

Road Safety Audits

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According to the Federal Highway Administration, a Road Safety Audit (RSA) is a formal safety performance examination of a road or intersection, existing or future, by an independent audit team. RSAs are a low cost method of identifying features of a roadway that can contribute to higher crash rates and/or a greater potential for resulting injuries. Costs for a typical audit will range from \$5,000 to \$25,000, not much compared to the multi-million dollar price tag on most road construction projects.

The RSA is a process that examines a roadway segment or roadway construction project and formally reports on safety issues using an independent, qualified, and experienced team. To appreciate the RSA's value and uniqueness, one must understand its elements. The process ensures that safety is an integral part of a project by conducting a detailed safety analysis at any or all of the following five stages: feasibility, preliminary design, final design, pre-opening (construction), and in-service (existing roads).

Audits are conducted by a team of experts from all disciplines of highway engineering, with assistance from experts in fields of human factors, law enforcement, and risk management. Audit teams are independent from those involved with the design to ensure that it remains resistant to constraints, like time and money. Field reviews are conducted to

"Iowa DOT has implemented road safety audits on proposed resurfacing projects. Previously, very few safety improvements were incorporated into our resurfacing projects. We now see that our staff consistently look for and implement numerous low-cost safety improvements on Iowa's roads." Thomas M. Welch, P.E.; State Transportation Safety Engineer, Iowa DOT

identify safety concerns which routine plan reviews cannot. Comprehensive checklists are used to prompt thought and raise multi-modal safety concerns for all road users including pedestrians, bicyclists, trucks, buses, emergency vehicles, and railroads.

Teams do not evaluate the project manager as the term "audit" may imply. They evaluate the roadway's crash potential and proactively attempt to prevent crashes from occurring. Audits also attempt to anticipate potential problems based on human factors. They are not intended to reactively resolve existing crash problems. A formal audit report is generated by the team for follow-up by the project manager or responsible agency.

The RSA is still relatively new to the United States. It has its origins in the United Kingdom and has been further developed and is being used in other countries, including Australia, New Zealand, and Canada. I've had the pleasure of being involved in two successful

pilot safety audit projects in the Delaware Valley. In 1997, the Pennsylvania Department of Transportation began conducting safety audits in District 6-0 and District 10-0 as part of their pilot program. These districts were chosen because they represented both rural and urban locations. The success of the pilot led to a statewide implementation in 2000. The South Jersey Transportation Planning Organization (SJTPO) conducted two audits as part of a pilot safety audit program in 2004, which led to ten subsequent audits in southern New Jersey.

RSAs are a relatively inexpensive way for road agencies to take proactive measures at reducing the amount death and injury. According to the National Highway Traffic Safety Administration (NHTSA), 42,636 people were killed in the United States as a result of motor vehicle crashes in 2004. The World Health Organization (WHO) estimates the worldwide death total from motor vehicle crashes is 1.26 million per year. The RSA will identify safety concerns on the road and in some cases recommend specific action, but will not, in and of itself, reduce crashes; follow-up action will be required. The audit process is an important first step in the long, but worthwhile, journey towards safer highways.

More information about RSAs can be found at www.roadwaysafetyaudits.org. ■

"The road safety audit process looks at the roadway from a purely technical safety viewpoint without outside influences. It is a valuable process that gives an unbiased view of safety issues with support from safety experts. These recommendations are helpful when working with others, such as political leaders." Ricky May, District Engineer, Mississippi DOT