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IDENTIFICATION AND PRIORATIZATION OF ACCIDENT BLACK SPOTS IN NITTABUWA POLICE DIVISION

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the University of Moratuwa in partial fulfilment of the requirements
for the Degree of
Master of Engineering in Highway and Traffic Engineering



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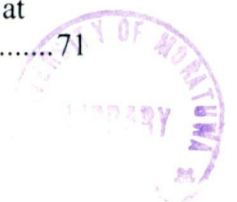
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Abstract

Road traffic injuries are a critical public health problem in Sri Lanka. As social & economic costs of road traffic injuries are enormous there is an urgent need to reduce the number of accidents.

This research has been focused on accident black spots spread over Nittabuwa Police Division. According to the statistics it has been reported that the most of the hazardous locations have been identified in Colombo – Kandy road within Nittabuwa Police Division. Colombo-Kandy road (A₁) is one of the major trunk roads in Sri Lanka. For this study the road stretch within the Nittabuwa Police boundary from 34 km post up to 56 km post has been considered. This is a two lane road section passes through flat terrain as well as mild gradient changes sections in flat terrain.

The accident black spots were identified based on the accident data collected from year 1998, 1999 and 2000. It has been found that average annual fatal, grievous, non-grievous and damage only accidents over the study period were 14, 40, 83 and 235 respectively. Most of these accidents were rear end and approaching types both at the long straight sections and the curvature sections with or without junctions. pedestrian and turning types were significant at the junctions and single motor vehicle accidents were significant at poor curvature alignments.

Cost of such accidents can be considerably high and it is imperative to adopt counter measures after a proper investigation at each accident black spots. Therefore this study has been focused towards identification of problems at accident black spots giving due consideration to the road geometry, land use and availability of road furniture.

It has been found that most of the places had horizontal alignment problems and not many problems associated with vertical alignment. There were problems associated with land use and lack of road furniture as well. These contributory factors for road accidents have been quantified at selected black spots for the identification of problems and suggesting counter measures.