

Ewing, R. Roadway Level of Service in an Era of Growth Management.
Transportation Research Record 1364: 63-70.

This paper calls for fresh thinking about the ways in which roadway level of service is calculated and recommends the following innovations in the calculation: a) using a simple regression method to estimate average travel speeds and, from them, arterial level of service; b) using average levels of service to determine adequacy of facilities within travel corridors; and c) using the 100th rather than 30th highest hourly traffic volumes to determine roadway level of service.

Issues Raised

- There is an erroneous belief that complex methods of calculating LOS yield more precise results than simple methods.
- LOS measures based on posted speed yield LOS that are two or more letters lower than those based on actual speeds (because drivers drive at designed speeds, not posted speeds).
- LOS measures are based on segments when traffic moves through corridors, districts, and areas.
- Area-wide LOS can be based on a “typical trip” and on consideration of “alternative routes”—the sum of volume/capacity ratios, average of volume/capacity for area, and a performance summary for different roads within the area (as a share of the total).
- Delineate travel corridors to define an “area” (e.g., the TCMA in Florida). Choose the peak hour at the 100th hour, not the 30th (established on the basis of 1950 traffic patterns), as traffic is now much more spread out throughout the day/week than it was in 1950