

Examining Relationship between Accident Occurrences and Road Characteristics on Yangon - Mandalay Expressway in Myanmar

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Abstract

Traffic crashes on Yangon-Mandalay Expressway in Myanmar become a worse problem resulting in many deaths, injuries, disabilities and damage to both private and public properties. This expressway is the most important one in the country and it passes through Naypyitaw, the capital city of Myanmar, as well as linking Yangon to the south and Mandalay to the north. Although over speeding is the major cause of traffic crash on Yangon-Mandalay Expressway, traffic crashes due to human behavior, road environment and road characteristic are also investigable factors. The purpose of the study is to examine relationships between crash frequency and road characteristics on that expressway. Negative binomial regression model was performed to predict the numbers of crash based on road characteristics variables. These variables include average daily traffic, road geometric variables, presence of bridge and presence of village settlement along the expressway. The last three years traffic crash data were used to develop the crash prediction model. The result shows that accident occurrences are found to be significantly related to average daily traffic, presence of bridge, presence of village settlement, percent downgrade and combination of horizontal curve and slope.

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