

NOTE: L<sub>t</sub>, L<sub>r</sub> & w VALUES IN FEET. LISTED RADIUS IS THE MINIMUM ALLOWABLE RADIUS FOR THE CORRESPONDING E, L<sub>t</sub>, L<sub>r</sub>, AND w VALUES. WIDENING SHOWN IS BASED ON A WB-62 DESIGN VEHICLE.

**DESIGN FACTORS FOR A DESIGN SPEED OF 80 MPH (RURAL) USING E= 8% MAX.**

DESIGN VELOCITY +80	DESIGN SOFTWARE EQUIVALENTS (NUMBER OF LANES AT LANE WIDTH)												INTERCHANGE RAMPS							
	WIDTH=22 FT			WIDTH=24 FT			WIDTH=48 FT			WIDTH=72 FT			WIDTH							
	1 @ 11'		1 @ 12'		1 @ 12'		2 @ 12'		2 @ 12'		3 @ 12'		16 FT		18 FT					
RADIUS(FT)	E(%)	L <sub>t</sub>	L <sub>r</sub>	w	L <sub>t</sub>	L <sub>r</sub>	w	L <sub>t</sub>	L <sub>r</sub>	w	L <sub>t</sub>	L <sub>r</sub>	w	L <sub>t</sub>	L <sub>r</sub>	L <sub>t</sub>	L <sub>r</sub>	L <sub>t</sub>	L <sub>r</sub>	
17800	NC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13704	2	63	63	0	69	69	0	103	103	0	138	138	0	138	138	0	83	83	86	86
12749	2.1	63	66	0	69	72	0	103	108	0	138	145	0	138	145	0	83	87	86	90
12340	2.2	63	70	0	69	76	0	103	114	0	138	152	0	138	152	0	83	91	86	95
11845	2.3	63	73	0	69	79	0	103	119	0	138	159	0	138	159	0	83	95	86	99
11401	2.4	63	76	0	69	83	0	103	124	0	138	166	0	138	166	0	83	99	86	103
10706	2.5	63	79	0	69	86	0	103	129	0	138	173	0	138	173	0	83	103	86	108
10251	2.6	63	82	0	69	90	0	103	134	0	138	180	0	138	180	0	83	107	86	112
9831	2.7	63	85	0	69	93	0	103	139	0	138	187	0	138	187	0	83	111	86	116
9528	2.8	63	88	0	69	96	0	103	144	0	138	193	0	138	193	0	83	115	86	120
9163	2.9	63	92	0	69	100	0	103	150	0	138	200	0	138	200	0	83	119	86	125
8904	3	63	95	0	69	103	0	103	155	0	138	207	0	138	207	0	83	124	86	129
8584	3.1	63	98	0	69	107	0	103	160	0	138	214	0	138	214	0	83	128	86	133
8358	3.2	63	101	0	69	110	0	103	165	0	138	221	0	138	221	0	83	132	86	138
8148	3.3	63	104	0	69	114	0	103	170	0	138	228	0	138	228	0	83	136	86	142
7881	3.4	63	107	0	69	117	0	103	175	0	138	235	0	138	235	0	83	140	86	146
7490	3.5	63	110	0	69	120	0	103	180	0	138	242	0	138	242	0	83	144	86	150
7319	3.6	63	114	0	69	124	0	103	186	0	138	249	0	138	249	0	83	148	86	155
7096	3.7	63	117	0	69	127	0	103	191	0	138	255	0	138	255	0	83	152	86	159
6883	3.8	63	120	0	69	131	0	103	196	0	138	262	0	138	262	0	83	156	86	163
6743	3.9	63	123	0	69	134	0	103	201	0	138	269	0	138	269	0	83	160	86	168
6550	4	63	126	0	69	138	0	103	206	0	138	276	0	138	276	0	83	165	86	172
6367	4.1	63	129	0	69	141	0	103	211	0	138	283	0	138	283	0	83	169	86	176
6193	4.2	63	132	0	69	144	0	103	216	0	138	290	0	138	290	0	83	173	86	180
6038	4.3	63	136	0	69	148	0	103	222	0	138	297	0	138	297	0	83	177	86	185
5868	4.4	63	139	0	69	151	0	103	227	0	138	304	0	138	304	0	83	181	86	189
5820	4.5	63	142	0	69	155	0	103	232	0	138	311	0	138	311	0	83	185	86	193
5656	4.6	63	145	0	69	158	0	103	237	0	138	318	0	138	318	0	83	189	86	198
5499	4.7	63	148	0	69	162	0	103	242	0	138	324	0	138	324	0	83	193	86	202
5405	4.8	63	151	0	69	165	0	103	247	0	138	331	0	138	331	0	83	197	86	206
5274	4.9	63	154	0	69	168	0	103	252	0	138	338	0	138	338	0	83	202	86	210
5150	5	63	158	0	69	172	0	103	258	0	138	345	0	138	345	0	83	206	86	215
5067	5.1	63	161	0	69	175	0	103	263	0	138	352	0	138	352	0	83	210	86	219
4951	5.2	63	164	0	69	179	0	103	268	0	138	359	0	138	359	0	83	214	86	223
4775	5.3	63	167	0	69	182	0	103	273	0	138	366	0	138	366	0	83	218	86	228
4669	5.4	63	170	0	69	186	0	103	278	0	138	373	0	138	373	0	83	222	86	232
4586	5.5	63	173	0	69	189	0	103	283	0	138	380	0	138	380	0	83	226	86	236
4497	5.6	63	176	0	69	192	0	103	288	0	138	386	0	138	386	0	83	230	86	240
4410	5.7	63	180	0	69	196	0	103	294	0	138	393	0	138	393	0	83	234	86	245
4337	5.8	63	183	0	69	199	0	103	299	0	138	400	0	138	400	0	83	238	86	249
4267	5.9	63	186	0	69	203	0	103	304	0	138	407	0	138	407	0	83	243	86	253
4227	6	63	189	0	69	206	0	103	309	0	138	414	0	138	414	0	83	247	86	258
4146	6.1	63	192	0	69	210	0	103	314	0	138	421	0	138	421	0	83	251	86	262
4047	6.2	63	195	0	69	213	0	103	319	0	138	428	0	138	428	0	83	255	86	266
3966	6.3	63	198	0	69	216	0	103	324	0	138	435	0	138	435	0	83	259	86	270
3877	6.4	63	202	0	69	220	0	103	330	0	138	442	0	138	442	0	83	263	86	275
3860	6.5	63	205	0	69	223	0	103	335	0	138	448	0	138	448	0	83	267	86	279
3790	6.6	63	208	0	69	227	0	103	340	0	138	455	0	138	455	0	83	271	86	283
3723	6.7	63	211	0	69	230	0	103	345	0	138	462	0	138	462	0	83	275	86	288
3652	6.8	63	214	0	69	234	0	103	350	0	138	469	0	138	469	0	83	279	86	292
3582	6.9	63	217	0	69	237	0	103	355	0	138	476	0	138	476	0	83	284	86	296
3513	7	69	240	2	69	240	0	103	360	0	138	483	0	138	483	0	83	288	86	300
3467	7.1	69	244	2	69	244	0	103	366	0	138	490	0	138	490	0	83	292	86	305
3425	7.2	69	247	2	69	247	0	103	371	0	138	497	0	138	497	0	83	296	86	309
3354	7.3	69	251	2	69	251	0	103	376	0	138	504	0	138	504	0	83	300	86	313
3324	7.4	69	254	2	69	254	0	103	381	0	138	510	0	138	510	0	83	304	86	318
3218	7.5	69	259	2.1	69	258	0	103	386	0	138	517	0	138	517	0	83	308	86	322
3159	7.6	69	262	2.1	69	261	0	103	391	0	138	524	0	138	524	0	83	312	86	326
3115	7.7	69	266	2.1	69	264	0	103	396	0	138	531	0	138	531	0	83	316	86	330
3029	7.8	69	269	2.1	69	268	0	103	402	0	138	538	0	138	538	0	83	320	86	335
2895	7.9	70	274	2.2	69	271	0	103	407	0	138	545	0	138	545	0	83	325	86	339
2675	8	70	278	2.3	69	275	0	103	412	0	138	552	0	138	552	0	83	329	86	343



ROAD AND BRIDGE STANDARDS

SHEET 1 OF 1

REVISION DATE

803.44

01/13

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

VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION  
REFERENCE