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ABSTRACT

In recent years the Iowa DOT has shifted emphasis from the construction of new roads to the maintenance and preservation of existing highways. A need has developed for analyzing pavements structurally to select the correct rehabilitation strategy and to properly design a pavement overlay if necessary. This need has been fulfilled by Road Rater testing which has been used successfully on all types of pavements to evaluate pavement and subgrade conditions and to design asphaltic concrete overlays. The Iowa Road Rater Design Method has been simplified so that it may be easily understood and used by the widely diverse groups of individuals which may be involved in pavement restoration and management.

Road Rater analysis techniques have worked well to date and have been verified by pavement coring, soils sampling and testing, and pavement removal by block sampling. Void detection testing has also been performed experimentally in Iowa, and results indicate that the Road Rater can be used to locate pavement voids and that Road Rater analysis techniques are reasonably accurate. The success of Road Rater research and development has made deflection test data one of the most important pavement management inputs.