

Development of a Methodology to Identify the Critical Locations and Suitable Roads to Conduct Road Safety Audit

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Road Safety Audit (RSA) can be conducted on new road projects, road improvement projects and existing roads. It is a formal process using a defined procedure and it should be performed by a group of auditors with appropriate experience and training. The audit process provides, at regular intervals, for independent safety assessments and recommendations.

Road Safety Audits assess the operation of a road, focusing on road safety for all road users, including pedestrians (along with children, elderly and disabled) and cyclists. The outcome of road safety audit is an Audit/Survey Report, which identifies potential or existing road safety deficiencies and makes recommendations aimed at removing or reducing those deficiencies.

There are several Guidelines & checklists for Road Safety Audits developed by organizations such as U. S. Department of Transportation, Asian Development Bank (ADB), National Roads Authority Ireland and other developed countries. Guidelines for Road Safety Audit have developed for the Road Development Authority (RDA) to be used for RDA roads as well as for other organizations responsible for their roads in Sri Lanka by SweRoad in association with RDC, as a part of the consultancy services in the Road Safety Component (RSC) of the Southern Transport Development Project (STDP) in 2005.

There are 12,020 km of Class A & B roads in Sri Lankan road network under the responsibility of the Road Development Authority (RDA). Out of that, about 4,500 km length have recently improved or rehabilitated. In addition, there are over 75,000 kms of other roads under the responsibility of Provincial RDA (PRDA) or other Local Government Authorities.

To conduct a RSA as per the guidelines developed for Sri Lankan roads, the relevant Road Authority shall give this task to a group of auditors with appropriate experience and training. Also at some locations, the occurrence of an accident depends on the time of the day and also depends on the day of the week. To conduct RSA by a group of auditors with appropriate experience and training for all these roads on regular basis are very difficult and expensive.

Therefore, the Purpose of this study is to develop a simplified methodology to identify the critical locations to be selected for RSA and also to identify the critical time & day to conduct such RSA. This study is limited only for the existing roads in Sri Lanka. It is intend to develop simplified formats to collect data for different types of road sections & intersections by different observers. It is also intend to develop a points system to identify the critical road sections & intersections using the collected data by the different observers in order to conduct detail RSA by group of auditors with appropriate experience and training. Using the points system the relevant Road Authority can prioritize the RSA schedule for their roads and can identify the most critical roads, road sections or intersections for next RSA.

The following methodology was used for this study:

1. Review of RSA guidelines & check lists developed for Sri Lanka & for other countries and any other related literature on road safety;
2. Interview experts who are dealing with road safety aspects.
3. Development of simplified formats to collect data for different types of road sections & intersections. One simplified method of data capturing is by reviewing the data collected by the Multi-Function Network Survey Vehicle (MFNSV).
4. Development of a points system to identify a priority order for the critical roads, sections & intersections to conduct RSA.
5. Conduct trial surveys to verify the developed methodology.
6. Improve the methodology & data collecting formats based on the results of the trial surveys.
7. Present the developed a methodology to identify the critical roads, sections & intersections to be selected for RSA and also to identify the critical time & day to conduct such RSA.

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