

Developing Medium Term Maintenance Plan For Road Networks

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Abstract : Infrastructure systems are essential assets in any community; accordingly, authorities aim to maximize its life span while minimizing the life cycle cost. This requires studying the asset conditions throughout its operation and forming a cost-efficient maintenance strategy plan. The objective of this study is to develop a highway management system that provides medium-term maintenance plans with the minimum life cycle cost subject to budget constraints. The model is applied to data collected for the highway network in India with the aim to output a 5-year maintenance plan strategy from 2019 till 2023. The main element considered is the surface coarse, either rigid or flexible pavement. The model outputs a 5-year maintenance plan for each segment given the budget constraint while maximizing the new pavement condition rating and minimizing its life cycle cost.

Keywords : infrastructure, asset management, optimization, maintenance plan

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