

DESIGN FACTORS FOR A DESIGN SPEED OF 25 MPH (RURAL) USING E= 8% MAX.

DESIGN VELOCITY =25 RADIUS(FT)	DESIGN SOFTWARE EQUIVALENTS (NUMBER OF LANES AT LANE WIDTH)																		INTERCHANGE RAMPS											
	WIDTH= 18 FT						WIDTH=20 FT						WIDTH=24 FT						WIDTH=48 FT						WIDTH					
	1 @ 9'			1 @ 10'			1 @ 11'			1 @ 12'			2 @ 12'			16 FT			18 FT											
	Lt	Lr	w	Lt	Lr	w	Lt	Lr	w	Lt	Lr	w	Lt	Lr	w	Lt	Lr	w	Lt	Lr	Lt	Lr	Lt	Lr						
2370	NC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
1745	2	29	29	2.1	29	29	0	32	32	0	35	35	0	52	52	0	40	40	40	40	43	43								
1698	2.1	30	31	2.1	29	30	0	32	33	0	35	36	0	52	54	0	40	42	43	43	45	45								
1580	2.2	30	32	2.1	29	32	0	32	35	0	35	38	0	52	57	0	40	44	43	43	48	48								
1520	2.3	30	34	2.2	29	33	0	32	37	0	35	40	0	52	60	0	40	46	43	43	50	50								
1432	2.4	30	35	2.2	29	35	0	32	38	0	35	42	0	52	62	0	40	48	43	43	52	52								
1400	2.5	30	37	2.2	29	36	0	32	40	0	35	43	0	52	65	0	40	50	43	43	54	54								
1290	2.6	30	38	2.3	29	38	0	32	41	0	35	45	0	52	67	0	40	52	43	43	56	56								
1254	2.7	30	40	2.3	29	39	0	32	43	0	35	47	0	52	70	0	40	54	43	43	58	58								
1220	2.8	30	41	2.4	29	40	0	32	44	0	35	48	0	52	72	0	40	56	43	43	60	60								
1160	2.9	30	43	2.4	29	42	0	32	46	0	35	50	0	52	75	0	40	58	43	43	63	63								
1080	3	30	44	2.5	29	43	0	32	48	0	35	52	0	52	78	0	40	60	43	43	65	65								
1056	3.1	30	46	2.5	29	45	0	32	49	0	35	54	0	52	80	0	40	62	43	43	67	67								
1008	3.2	30	48	2.6	29	46	0	32	51	0	35	55	0	52	83	0	40	64	43	43	69	69								
990	3.3	30	49	2.6	29	48	0	32	52	0	35	57	0	52	85	0	40	66	43	43	71	71								
950	3.4	30	51	2.6	29	49	0	32	54	0	35	59	0	52	88	0	40	68	43	43	73	73								
910	3.5	30	52	2.7	29	50	0	32	55	0	35	60	0	52	90	0	40	70	43	43	75	75								
870	3.6	30	54	2.7	29	52	0	32	57	0	35	62	0	52	93	0	40	72	43	43	78	78								
830	3.7	30	55	2.8	29	53	0	32	59	0	35	64	0	52	96	0	40	74	43	43	80	80								
807	3.8	30	57	2.8	29	55	0	32	60	0	35	66	0	52	98	0	40	76	43	43	82	82								
781	3.9	31	59	2.9	29	56	0	32	62	0	35	67	0	52	101	0	40	78	43	43	84	84								
752	4	30	60	2.9	29	58	0	32	63	0	35	69	0	52	103	0	40	80	43	43	86	86								
718	4.1	31	62	3	32	65	2	32	65	0	35	71	0	52	106	0	40	82	43	43	88	88								
690	4.2	31	64	3.1	32	67	2.1	32	66	0	35	72	0	52	108	0	40	84	43	43	90	90								
662	4.3	31	65	3.1	32	68	2.1	32	68	0	35	74	0	52	111	0	40	86	43	43	93	93								
652	4.4	31	67	3.2	32	70	2.2	32	70	0	35	76	0	52	114	0	40	88	43	43	95	95								
626	4.5	31	69	3.2	32	72	2.2	32	71	0	35	78	0	52	116	0	40	90	43	43	97	97								
599	4.6	31	70	3.3	32	74	2.3	32	73	0	35	79	0	52	119	0	40	92	43	43	99	99								
588	4.7	31	72	3.3	32	75	2.3	32	74	0	35	81	0	52	121	0	40	94	43	43	101	101								
562	4.8	31	74	3.4	32	77	2.4	32	76	0	35	83	0	52	124	0	40	96	43	43	103	103								
535	4.9	32	76	3.5	33	79	2.5	32	77	0	35	84	0	52	126	0	40	98	43	43	105	105								
524	5	31	77	3.5	33	81	2.5	32	79	0	35	86	0	52	129	0	40	100	43	43	108	108								
498	5.1	31	79	3.6	33	83	2.6	32	81	0	35	88	0	52	132	0	40	102	43	43	110	110								
470	5.2	32	81	3.8	33	85	2.8	32	82	0	35	90	0	52	134	0	40	104	43	43	112	112								
458	5.3	32	83	3.8	33	87	2.8	32	84	0	35	91	0	52	137	0	40	106	43	43	114	114								
446	5.4	32	85	3.9	33	89	2.9	32	85	0	35	93	0	52	139	0	40	108	43	43	116	116								
420	5.5	32	87	4	34	91	3	35	95	2	35	95	0	52	142	0	40	110	43	43	118	118								
408	5.6	32	89	4.1	34	93	3.1	35	97	2.1	35	96	0	52	144	0	40	112	43	43	120	120								
392	5.7	32	91	4.2	34	95	3.2	35	99	2.2	35	98	0	52	147	0	40	114	43	43	123	123								
376	5.8	33	93	4.3	34	97	3.3	35	101	2.3	35	100	0	52	150	0	40	116	43	43	125	125								
360	5.9	33	95	4.4	34	99	3.4	35	103	2.4	35	102	0	52	152	0	40	118	43	43	127	127								
340	6	33	97	4.6	34	102	3.6	36	106	2.6	35	103	0	52	155	0	40	120	43	43	129	129								
337	6.1	33	99	4.6	34	103	3.6	36	108	2.6	35	105	0	52	157	0	40	122	43	43	131	131								
322	6.2	33	101	4.7	34	105	3.7	36	110	2.7	35	107	0	52	160	0	40	124	43	43	133	133								
308	6.3	34	104	4.9	35	108	3.9	36	113	2.9	35	108	0	52	162	0	40	126	43	43	135	135								
299	6.4	34	106	5	35	110	4	36	115	3	38	119	2	56	179	4	40	128	43	43	138	138								
290	6.5	33	107	5	35	112	4	36	117	3	38	121	2	56	182	4	40	130	43	43	140	140								
273	6.6	34	110	5.3	35	115	4.3	37	120	3.3	38	124	2.3	57	186	4.6	40	132	43	43	142	142								
267	6.7	34	112	5.3	35	117	4.3	37	122	3.3	38	126	2.3	57	189	4.6	40	134	43	43	144	144								
259	6.8	34	114	5.4	35	119	4.4	37	124	3.4	38	129	2.4	57	193	4.8	40	136	43	43	146	146								
251	6.9	34	117	5.6	36	122	4.6	37	127	3.6	38	132	2.6	58	197	5.2	40	138	43	43	148	148								
242	7	34	119	5.7	36	124	4.7	37	129	3.7	39	134	2.7	58	201	5.4	40	140	43	43	150	150								
234	7.1	35	121	5.8	36	126	4.8	37	131	3.8	39	136	2.8	58	204	5.6	40	142	43	43	153	153								
225	7.2	35	124	6	36	129	5	38	134	4	39	139	3	59	209	6	40	144	43	43	155	155								
216	7.3	35	127	6.2	37	132	5.2	38	137	4.2	39	142	3.2	59	213	6.4	40	146	43	43	157	157								
209	7.4	35	129	6.3	37	134	5.3	38	140	4.3	39	145	3.3	59	217	6.6	40	148	43	43	159	159								
199	7.5	36	132	6.5	37	137	5.5	38	142	4.5	40	148	3.5	59	221	7	40	150	43	43	161	161								
191	7.6	36	135	6.7	37	140	5.7	39	145	4.7	40	151	3.7	60	226	7.4	40	152	43	43	163	163								
177	7.7	37	139	7.1	38	144	6.1	39	150	5.1	41	155	4.1	61	232	8.2	40	154	43	43	165	165								
168	7.8	37	142	7.4	38	148	6.4	40	153	5.4	41	159	4.4	62	238	8.8	40	156	43	43	168	168								
159	7.9	37	146	7.7	39	151	6.7	40	157	5.7	42	162	4.7	62	243	9.4	40	158	43	43	170	170								
135	8	39	153	8.7	40	159	7.7	41	164	6.7	43	170	5.7	64	255	11.4	40	160	43	43	172	172								

NOTE: Lt, Lr & w VALUES IN FEET. LISTED RADIUS IS THE MINIMUM ALLOWABLE RADIUS FOR THE CORRESPONDING E, Lt, Lr, AND w VALUES. WIDENING SHOWN IS BASED ON A SU-40 DESIGN VEHICLE.

SPECIFICATION REFERENCE

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

VIRGINIA DEPARTMENT OF TRANSPORTATION



ROAD AND BRIDGE STANDARDS

REVISION DATE SHEET 1 OF 1

01/13

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