Research Summary Series

A series to disseminate results of research being conducted by the Midwest Regional University Transportation Center, Federal Highway Administration, and Wisconsin Department of Transportation

Compass 2006-2007 Data Analysis and Reporting

Project 08-01

For more information on this topic:

Research Title:
Compass 2006-2007 Data Analysis and Reporting

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Research results in a quick and easy-to-read format
Project Background
The Compass Reports created in this project are issued annually to provide information on the maintenance condition of Wisconsin’s highways. The information in these reports is being used to help understand trends and conditions, prioritize resources, and set targets for future condition levels of our highway system. As more information is gathered, the reports will also be used to illustrate and understand the consequences of funding and policy shifts, and to demonstrate accountability to decision-makers at WisDOT and in the legislature. This project includes measures of bridges, traveled way, shoulders, drainage, roadsides, selected traffic devices, and selected aspects of winter operations. It does not include measures of preventive maintenance, operational services (like traveler information and incident management), or electrified traffic assets (like signals and lighting).

Several changes were made to improve the report this year:
- Created improved display of information to better show cause and effect relationships with trends on expenditures and conditions.
- To illustrate the effect of inflation, maintenance costs are now provided as nominal dollars at the time the money was spent and also in real dollar values, expressed in 2006 constant dollars.
- Maintenance costs are divided by the statewide lane miles being maintained to illustrate how maintenance budgets are stretched as the highway system grows.
- The pavement report has been updated to provide results from the annual pavement inspection instead of two-year rolling average numbers in previous Compass reports. Because of this change, all statewide annual numbers were recalculated and the statewide pavement backlog trend is now shown as two separate trends.

Project Objectives
The scope of work for this project includes providing services to analyze and report maintenance performance measures and outcomes in Wisconsin.

Specifically, the project objectives are data reduction and preparation of data tables and figures to be included in 2 reports:
1. Compass Wisconsin State Highway 2006 Maintenance, Traffic, and Operations Conditions Executive Overview Report (which are offered in a slightly condensed version for executive managers) and
2. Compass Wisconsin State Highway 2006 Maintenance, Traffic, and Operations Conditions Operational Report

Highlighted areas in these reports are:
- Safety
- Ride/Comfort
- Stewardship

Key Observations
Examples of key findings in the report:
- Centerline markings and the emergency repair of regulatory/warning signs consistently received grades of B and A, respectively.
- Delineators improved to C from the D it received last year.
- 33% of bridge decks are in “Fair” condition and in need of reactive maintenance, based on their NBI ratings of 5 or 6. These include 29% of concrete bridges and 42% of steel bridges.

Overall, the maintenance conditions of most features in 2006 are better than targeted. There is also a significant increase in the number of features exceeding the target condition. To view a comprehensive list of observations and findings, please see the project webpage http://www.mrutc.org/research/0801/ and view the reports.