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Research Title:

Maintenance Quality Assurance Synthesis of Measures

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Research Summary Series

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Maintenance Quality Assurance Synthesis of Measures



Project 06-01

Research results in a quick and easy-to-read format

Project Overview

Constrained budgets and reduced funding have caused states to re-evaluate spending and allocations for maintenance. Much attention is being placed on accounting for maintenance expenditures and justifying maintenance budgets. One approach is to relate highway maintenance to highway performance through maintenance quality assurance (MQA). MQA programs help decision-makers to understand maintenance conditions, set priorities, and to document the relationship between dollars and outcomes.

This project provides a synthesis of the measures for maintenance condition as used in maintenance quality assurance programs. The study accomplished two main objectives. The first was to assemble a set of common measures for maintenance quality by reviewing and synthesizing the measures used by individual agencies. The second objective was to evaluate consensus and evolution of maintenance quality measurement since the National Workshop on Commonly Recognized Measures for Maintenance held in Scottsdale Arizona in 2000.

Methodology

The process for identifying measures for MQA involved several steps:

1. MQA programs at state transportation agencies were identified
2. Compile an inventory of the maintenance categories, features and characteristics that are measured by each agency
3. Similar categories, features, and characteristics with different names were combined (Figure 1)
4. Measures and standards were identified for the features and characteristics in each maintenance category
5. Categories, features, characteristics and measures compiled from the state agencies are compared to the ones identified in 2000

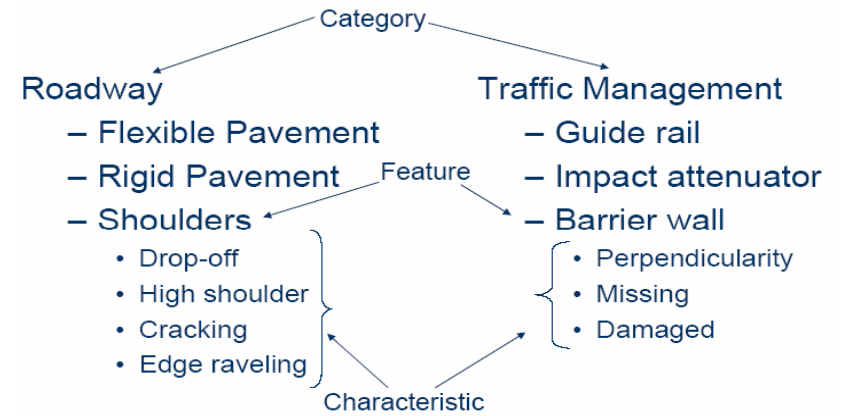


Figure 1: Relationship between Category, Feature and Characteristic

Conclusions

To facilitate communication and development of MQA program concepts and analysis, this report presents and defines a set of essential terms for MQA. Clear and commonly understood definitions of terms like feature, characteristic, standard, measure, threshold, and target are essential for effective communication.

Overall states use very similar categories for organizing maintenance features and characteristics but not enough agreement exists on features and characteristics to allow for the identification of a set of common measures for each category. The reason for good agreement on maintenance categories (e.g. roadway, drainage, traffic management and bridges etc.) is that they are tied to maintenance budgeting and work activities. There is little agreement among the states on what particular features or characteristics are important to measure in each category.

When compared to results of Scottsdale meeting in 2000, MQA programs have evolved considerably. MQA is becoming a recognized business function at state transportation agencies. Terminology for MQA analysis and business has evolved significantly but no standard exists.