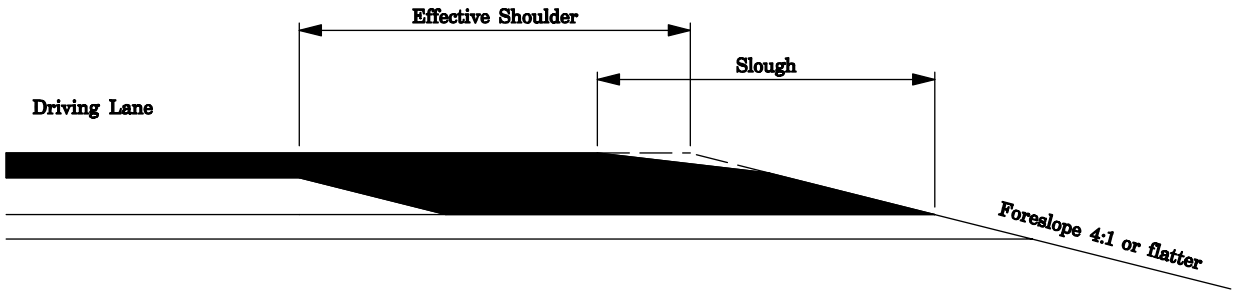
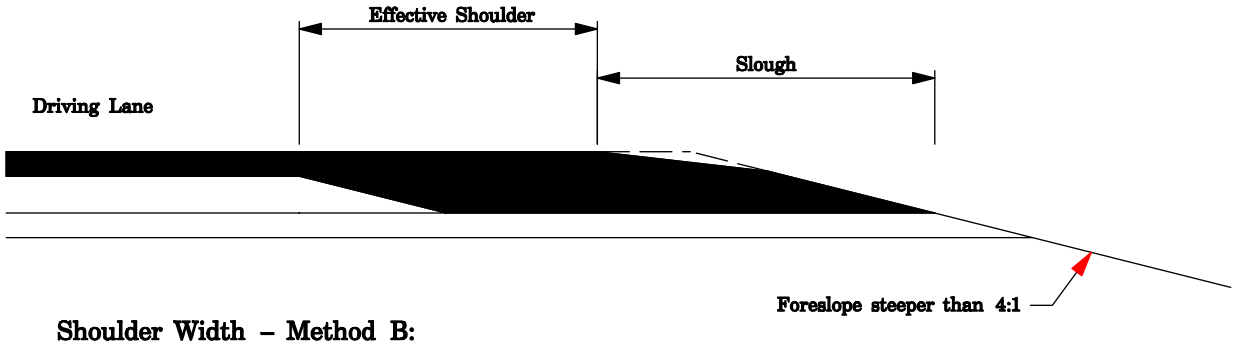
Figure I-06.03.01 Determination of Shoulder Width, Methods A and B

Figure I-06.03.02 Values for Design Elements Related to Design Speed and Horizontal Curvature-RRR Standards

Figure I-06.03.01 Determination of Shoulder Width, Method A and B



Shoulder Width – Method A:
Measured from the edge of the through–traffic lane to the intersection of the shoulder slope and the foreslope planes where the foreslope is 4:1 or flatter.



Shoulder Width – Method B:
Measured from the edge of the through–traffic lane to the beginning of rounding at the shoulder break for foreslopes steeper that 4:1.

Figure I-06.03.02 Values For Design Elements Related To Design Speed And Horizontal Curvature - RRR Standards

D	R (ft)	V = 30 mph			V = 40 mph			V = 50 mph			V = 55 mph			V = 60 mph			V = 65 mph			V = 70 mph		
		e	L (ft)		e	L (ft)		e	L (ft)		e	L (ft)		e	L (ft)		e	L (ft)		e	L (ft)	
			2 Ln	4 Ln		2 Ln	4 Ln		2 Ln	4 Ln		2 Ln	4 Ln		2 Ln	4 Ln		2 Ln	4 Ln		2 Ln	4 Ln
0E15'	22,918	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0
0E30'	11,459	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	RC	190	190	RC	200	200
0E45'	7,639	NC	0	0	NC	0	0	RC	0	0	RC	160	160	.021	175	175	.024	190	190	.026	200	200
1E00'	5,730	NC	0	0	NC	0	0	.020	150	150	.023	160	160	.027	175	175	.030	190	190	.033	200	200
1E30'	3,820	NC	0	0	.020	125	125	.028	150	150	.032	160	160	.037	175	175	.041	190	190	.046	200	200
2E00'	2,865	RC	100	100	.025	125	125	.035	150	150	.040	160	160	.045	175	180	.050	190	210	.055	200	230
3E00'	1,910	.023	100	100	.034	125	125	.045	150	160	.050	160	190	.055	175	220	.059	190	250	.059	200	260
3E30'	1,637	.026	100	100	.038	125	125	.048	150	170	.054	160	210	.058	175	230	.060	190	250			
4E00'	1,432	.029	100	100	.041	125	130	.052	150	180	.057	160	220	.060	175	240				D_{max} = 2E45'		
5E00'	1,146	.034	100	100	.046	125	140	.056	150	200	.060	160	230				D_{max} = 3E30'					
6E00'	955	.038	100	100	.050	125	160	.059	150	210				D_{max} = 4E15'								
7E00'	819	.041	100	110	.053	125	170				D_{max} = 5E15'											
8E00'	716	.043	100	120	.056	125	180	D_{max} = 6E45'														
9E00'	637	.046	100	120	.058	125	180															
10E00'	573	.048	100	130	.059	125	190															
11E00'	521	.050	100	140	.060	130	190															
12E00'	477	.052	100	140																		
13E00'	441	.054	100	140	D_{max} = 11E15'																	

14E00'	409	.055	100	150																		
16E00'	358	.058	100	160																		
18E00'	318	.059	110	160																		
20E00'	286	.060	110	160																		
21E00'	273	.060	110	160																		
		D_{max} = 21E00'																				

D = degree of curve
R = radius of curve
V = assumed design speed
e = rate of superelevation

L = minimum length of runoff (does not include tangent runout)
NC = normal crown section
RC = remove adverse crown, superelevate at normal crown slope
Ln = lanes

e_{max} = 0.06

NOTE: Lengths rounded in multiples of 25 or 50 ft. permit simpler calculations.