

Evaluation Criteria for Maintenance Priorities of Bridges

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Abstract

It has been observed that there is no maintenance plan in most of the developing countries and maintenance is only conducted based on users' complaints or when significant structural defect is obvious to the public. Therefore, it is very important to have assessment criteria of bridges as accurate evaluation is one of the most important and significant steps in any maintenance plan of bridges. The main purpose of this paper is to develop a criterion which is capable of assessing and evaluating the bridges, their overall condition and the condition of each element. Moreover, to develop a method that can rank the bridges in a network according to their repairing urgency. First of all different inspection types are reviewed, then in order to obtain reliable judgment the experience and knowledge of the bridge maintenance experts in Egypt were added to the criteria by carrying out questionnaires and interviews with these experts in order to set the importance of each parameter in the evaluation criteria and the importance of each element of bridges. Finally obtaining a Bridge Overall Priority Indicator (BOPI) that ranks bridges in a network according to their condition and maintenance urgency. As a result, an advanced approach and accurate judgment to bridges is created through evaluating and assessing each parameter that may affect bridges. Also a criterion that can help decision makers to rank the bridges according to their maintenance urgency is proposed.

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