

In Depth Analysis of Southern Expressway Accidents

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Abstract

Southern Expressway is the first access control expressway in Sri Lanka. Currently it traverse from Kottawa to Matara and it was initially opened to public on 27th November 2011 from Kottawa to Pinnaduwa.

Road accidents have become a normal and re-occurring phenomenon from the beginning of expressway operation up to date. Accidents bring a great loss of economy and property, and even the human life. This study focuses on analyzing data collected by Expressway Operation Maintenance and Management Division and Expressway Police Division based on expressway accidents from beginning of operation up to end of April 2016 .

The objective of this study is to present accident trend between interchanges and comparison of accidents with other expressways based on accidents rate (Accidents per Vehicle Kilometer Travel). SPSS frequency analysis is based on the day, time, location, severity, causes of the accidents and conditions of locations. Accidents prone locations are identified by prepared accident map. Causes for the accidents are analyzed based on the three main factors as human, vehicle & infrastructure/environment. The causes of accidents and their general preventive measures are discussed based on safety audit process through the expressway.

This report provides an in-depth analysis of accidents in selected period based on the various factors influencing accidents. Cumulative total of 2270 accidents with 14 fatal accidents have now been reported on the carriageway of Southern Expressway and 10.6% was Injury and 88.8% was property damage only. This is not a good trend for the expressway present as well as future.

Most of the accidents have been occurred during the clear weather condition and 36.1% occurred during the rainy weather. 40% of accidents were reported in wet road surface condition. About 16 numbers of accident prone areas have been identified in between

Kottawa to Pinnaduwa section. Human factors such as driver behavior, fatigue, negligence etc. are the main cause involving with the large number of accidents.

This study helps for the improvement of safety through the Expressway network as well as planning of safety procedures during the future Expressway development. New improvement can be implemented to minimize the accident rate as well as severity.

Key Words: Accidents Rates, In-depth Study, Preventive Measures

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