

**DESIGN FACTORS FOR A DESIGN SPEED OF 90 km/h
(URBAN) USING E= 4% MAX.**

RADIUS (METERS)	E (%)	PAVEMENT WIDTH											
		7.2 m		10.8 m		14.4 m		18.0 m		19.8 m		21.6 m	
		DESIGN SPEED EQUIVALENTS (NUMBER OF LANES AT LANE WIDTH)											
		1 @ 3.6 m		1.5 @ 3.6 m		2 @ 3.6 m		3 @ 3.0 m		3 @ 3.3 m		3 @ 3.6 m	
		Lt	Lr	Lt	Lr	Lt	Lr	Lt	Lr	Lt	Lr	Lt	Lr
3000	NC	0	0	0	0	0	0	0	0	0	0	0	0
1830	2.0	16	16	20	20	23	23	26	26	29	29	31	31
1709	2.1	16	17	20	21	23	25	26	27	29	30	31	33
1597	2.2	16	17	20	21	23	26	26	29	29	31	31	34
1492	2.3	16	18	20	22	23	27	26	30	29	33	31	36
1393	2.4	16	19	20	23	23	28	26	31	29	34	31	37
1299	2.5	16	20	20	24	23	29	26	32	29	36	31	39
1208	2.6	16	20	20	25	23	30	26	34	29	37	31	40
1118	2.7	16	21	20	26	23	32	26	35	29	38	31	42
1038	2.8	16	22	20	27	23	33	26	36	29	40	31	43
965	2.9	16	23	20	28	23	34	26	38	29	41	31	45
900	3.0	16	23	20	29	23	35	26	39	29	43	31	46
840	3.1	16	24	20	30	23	36	26	40	29	44	31	48
784	3.2	16	25	20	31	23	37	26	41	29	45	31	50
733	3.3	16	26	20	32	23	38	26	43	29	47	31	51
685	3.4	16	27	20	33	23	40	26	44	29	48	31	53
639	3.5	16	27	20	34	23	41	26	45	29	50	31	54
595	3.6	16	28	20	35	23	42	26	46	29	51	31	56
552	3.7	16	29	20	36	23	43	26	48	29	52	31	57
508	3.8	16	30	20	37	23	44	26	49	29	54	31	59
461	3.9	16	30	20	38	23	45	26	50	29	55	31	60
376	4.0	16	32	20	40	23	46	26	52	29	58	31	62

NOTE:

Lt AND Lr VALUES IN METERS.

FOR PAVEMENT WIDTHS GREATER THAN 21.6 METERS USE Lr VALUES DEVELOPED BY DESIGN SOFTWARE.

LISTED RADIUS IS THE MINIMUM ALLOWABLE RADIUS FOR THE CORRESPONDING E, Lt, AND Lr VALUES.

**TRANSITION CURVES - URBAN
90 km/h DESIGN SPEED**

VIRGINIA DEPARTMENT OF TRANSPORTATION