

ODOT Pavement Management System

Client
Ohio Department of Transportation

Start Date
May, 2012

Project Type
Pavement Management

Completion Date
July, 2013

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Deighton was selected by the Ohio Department of Transportation (ODOT) to supply and implement a COTS Enterprise Pavement Management System (EPMS). The approximate size of the ODOT network is 33,000 directional miles of highway.

Central Office staff and 12 District offices would have access to the EPMS for the joint development of a statewide work plan that includes an initial network analysis at Central Office and subsequent district level analyses that enable decentralized influence on the ultimate project recommendations.

The pavement performance was modeled using approximately 450 ODOT developed 10 x 10 Markov Transition Probability Matrices that were implemented within the dTIMS framework. Each probability matrix represented a probability that the next level of distress can occur. Distresses were organized by Pavement Type; for example, flexible, composite, jointed concrete and so on.

The three key deliverables for this project included the following:

- Develop multi-year, optimized recommended work plans for the maintenance and rehabilitation of ODOT's highway network
- Interact with the corporate Consolidate Oracle Database that contains Network, Condition, Project History, Planned Work and Budget information related to the management of the ODOT highway network
- Provide a web-based user interface that would give District Engineers an opportunity to review and modify the program recommendations

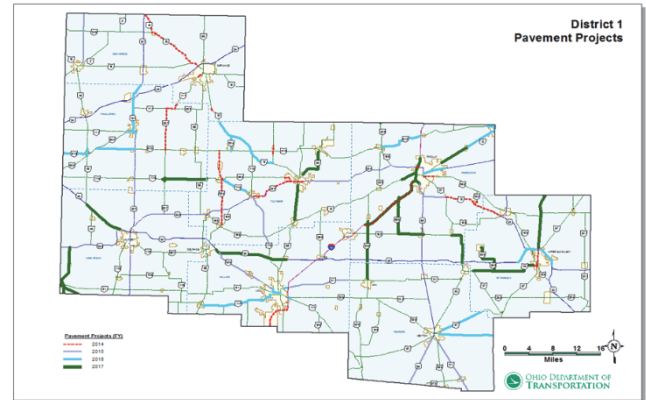


Figure 1: Example Project Map – By District

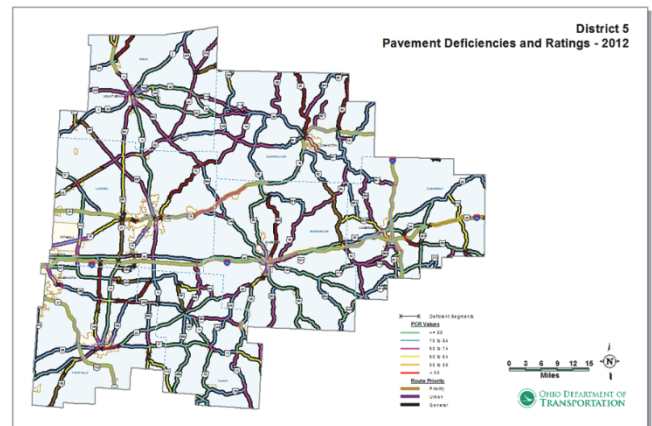


Figure 2: Pavement Deficiencies and Ratings – by district, current or forecasted for any given year

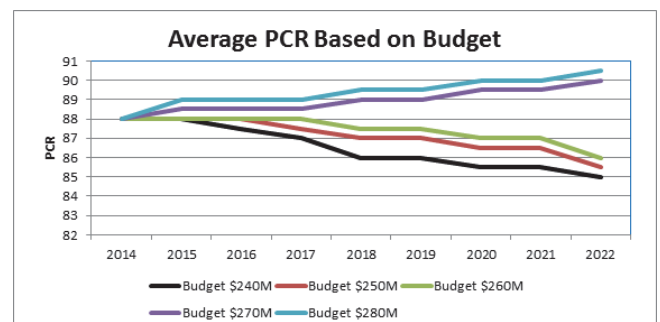


Figure 3: Average PCR Based on selected budget – by district