

ANALYSIS OF FREEWAY WEAVING AREAS USING CORRIDOR SIMULATOR AND HIGHWAY CAPACITY MANUAL

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(ABSTRACT)

Weaving is defined as the crossing of two or more traffic streams traveling in the same direction along a significant length of the highway without the aid of traffic control devices. The traditional methods used for design and operational analysis of a highway is the Highway Capacity Manual (HCM). The traditional weaving methods in the highway capacity manual use road geometry and traffic volume as inputs and provide an estimate of speed as an output. CORSIM is a new computer simulation model developed by Federal Highway Administration (FHWA) for simulation of traffic behavior on integrated urban transportation networks of freeway and surface streets. The intent of this research is to identify the difference in the results by using the new CORSIM simulation and the traditional HCM approach in modeling the weaving sections on a freeway and make recommendations. The research will also compare the modeling strategy and provide analysis of the output.