

Highway Design Speed (km/h)	Average Running Speed (km/h) ( $V_a$ )	L = Deceleration Length (m)								
		For Design Speed of First Governing Geometric Control (km/h)								
		Stop	20	30	40	50	60	70	80	
		For Average Running Speed (km/h) ( $V'_a$ )								
		0	20	28	35	42	51	63	70	
50	47	75	70	60	45	-	-	-	-	
60	55	95	90	80	65	55	-	-	-	
70	63	110	105	95	85	70	55	-	-	
80	70	130	125	115	110	90	80	55	-	
90	77	145	140	135	120	110	100	75	60	
100	85	170	165	155	145	135	120	00	85	
110	91	180	180	170	160	150	140	120	105	

Notes:

1. *These values are for grades 3% or less. See [Figure 54-3B](#) for steeper upgrades or downgrades.*
2. *The deceleration lengths are calculated from the distance needed for a passenger car to decelerate from the highway mainline speed to the speed of the first governing geometric control on the exit ramp. The basic assumptions within the AASHTO deceleration model are:*
  - a. *The vehicle is initially traveling at the average running speed of the highway mainline.*
  - b. *The vehicle decelerates in gear for 3 seconds of travel time.*
  - c. *The driver brakes the vehicle at a “comfortable” rate until it reaches the average running speed of the first governing geometric control.*

*The AASHTO deceleration model is discussed in detail on pp. 348-351 of the 1965 A Policy on Geometric Design of Rural Highways.*

## LENGTHS FOR DECELERATION

**Figure 54-3A**