

PLANE METHOD CURB RETURN DESIGN

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COUNTY OF RIVERSIDE  
 TRANSPORTATION DEPARTMENT  
 ENGINEERING DEVISION

Plan Method Curb	IP Number:		Project No:	
Return Design	Checked By:		Date:	
	Approved By:		Sheet No:	

**CURB RETURN ELEVATION DATA**

**CURB RETURN CURVE DATA**

PI 1  
 A  
 B  
 G1  
 G2

$\Delta$  in degrees  
 RADIUS  
 L  
 T

**ELEVATION AT M.O.C**

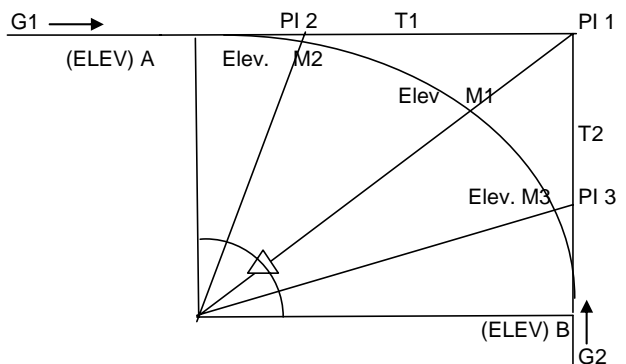
$C1 = 1/2 (A+B)$   
 $a1 = (PI\ 1) - C1$   
 $R1 = \frac{COS\ 1/2\ \Delta}{1 + COS\ 1/2\ \Delta}$   
 $M1 = C1 + (R1 * A1)$

**ELEVATION AT 1/4 POINT**

$T2 = (RADIUS) * (TAN\ 1/4\ \Delta)$   
 $PI\ 2 = A + (T2 * G1)$   
 $C2 = 1/2 (A + M1)$   
 $a2 = PI2 - C2$   
 $R2 = \frac{COS\ 1/4\ \Delta}{1 + COS\ 1/4\ \Delta}$   
 $M2 = C2 + (R2 * a2)$

**ELEVATION AT 1/4 POINT**

$PI\ 3 = B + [T2 * (-G2)]$   
 $C3 = 1/2 (B + M1)$   
 $a3 = (PI\ 3) - C3$   
 $M3 = C3 + (R2 * a3)$



RIVERSIDE COUNTY TRANSPORTATION DEPARTMENT  
MINIMUM STORM DRAIN EASEMENT TABLE

Diameter	(Sloped)						(Shored)								
	2'	3'	4'	5'	6'	7'	8'	9'	10'	12'	14'	16'	18'	22'	24'
18"	20'	20'	20'	20'	20'	20'	20'	20'	20'	22'	22'	24'	25'	28'	28'
21"	20'	20'	20'	20'	20'	20'	20'	20'	20'	22'	24'	24'	25'	28'	28'
24"	20'	20'	20'	20'	20'	20'	20'	20'	22'	22'	24'	24'	25'	28'	30'
27"	20'	20'	20'	20'	20'	20'	20'	22'	22'	22'	24'	25'	26'	28'	30'
30"	20'	20'	20'	20'	20'	20'	20'	22'	22'	24'	24'	25'	26'	28'	30'
33"	20'	20'	20'	20'	20'	20'	22'	22'	22'	24'	24'	26'	28'	30'	30'
36"	20'	20'	20'	20'	20'	22'	22'	22'	24'	24'	26'	28'	30'	30'	
39"	20'	20'	20'	20'	22'	22'	22'	22'	24'	24'	25'	26'	28'	30'	32'
42"	20'	20'	20'	22'	22'	22'	22'	24'	24'	24'	26'	28'	28'	30'	32'
45"	20'	20'	20'	22'	22'	22'	24'	24'	24'	25'	26'	28'	28'	30'	32'
48"	20'	20'	20'	22'	22'	22'	24'	24'	24'	25'	26'	28'	28'	32'	32'
51"	20'	20'	20'	22'	22'	24'	24'	24'	25'	26'	28'	28'	30'	32'	32'
54"	20'	20'	22'	22'	24'	24'	24'	25'	25'	26'	28'	28'	30'	32'	32'
57"	20'	20'	22'	24'	24'	24'	25'	25'	26'	26'	28'	30'	30'	32'	34'
60"	20'	20'	24'	24'	24'	24'	25'	25'	26'	28'	28'	30'	30'	32'	34'
63"	20'	20'	24'	24'	24'	24'	25'	26'	26'	28'	28'	30'	30'	34'	34'
66"	20'	20'	24'	24'	24'	25'	25'	26'	28'	28'	30'	30'	32'	34'	34'
69"	20'	20'	24'	24'	25'	25'	26'	26'	28'	28'	30'	30'	32'	34'	35'
72"	20'	24'	24'	25'	25'	26'	26'	28'	28'	28'	30'	32'	32'	34'	35'
75"	24'	24'	24'	25'	26'	26'	28'	28'	28'	30'	30'	32'	32'	34'	35'
78"	24'	24'	25'	25'	26'	26'	28'	28'	28'	30'	30'	32'	32'	35'	36'
81"	24'	25'	25'	26'	26'	28'	28'	28'	28'	30'	32'	32'	34'	35'	36'
84"	25'	25'	26'	26'	28'	28'	28'	28'	30'	30'	32'	32'	34'	35'	36'
90"	25'	26'	26'	28'	28'	28'	30'	30'	30'	32'	32'	34'	34'	36'	38'
96"	26'	28'	28'	28'	28'	30'	30'	30'	30'	32'	34'	34'	35'	38'	38'
102"	28'	28'	28'	28'	30'	30'	30'	32'	32'	32'	34'	34'	36'	38'	40'
108"	28'	28'	30'	30'	30'	30'	32'	32'	32'	34'	34'	35'	36'	38'	40'
120"	28'	30'	30'	30'	30'	30'	32'	32'	34'	35'	36'	38'	38'	40'	42'