

NOTE: Lt, Lr & w VALUES IN FEET. LISTED RADIUS IS THE MINIMUM ALLOWABLE RADIUS FOR THE CORRESPONDING E, Lt, Lr, AND w VALUES.

DESIGN FACTORS FOR A DESIGN SPEED OF 50 MPH (RURAL) USING E= 8% MAX.

DESIGN VELOCITY -50 RADIUS(FT)	DESIGN SOFTWARE EQUIVALENTS (NUMBER OF LANES AT LANE WIDTH)												INTERCHANGE RAMPS						
	WIDTH-18 FT			WIDTH-20 FT			WIDTH-22 FT			WIDTH-24 FT			WIDTH-48 FT			WIDTH-72 FT		WIDTH	
	1 e 9'	1 e 10'		1 e 11'		1 e 12'		2 e 12'		3 e 12'		16 FT	18 FT						
E(%)	Lt	Lr	w	Lt	Lr	w	Lt	Lr	w	Lt	Lr	w	Lt	Lr	w	Lt	Lr	w	
8000	NC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6013	2.0	36	36	0	40	40	0	44	44	44	48	48	0	72	72	0	96	96	0
5703	2.1	36	38	0	40	42	0	44	47	0	48	51	0	72	76	0	96	101	0
5420	2.2	36	40	0	40	44	0	44	49	0	48	53	0	72	80	0	96	106	0
5162	2.3	36	42	0	40	46	0	44	51	0	48	56	0	72	83	0	96	111	0
4926	2.4	36	44	0	40	48	0	44	53	0	48	58	0	72	87	0	96	116	0
4708	2.5	36	45	0	40	50	0	44	55	0	48	60	0	72	90	0	96	120	0
4507	2.6	36	47	0	40	52	0	44	58	0	48	63	0	72	94	0	96	125	0
4320	2.7	36	49	0	40	54	0	44	60	0	48	65	0	72	98	0	96	130	0
4146	2.8	36	51	0	40	56	0	44	62	0	48	68	0	72	101	0	96	135	0
3985	2.9	36	53	0	40	58	0	44	64	0	48	70	0	72	105	0	96	140	0
3834	3.0	36	54	0	40	60	0	44	66	0	48	72	0	72	108	0	96	144	0
3692	3.1	36	56	0	40	62	0	44	69	0	48	75	0	72	112	0	96	149	0
3560	3.2	36	58	0	40	64	0	44	71	0	48	77	0	72	116	0	96	154	0
3434	3.3	36	60	0	40	66	0	44	73	0	48	80	0	72	119	0	96	159	0
3316	3.4	36	62	0	40	68	0	44	75	0	48	82	0	72	123	0	96	164	0
3205	3.5	36	63	0	40	70	0	44	77	0	48	84	0	72	126	0	96	168	0
3099	3.6	36	65	0	40	72	0	44	80	0	48	87	0	72	130	0	96	173	0
2999	3.7	36	67	0	40	74	0	44	82	0	48	89	0	72	134	0	96	178	0
2904	3.8	36	69	0	40	76	0	44	84	0	48	92	0	72	137	0	96	183	0
2866	3.9	36	71	0	40	78	0	44	86	0	48	94	0	72	141	0	96	188	0
2865	3.9	76	147	2.2	40	78	0	44	86	0	48	94	0	72	141	0	96	188	0
2814	3.9	76	147	2.2	40	78	0	44	86	0	48	94	0	72	141	0	96	188	0
2728	4.0	74	147	2.2	40	80	0	44	88	0	48	96	0	72	144	0	96	192	0
2646	4.1	72	147	2.2	40	82	0	44	91	0	48	99	0	72	148	0	96	197	0
2568	4.2	70	147	2.2	40	84	0	44	93	0	48	101	0	72	152	0	96	202	0
2493	4.3	69	147	2.2	40	86	0	44	95	0	48	104	0	72	155	0	96	207	0
2422	4.4	67	147	2.3	40	88	0	44	97	0	48	106	0	72	159	0	96	212	0
2353	4.5	66	147	2.3	40	90	0	44	99	0	48	108	0	72	162	0	96	216	0
2287	4.6	64	147	2.3	40	92	0	44	102	0	48	111	0	72	166	0	96	221	0
2224	4.7	63	147	2.3	40	94	0	44	104	0	48	113	0	72	170	0	96	226	0
2163	4.8	62	147	2.4	40	96	0	44	106	0	48	116	0	72	173	0	96	231	0
2104	4.9	60	147	2.4	40	98	0	44	108	0	48	118	0	72	177	0	96	236	0
2047	5.0	59	147	2.4	40	100	0	44	110	0	48	120	0	72	180	0	96	240	0
1992	5.1	58	147	2.4	40	102	0	44	113	0	48	123	0	72	184	0	96	245	0
1939	5.2	57	147	2.4	40	104	0	44	115	0	48	125	0	72	188	0	96	250	0
1888	5.3	56	147	2.5	40	106	0	44	117	0	48	128	0	72	191	0	96	255	0
1838	5.4	55	147	2.5	40	108	0	44	119	0	48	130	0	72	195	0	96	260	0
1790	5.5	54	147	2.5	40	110	0	44	121	0	48	132	0	72	198	0	96	264	0
1743	5.6	53	147	2.5	40	112	0	44	124	0	48	135	0	72	202	0	96	269	0
1698	5.7	52	147	2.6	40	114	0	44	126	0	48	137	0	72	206	0	96	274	0
1653	5.8	51	147	2.6	40	116	0	44	128	0	48	140	0	72	209	0	96	279	0
1610	5.9	50	147	2.6	40	118	0	44	130	0	48	142	0	72	213	0	96	284	0
1568	6.0	49	147	2.6	40	120	0	44	132	0	48	144	0	72	216	0	96	288	0
1527	6.1	49	147	2.6	40	122	0	44	135	0	48	147	0	72	220	0	96	293	0
1487	6.2	48	147	2.7	40	124	0	44	137	0	48	149	0	72	224	0	96	298	0
1448	6.3	47	147	2.7	40	126	0	44	139	0	48	152	0	72	227	0	96	303	0
1410	6.4	46	147	2.7	40	128	0	44	141	0	48	154	0	72	231	0	96	308	0
1372	6.5	46	147	2.8	40	130	0	44	143	0	48	156	0	72	234	0	96	312	0
1336	6.6	45	147	2.8	40	132	0	44	146	0	48	159	0	72	238	0	96	317	0
1300	6.7	44	147	2.8	40	134	0	44	148	0	48	161	0	72	242	0	96	322	0
1265	6.8	44	147	2.8	40	136	0	44	150	0	48	164	0	72	245	0	96	327	0
1230	6.9	43	147	2.9	40	138	0	44	152	0	48	166	0	72	249	0	96	332	0
1196	7.0	42	147	2.9	40	140	0	44	154	0	48	168	0	72	252	0	96	336	0
1162	7.1	42	149	2.9	40	142	0	44	157	0	48	171	0	72	256	0	96	341	0
1128	7.2	43	152	3.0	45	159	2.0	44	159	0	48	173	0	72	260	0	96	346	0
1094	7.3	43	154	3.0	45	161	2.0	44	161	0	48	176	0	72	263	0	96	351	0
1059	7.4	43	156	3.0	45	163	2.0	44	163	0	48	178	0	72	267	0	96	356	0
1024	7.5	43	159	3.1	45	166	2.1	44	165	0	48	180	0	72	270	0	96	360	0
988	7.6	43	161	3.1	45	168	2.1	44	168	0	48	183	0	72	274	0	96	365	0
950	7.7	43	164	3.2	45	171	2.2	44	170	0	48	185	0	72	278	0	96	370	0
908	7.8	43	166	3.2	45	174	2.2	44	172	0	48	188	0	72	281	0	96	375	0
860	7.9	43	169	3.3	45	177	2.3	44	174	0	48	190	0	72	285	0	96	380	0
760	8.0	43	172	3.5	45	180	2.5	44	176	0	48	192	0	72	288	0	96	384	0



ROAD AND BRIDGE STANDARDS

SHEET 1 OF 1

REVISION DATE

802.38

**TRANSITION CURVES - RURAL
50 MPH DESIGN SPEED**

VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION
REFERENCE