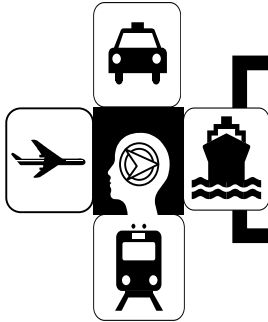


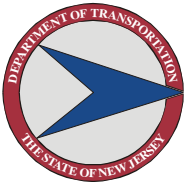
JERSEY DOT'S

"Turning Problems into Solutions"



Tech Brief

Pilot Implementation of Pavement Management Systems (PMS) for New Jersey Counties and Municipalities



FHWA-NJ-2006-010

April 2006

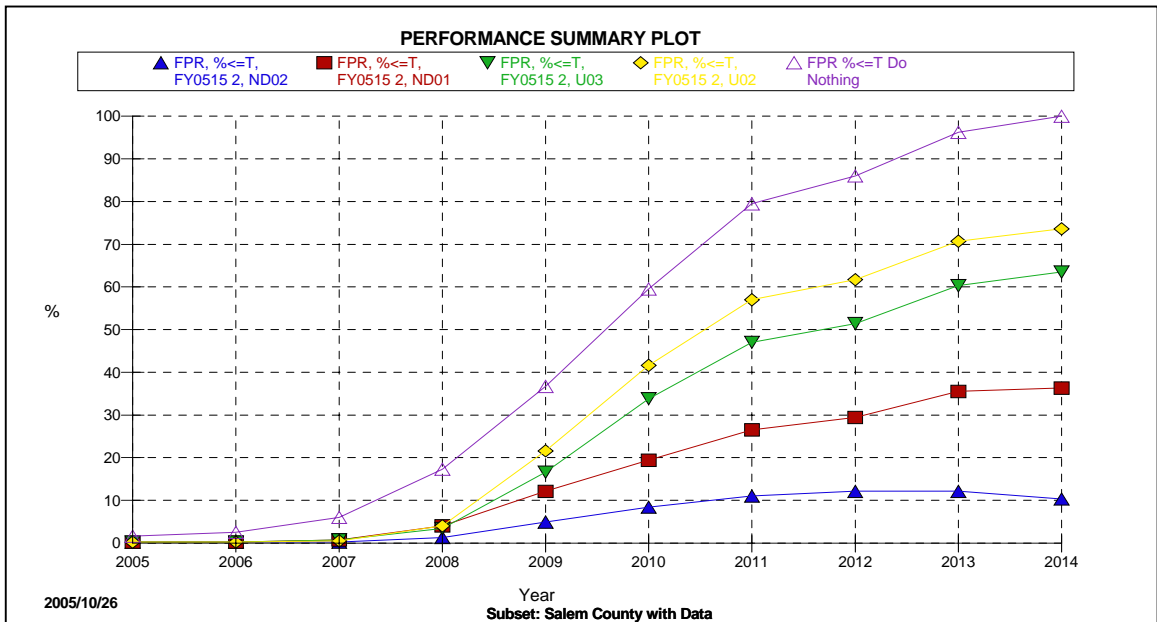
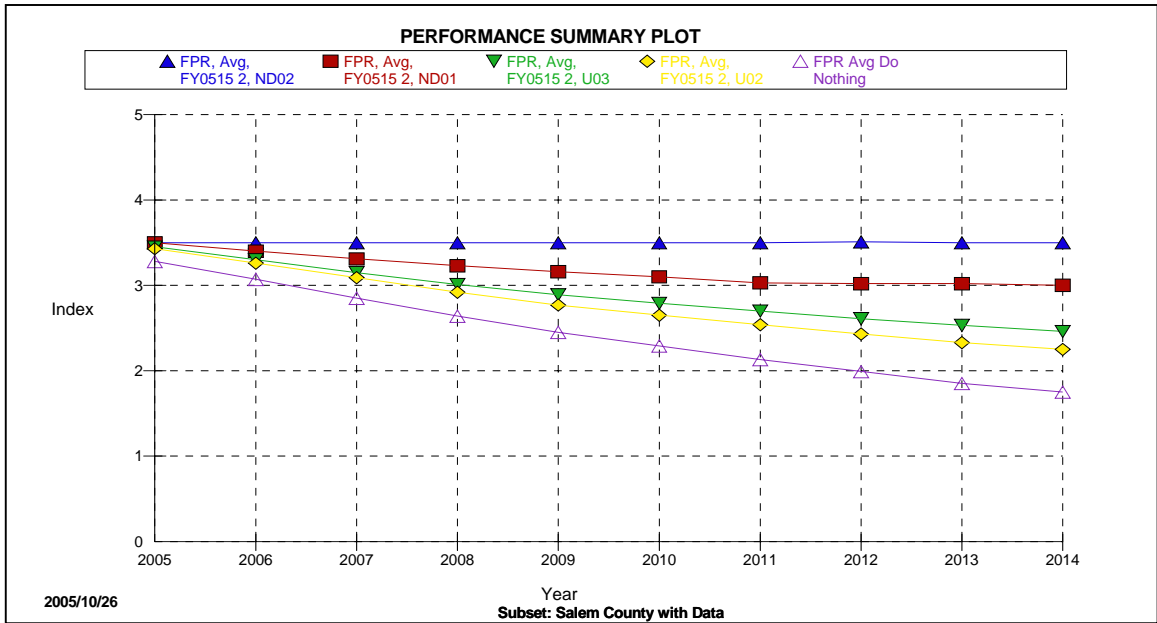


Stantec

Pavement Management is a program for improving the quality and performance of pavements and minimizing their life cycle costs through the use of good management practices. A PMS involves a systematic process of collecting and analyzing pavement information, which is then used as input for selecting cost-effective strategies to provide and maintain pavements in a serviceable condition.

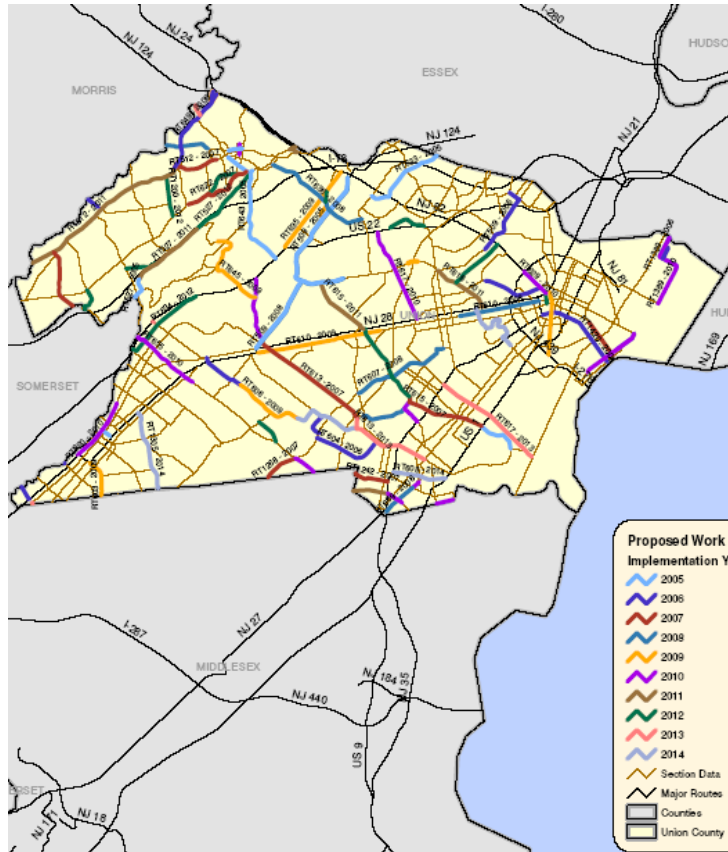
A pilot study was performed to demonstrate to local government agencies in New Jersey the potential benefits of implementing PMS. In this study, a base PMS that can be used by any local government agency in New Jersey was developed. This base PMS was implemented for six local government agencies in New Jersey, representing different conditions of New Jersey local government agencies (county versus municipality, urban versus rural and large versus small).

The main goal of this research project was to implement, on a pilot basis, a base Pavement Management System (PMS) that could be used by local government agencies (counties and municipalities) in New Jersey, and to evaluate the success of this implementation. Six local government agencies in New Jersey were selected for the pilot implementation. These six agencies represent different conditions of New Jersey local government agencies (county versus municipality, urban versus rural and large versus small).



Network Performance and Backlog Under Different Investment Scenarios

As a part of this pilot implementation, limited performance prediction models and decision trees were developed. In addition, budget scenario analyses were performed using the base PMS to demonstrate some of the potential benefits of adopting a PMS. The pilot implementation demonstrated that a single PMS software can accommodate the basic needs of multiple NJ local government agencies and can be adopted with very limited effort. It also illustrated and documented the benefits of adopting a PMS.



Proposed Work Program by Year

Conclusions and Recommendations

The pilot implementation demonstrated that a single PMS software can accommodate the basic needs of multiple NJ local government agencies and can be adopted with very limited effort. It also illustrated and documented the benefits of adopting a PMS. The final product of this pilot implementation can be delivered in the form of a fully functioning PMS (Stantec's Highway Pavement Management Application (HPMA) adopted by NJDOT) or in the form of an Access database with customized reports, which has already been delivered to the six selected agencies. The Access database can also be linked to a Geographic Information System (GIS), as demonstrated by Stantec at the Joint FHWA 2005 Northeast Pavement Management Conference and NJDOT Local PMS Workshop.

The project highlighted the problems local agencies face in terms of lack of resources, especially manpower, which restrict the personnel that can be dedicated to maintaining and running the system and collating pavement data electronically.

For other local agencies not involved in the pilot implementation, the project has had the benefit of producing a base PMS with parametric set-up that is available for utilization. These other agencies can also take advantage of the PMS models developed for the pilot agencies, which will provide a good starting point for implementation into their own system. The three above noted options could either be undertaken by each of these agencies individually, or by an MPO for all agencies under its jurisdiction.

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