

DESIGN FACTORS FOR A DESIGN SPEED OF 70 km/h (RURAL) USING E- 8% MAX.

DESIGN VELOCITY -70	DESIGN SOFTWARE EQUIVALENTS (NUMBER OF LANES AT LANE WIDTH)												INTERCHANGE RAMPS										
	WIDTH+ 5.4 m			WIDTH+6.0 m			WIDTH+6.6 m			WIDTH+7.2 m			WIDTH+14.4 m			WIDTH+21.6 m			WIDTH				
	1 e 2.7 m		1 e 3.0 m		1 e 3.3 m		1 e 3.6 m		2 e 3.6 m		3 e 3.6 m		4.8 m		5.4 m		Lt	Lr	Lt	Lr			
RADIUS (m)E (%)	Lt	Lr	w	Lt	Lr	w	Lt	Lr	w	Lt	Lr	w	Lt	Lr	w	Lt	Lr	Lt	Lr	Lt	Lr		
2000	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0	0	0	0	0	
1447	10	10	0.0	11	11	0.0	12	12	0.0	14	14	0.0	20	20	0.0	27	27	0.0	16	16	17	17	
1372	10	11	0.0	11	12	0.0	12	13	0.0	14	14	0.0	20	21	0.0	27	28	0.0	16	17	17	18	
1304	2.1	10	11	0.0	11	12	0.0	12	14	0.0	14	15	0.0	20	22	0.0	27	29	0.0	16	18	17	18
1242	2.3	10	12	0.0	11	13	0.0	12	14	0.0	14	16	0.0	20	23	0.0	27	31	0.0	16	18	17	19
1184	2.4	10	12	0.0	11	14	0.0	12	15	0.0	14	16	0.0	20	24	0.0	27	32	0.0	16	19	17	20
1132	2.5	10	13	0.0	11	14	0.0	12	15	0.0	14	17	0.0	20	25	0.0	27	33	0.0	16	20	17	21
1083	2.6	10	13	0.0	11	15	0.0	12	16	0.0	14	18	0.0	20	26	0.0	27	35	0.0	16	21	17	22
1038	2.7	10	14	0.0	11	15	0.0	12	17	0.0	14	18	0.0	20	27	0.0	27	36	0.0	16	21	17	23
996	2.8	10	14	0.0	11	16	0.0	12	17	0.0	14	19	0.0	20	28	0.0	27	37	0.0	16	22	17	23
957	2.9	10	15	0.0	11	16	0.0	12	18	0.0	14	19	0.0	20	29	0.0	27	38	0.0	16	23	17	24
921	3.0	10	15	0.0	11	17	0.0	12	18	0.0	14	20	0.0	20	30	0.0	27	40	0.0	16	24	17	25
886	3.1	10	16	0.0	11	17	0.0	12	19	0.0	14	21	0.0	20	31	0.0	27	41	0.0	16	24	17	26
854	3.2	10	16	0.0	11	18	0.0	12	20	0.0	14	21	0.0	20	32	0.0	27	42	0.0	16	25	17	27
851	3.3	10	17	0.0	11	18	0.0	12	20	0.0	14	22	0.0	20	33	0.0	27	44	0.0	16	26	17	27
850	3.3	25	40	0.6	11	18	0.0	12	20	0.0	14	22	0.0	20	33	0.0	27	44	0.0	16	26	17	27
824	3.3	25	40	0.6	11	18	0.0	12	20	0.0	14	22	0.0	20	33	0.0	27	44	0.0	16	26	17	27
795	3.4	24	40	0.7	11	19	0.0	12	21	0.0	14	23	0.0	20	34	0.0	27	45	0.0	16	27	17	28
768	3.5	23	40	0.7	11	20	0.0	12	21	0.0	14	23	0.0	20	35	0.0	27	46	0.0	16	27	17	28
743	3.6	23	40	0.7	11	20	0.0	12	22	0.0	14	24	0.0	20	36	0.0	27	48	0.0	16	28	17	29
719	3.7	22	40	0.7	11	21	0.0	12	23	0.0	14	25	0.0	20	37	0.0	27	49	0.0	16	28	17	30
696	3.8	22	40	0.7	11	21	0.0	12	23	0.0	14	25	0.0	20	37	0.0	27	49	0.0	16	29	17	31
674	3.9	21	40	0.7	11	22	0.0	12	24	0.0	14	26	0.0	20	38	0.0	27	50	0.0	16	30	17	32
653	4.0	20	40	0.7	11	22	0.0	12	24	0.0	14	26	0.0	20	39	0.0	27	52	0.0	16	31	17	32
633	4.1	20	40	0.7	11	23	0.0	12	25	0.0	14	27	0.0	20	40	0.0	27	53	0.0	16	31	17	33
614	4.2	20	40	0.7	11	23	0.0	12	26	0.0	14	28	0.0	20	41	0.0	27	54	0.0	16	32	17	34
596	4.3	19	40	0.7	11	24	0.0	12	26	0.0	14	29	0.0	20	42	0.0	27	55	0.0	16	33	17	35
579	4.4	19	40	0.7	11	24	0.0	12	27	0.0	14	29	0.0	20	43	0.0	27	57	0.0	16	34	17	36
562	4.5	18	40	0.7	11	25	0.0	12	27	0.0	14	30	0.0	20	44	0.0	27	58	0.0	16	35	17	36
546	4.6	18	40	0.7	11	26	0.0	12	28	0.0	14	31	0.0	20	45	0.0	27	59	0.0	16	35	17	37
531	4.7	18	40	0.7	11	26	0.0	12	28	0.0	14	31	0.0	20	46	0.0	27	61	0.0	16	36	17	38
516	4.8	17	40	0.7	11	27	0.0	12	29	0.0	14	32	0.0	20	47	0.0	27	62	0.0	16	37	17	39
501	4.9	17	40	0.8	11	27	0.0	12	30	0.0	14	33	0.0	20	48	0.0	27	63	0.0	16	38	17	40
488	5.0	16	40	0.8	11	28	0.0	12	30	0.0	14	33	0.0	20	49	0.0	27	65	0.0	16	38	17	41
474	5.1	16	40	0.8	11	28	0.0	12	31	0.0	14	34	0.0	20	50	0.0	27	66	0.0	16	39	17	41
461	5.2	16	40	0.8	11	29	0.0	12	32	0.0	14	35	0.0	20	51	0.0	27	67	0.0	16	40	17	42
449	5.3	16	40	0.8	11	29	0.0	12	32	0.0	14	35	0.0	20	52	0.0	27	69	0.0	16	41	17	43
436	5.4	15	40	0.8	11	30	0.0	12	33	0.0	14	36	0.0	20	53	0.0	27	70	0.0	16	42	17	44
425	5.5	15	40	0.8	11	30	0.0	12	33	0.0	14	36	0.0	20	54	0.0	27	71	0.0	16	42	17	45
413	5.6	15	40	0.8	11	31	0.0	12	34	0.0	14	37	0.0	20	55	0.0	27	72	0.0	16	43	17	45
402	5.7	15	40	0.8	11	32	0.0	12	35	0.0	14	38	0.0	20	56	0.0	27	74	0.0	16	44	17	46
391	5.8	14	40	0.8	11	32	0.0	12	35	0.0	14	38	0.0	20	57	0.0	27	75	0.0	16	45	17	47
380	5.9	14	40	0.8	11	33	0.0	12	36	0.0	14	39	0.0	20	58	0.0	27	76	0.0	16	45	17	48
370	6.0	14	40	0.8	11	33	0.0	12	36	0.0	14	40	0.0	20	59	0.0	27	78	0.0	16	46	17	49
360	6.1	14	40	0.8	11	34	0.0	12	37	0.0	14	40	0.0	20	60	0.0	27	80	0.0	16	47	17	50
350	6.2	13	40	0.9	13	40	0.6	12	38	0.0	14	41	0.0	20	61	0.0	27	82	0.0	16	48	17	51
341	6.3	13	40	0.9	13	40	0.6	12	38	0.0	14	42	0.0	20	62	0.0	27	83	0.0	16	49	17	52
331	6.4	13	40	0.9	13	40	0.6	12	39	0.0	14	42	0.0	20	63	0.0	27	84	0.0	16	50	17	53
322	6.5	13	40	0.9	13	40	0.6	12	39	0.0	14	43	0.0	20	64	0.0	27	86	0.0	16	51	17	54
313	6.6	13	40	0.9	12	40	0.6	12	40	0.0	14	44	0.0	20	65	0.0	27	87	0.0	16	52	17	54
305	6.7	12	40	0.9	12	41	0.6	12	41	0.0	14	44	0.0	20	66	0.0	27	88	0.0	16	52	17	55
296	6.8	12	40	0.9	12	41	0.6	12	41	0.0	14	45	0.0	20	67	0.0	27	90	0.0	16	53	17	55
288	6.9	12	40	0.9	12	42	0.6	12	42	0.0	14	46	0.0	20	68	0.0	27	91	0.0	16	54	17	57
280	7.0	12	41	0.9	12	42	0.6	12	42	0.0	14	46	0.0	20	69	0.0	27	92	0.0	16	55	17	58
271	7.1	12	41	0.9	12	43	0.6	12	43	0.0	14	47	0.0	20	70	0.0	27	93	0.0	16	55	17	59
263	7.2	12	42	1.0	13	44	0.7	12	44	0.0	14	48	0.0	20	71	0.0	27	95	0.0	16	56	17	59
255	7.3	12	43	1.0	13	45	0.7	12	44	0.0	14	48	0.0	20	72	0.0	27	96	0.0	16	57	17	60
247	7.4	12	44	1.0	13	46	0.7	12	45	0.0	14	49	0.0	20	73	0.0	27	97	0.0	16	58	17	61
238	7.5	12	44	1.0	13	46	0.7	12	45	0.0	14	50	0.0	20	74	0.0	27	99	0.0	16	59	17	62
230	7.6	12	45	1.0	13	47	0.7	12	46	0.0	14	50	0.0	20	75	0.0	27	100	0.0	16	59	17	63
221	7.7	12	45	1.0	13	47	0.7	12	47	0.0	14	51	0.0	20	76	0.0	27	101	0.0	16	60	17	63
211	7.8	12	46	1.0	13	48	0.7	12	47	0.0	14	52	0.0	20	77	0.0	27	103	0.0	16	61	17	64
199	7.9	12	47	1.1	13	49	0.8	12	48	0.0	14	52	0.0	20	78	0.0	28	110	0.6	16	62	17	65
176	8.0	12	48	1.1	13	50	0.8	12	48	0.0	14	53	0.0	20	79	0.0	28	111	0.6	16	62	17	66

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

TRANSITION CURVES - RURAL
70 km/h DESIGN SPEED

VIRGINIA DEPARTMENT OF TRANSPORTATION