

Why the “85th percentile” Speed?

A study conducted by the American Association of State Highway and Transportation Officials (AASHTO) Subcommittee on Traffic Engineering and based on a survey of traffic officials from all states and 44 city and county agencies, reviewed the principles and practices used to set speed limits.

The study indicated that based on the best available evidence, the speed limit should be set at the speed driven by 85 to 90 % of the free-moving vehicles rounded up to the next 5 mph increment. The method results in speed limits that are not only acceptable to a large majority of the motorists, but also fall within the speed range where the accident risk is the lowest. Allowing a 5 mph tolerance, enforcement would be targeted at drivers who are clearly at risk.

Traffic officials generally agree speed limits should reflect the speed of most drivers. All states and most local agencies use the 85th percentile speed of free-flowing traffic as the basic factor used to set speed limits. However, it is fairly common to reduce the speed limit based on a subjective consideration of other factors. If there are unusual hazards not readily apparent to drivers, then a warning sign could be installed giving the nature of the hazard, and if necessary, supplemented with a realistic advisory speed.

Excerpted from “Synthesis of Speed Zoning Practice”, Technical Summary, FHWA/RD- 85/096