VARIABILITY IN HIGHWAY PAVEMENT CONSTRUCTION IN EGYPT

By

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1. Abstract

The quality of highway construction has always been a major concern to highway engineers and contractors. The AASHTO Quality Assurance Guide Specification uses the variability of the materials and construction processes as one of the measures to assess quality. It is sometimes thought that a more uniform product, one with less variability, is an indication of better quality. In this study the variability in highway pavement construction in Egypt is investigated and the standard deviation was used as the most typical variability measure. The study reported typical variabilities found in materials and construction processes in selected highways in Egypt. From data gathered in this study, variability has a relatively wide range of values for each test procedure and materials and construction property. Factors that may influence this variability include the period of time, distance, area, and quality of material over which the variability is measured. The major objective of this study is to report the variability found in materials and construction processes for highways in Egypt, and to compare those values with the typical variability found in the previous international studies. Another objective is to discuss the use of these typical variability in establishing specifications limits.