

Operating Speed Models on Tangent Sections of Two-Lane Rural Roads

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Abstract : This paper presents models for predicting operating speeds on tangent sections of two-lane rural roads developed on continuous speed data. The data corresponds to 20 drivers of different ages and driving experiences, driving their own cars along an 18 km long section of a state road. The data were first used for determination of maximum operating speeds on tangents and their comparison with speeds in the middle of tangents i.e. speed data used in most of operating speed studies. Analysis of continuous speed data indicated that the spot speed data are not reliable indicators of relevant speeds. After that, operating speed models for tangent sections were developed. There was no significant difference between models developed using speed data in the middle of tangent sections and models developed using maximum operating speeds on tangent sections. All developed models have higher coefficient of determination than models developed on spot speed data. Thus, it can be concluded that the method of measuring has more significant impact on the quality of operating speed model than the location of measurement.

Keywords : operating speed, continuous speed data, tangent sections, spot speed, consistency

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