

**INVESTIGATION OF ACCIDENTS IN COLOMBO
KATUNAYAKE EXPRESSWAY**

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Degree of Master of Engineering in Highway and Traffic Engineering

Department of Civil Engineering

University of Moratuwa

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Dissertation submitted in partial fulfillment of the requirements for the degree of
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Abstract

Expressways are developed to provide high mobility link between major cities in a country. Colombo Katunayake Expressway is 26 km expressway connect Colombo to Katunayake where major airport located. Since expressways are designed for high speed traffic flows ensuring safety is important in the future.

The objective of this study is to identify road accident causing factors related to road, user and environment factors in expressways. CKE is used as a case study for the research.

It is identified that majority of accidents 66.4% of total accidents cause due to road user (driver) behavior and vehicle related problems. Severity of accident has increased when there is a combination of the above factors (road, user and environment).

This would suggest the average accident rate 1.3 per million vehicle kilometer. Only one fatal accident has recorded during the period which is a motorbike entry and crash with a car.

Since this is a partially open expressway there is an issue relates to vehicle road worthiness. Therefore, we can expect to significantly reduce the accident rate through improving road user awareness and education on safe practices. Significant issue related to road characteristics is surface water accumulation on the expressway at reverse curves due to the problem of change of super elevation and cross fall. Therefore, need to add design improvement such as groves or use of porous pavement to improve drainage on such sections or by installing variable speed sign on such sections to notify drivers.

Key words:

Mobility — safety— accidents — user — environment— expressways— behavior— crash

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List of Abbreviations

GDP	- Gross Domestic Product
EOMM&D	- Expressway Operation Maintenance and Management Division
RDA	- Road Development Authority
CKE	- Colombo Katunayake expressway
RoW	- Right of Way
LHS	- Left Hand Side
RHS	- Right Hand Side
RAI	- Road accident investigation
VKT	- Vehicle kilometer travelled
MFNSV	- Multi function network survey vehicle