



Planning & Research Problem Statement

Traffic & Safety

Problem Title : Modeling of 85th Percentile Speed for Rural Highways for Enhanced Traffic Safety

Problem Statement:

Traffic operations on two-lane rural highways and setting realistic speed limits are some of the difficult tasks faced by the Oklahoma Department of Transportation (ODOT). For such highways, overtaking slower vehicles is possible only by the use of the opposing lane where site distance and gap in the opposing traffic stream play a key role. While, in most states, including Oklahoma, the 85th percentile speed is used as a major factor in determining posted speeds for rural highways, other factors such as pavement width, type and width of shoulder, topography, weather, roadside development, and accident experience also play an important role in determining posted speeds. In recent years neural network models have been used successfully for many engineering problems, including modeling 85th percentile speeds in rural highways in Kansas. Similar models are needed for Oklahoma for enhanced traffic safety on rural highways in the state. A neural network model based on appropriate pavement, traffic and environmental data can be an effective tool for ODOT to enhance traffic safety in the state. Research is needed to develop such a model.

This project will help revise a model that was developed by OU for ODOT in 1996. This model will produce an effective tool for ODOT to enhance traffic safety within the State of Oklahoma.

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