

**DESIGN FACTORS FOR A DESIGN SPEED OF 45 MPH (RURAL) USING E= 8% MAX.**

DESIGN VELOCITY=45		WIDTH-18 FT			WIDTH-20 FT			WIDTH-22 FT			WIDTH-24 FT			WIDTH-48 FT			WIDTH-72 FT		
		IGRDS EQUIVALENTS (NUMBER OF LANES AT LANE WIDTH)																	
		1 @ 9'			1 @ 10'			1 @ 11'			1 @ 12'			2 @ 12'			3 @ 12'		
RADIUS (FT)	E(%)	Lt	Lr	w	Lt	Lr	w	Lt	Lr	w	Lt	Lr	w	Lt	Lr	w	Lt	Lr	w
20000	2.1	140	140	0.0	140	140	0.0	140	140	0.0	140	140	0.0	140	140	0.0	140	140	0.0
15000	2.1	140	140	0.0	140	140	0.0	140	140	0.0	140	140	0.0	140	140	0.0	140	140	0.0
10000	2.1	140	140	0.0	140	140	0.0	140	140	0.0	140	140	0.0	140	140	0.0	140	140	0.0
7000	2.1	140	140	0.0	140	140	0.0	140	140	0.0	140	140	0.0	140	140	0.0	140	140	0.0
5000	2.1	140	140	0.0	140	140	0.0	140	140	0.0	140	140	0.0	140	140	0.0	140	140	0.0
4000	2.5	118	140	0.0	118	140	0.0	118	140	0.0	118	140	0.0	118	140	0.0	118	140	0.0
3000	3.2	92	140	0.0	92	140	0.0	92	140	0.0	92	140	0.0	92	140	0.0	105	160	0.0
2500	3.7	32	140	3.1	34	140	2.0	80	140	0.0	80	140	0.0	80	140	0.0	103	180	0.0
2250	4.0	32	140	3.2	34	140	2.2	74	140	0.0	74	140	0.0	74	140	0.0	95	180	0.0
2000	4.4	32	140	3.3	33	140	2.3	67	140	0.0	67	140	0.0	77	160	0.0	96	200	0.0
1750	4.9	31	140	3.4	33	140	2.4	60	140	0.0	60	140	0.0	78	180	0.0	95	220	0.0
1500	5.4	31	140	3.5	33	140	2.5	55	140	0.0	55	140	0.0	70	180	0.0	94	240	0.0
1300	6.0	31	140	3.7	33	140	2.7	49	140	0.0	49	140	0.0	70	200	0.0	98	280	0.0
1150	6.4	31	140	3.8	33	140	2.8	46	140	0.0	53	160	0.0	73	220	0.0	99	300	0.0
1000	6.9	35	160	4.0	37	160	3.0	39	160	2.0	49	160	0.0	74	240	0.0	98	320	0.0
900	7.3	35	160	4.1	37	160	3.1	44	180	2.0	52	160	0.0	75	260	0.0	98	340	0.0
800	7.6	34	160	4.3	41	180	3.3	43	180	2.3	50	180	0.0	70	280	2.6	90	360	3.9
750	7.8	39	180	4.3	41	180	3.3	43	180	2.3	49	180	0.0	70	280	2.6	95	380	3.9
700	7.9	38	180	4.4	41	180	3.4	43	180	2.4	48	180	0.0	70	280	2.8	95	380	4.2
650	8.0	38	180	4.6	41	180	3.6	47	200	2.6	48	180	0.0	74	300	3.2	94	380	4.8
⊗ 602	8.0	38	180	4.7	40	180	3.7	47	200	2.7	48	180	0.0	74	300	3.4	99	400	5.1

NOTE:

Lt, Lr & w VALUES IN FEET.

FOR PAVEMENT WIDTHS GREATER THAN 72 FEET  
USE Lr VALUES DEVELOPED BY IGRDS.

⊗ MINIMUM ALLOWABLE RADIUS