	12"	16'-11	132	5	6"	44'-10	6	6"	44'-10	50	4'-0	4	6"	7'-3	2'-6
	7'	16"	9"	5	10"	9'-5	5	12"	18'-11	144	5	6"	44'-10	6	6"	44'-10	50	4'-0	5	6"	7'-9	2'-6
10'	3'	19"	11"	5	12"	5'-11	5	12"	11'-6	108	6	6"	55'-2	7	6"	55'-2	60	5'-0	5	6"	6'-6	2'-9
	4'	19"	11"	5	12"	6'-11	5	12"	13'-6	120	6	6"	55'-2	7	6"	55'-2	60	5'-0	5	6"	7'-0	2'-9
	5'	19"	11"	5	12"	7'-11	5	12"	15'-6	120	6	6"	55'-2	7	6"	55'-2	60	5'-0	5	6"	7'-6	2'-9
	6'	19"	11"	5	12"	8'-11	5	12"	17'-6	132	6	6"	55'-2	7	6"	55'-2	60	5'-0	5	6"	8'-0	2'-9
	7'	19"	11"	5	12"	9'-11	5	12"	19'-6	144	6	6"	55'-2	7	6"	55'-2	60	5'-0	5	6"	8'-6	2'-9
12'	8'	23"	13"	5	12"	11'-7	5	12"	21'-6	144	6	6"	65'-6	7	6"	65'-6	70	6'-0	5	6"	9'-0	2'-9
	9'	23"	13"	5	10"	11'-11	5	12"	23'-6	156	6	6"	65'-6	7	6"	65'-6	70	6'-0	6	6"	9'-6	2'-9
	10'	23"	13"	5	9"	12'-11	5	12"	25'-6	168	6	6"	65'-6	7	6"	65'-6	70	6'-0	6	6"	10'-0	2'-9
	11'	23"	13"	5	10"	13'-7	5	12"	27'-6	168	7	7"	65'-6	7	6"	65'-6	70	6'-0	6	6"	10'-6	3'-5
	12'	23"	13"	5	7"	15'-7	5	12"	30'-7	180	7	7"	65'-6	7	6"	65'-6	70	6'-0	6	6"	12'-0	3'-5

New box culverts shall not be constructed using 3' or 4' heights without special approval from ADOT Bridge Group. Tables referencing these sizes are provided for extension of existing box culverts only.

Span 'S'	Height 'H'	Top Slab 'T'	Walls 'W'	aa		bb		cc	ee		ff		gg	hh								
				Bar Size	Spacing	Bar Size	Spacing		Bar Size	Spacing	Bar Size	Spacing		Bar Size	Spacing	Length	F					
6'	3'	11"	8"	5	12"	4'-7	5	12"	9'-2	108	5	7"	34'-8	5	7"	34'-8	40	3'-0	4	7"	5'-3	2'-5
	4'	11"	8"	5	12"	5'-7	5	12"	11'-2	120	5	7"	34'-8	5	7"	34'-8	40	3'-0	4	7"	5'-9	2'-5
	5'	11"	8"	5	12"	6'-7	5	12"	13'-2	120	5	7"	34'-8	5	7"	34'-8	40	3'-0	4	7"	6'-3	2'-5
	6'	11"	8"	5	12"	7'-7	5	12"	15'-2	132	5	7"	34'-8	5	7"	34'-8	40	3'-0	4	7"	6'-9	2'-5
	7'	11"	8"	5	10"	8'-7	5	12"	17'-2	144	5	7"	34'-8	5	7"	34'-8	40	3'-0	5	7"	7'-3	2'-5
8'	3'	14"	9"	5	12"	5'-1	5	12"	10'-1	108	5	7"	44'-10	6	7"	44'-10	50	4'-0	4	7"	5'-7	2'-6
	4'	14"	9"	5	12"	6'-1	5	12"	12'-1	120	5	7"	44'-10	6	7"	44'-10	50	4'-0	4	7"	6'-1	2'-6
	5'	14"	9"	5	12"	7'-1	5	12"	14'-1	120	5	7"	44'-10	6	7"	44'-10	50	4'-0	4	7"	6'-7	2'-6
	6'	14"	9"	5	12"	8'-1	5	12"	16'-1	132	5	7"	44'-10	6	7"	44'-10	50	4'-0	4	7"	7'-1	2'-6
	7'	14"	9"	5	10"	9'-1	5	12"	18'-1	144	5	7"	44'-10	6	7"	44'-10	50	4'-0	5	7"	7'-7	2'-6
10'	3'	17"	11"	5	12"	5'-7	5	12"	10'-11	108	6	7"	55'-2	7	7"	55'-2	60	5'-0	5	7"	6'-3	2'-9
	4'	17"	11"	5	12"	6'-7	5	12"	12'-11	120	6	7"	55'-2	7	7"	55'-2	60	5'-0	5	7"	6'-9	2'-9
	5'	17"	11"	5	12"	7'-7	5	12"	14'-11	120	6	7"	55'-2	7	7"	55'-2	60	5'-0	5	7"	7'-3	2'-9
	6'	17"	11"	5	12"	8'-7	5	12"	16'-11	132	6	7"	55'-2	7	7"	55'-2	60	5'-0	5	7"	7'-9	2'-9
	7'	17"	11"	5	12"	9'-7	5	12"	18'-11	144	6	7"	55'-2	7	7"	55'-2	60	5'-0	5	7"	8'-3	2'-9
12'	8'	20 1/2"	13"	5	12"	11'-2	5	12"	22'-1	144	6	6"	65'-6	7	6"	65'-6	70	6'-0	5	6"	9'-3	2'-11
	9'	20 1/2"	13"	5	12"	12'-2	5	12"	24'-1	156	6	6"	65'-6	7	6"	65'-6	70	6'-0	6	6"	9'-9	2'-11
	10'	20 1/2"	13"	5	10"	13'-2	5	12"	26'-1	168	6	6"	65'-6	7	6"	65'-6	70	6'-0	6	6"	10'-3	2'-11
	11'	20 1/2"	13"	5	10"	14'-2	5	12"	28'-1	168	6	6"	65'-6	7	6"	65'-6	70	6'-0	6	6"	11'-3	3'-5
	12'	20 1/2"	13"	5	9"	15'-2	5	12"	30'-1	180	6	6"	65'-6	7	6"	65'-6	70	6'-0	6	6"	11'-9	3'-5

Span 'S'	Height 'H'	Table I		Table II		Table III		Table IV		Table V	
		Concrete C. Y.	Reinf. Steel Lbs.	Concrete C. Y.	Reinf. Steel Lbs.	Concrete C. Y.	Reinf. Steel Lbs.	Concrete C. Y.	Reinf. Steel Lbs.	Concrete C. Y.	Reinf. Steel Lbs.
6'	3'	2.694	381.7	2.380	397.1	2.694	415.6	3.009	418.6	3.324	447.0
	4'	2.843	402.2	2.528	417.9	2.843	436.3	3.157	439.3	3.472	468.2
	5'	2.991	414.6	2.676	430.6	2.991	449.0	3.306	452.1	3.620	481.3
	6'	3.139	435.1	2.824	451.3	3.139	469.8	3.454	472.8	3.769	502.4
	7'	3.287	455.5	2.972	472.0	3.287	520.1	3.602	515.8	3.917	549.2
8'	3'	3.372	554.2	3.645	568.0	4.053	571.4	4.599	574.9	5.144	649.5
	4'	3.526	575.7	3.799	588.7	4.208	592.1	4.753	595.7	5.298	670.6
	5'	3.681	589.3	3.953	606.6	4.362	610.0	4.907			