



The Grand Valley Metropolitan Council

The Evolution of GVMC's Pavement Management Data Collection System

What is a Pavement Management System?

Grand Valley Metro Council's Pavement Management System (PaMS) is a tool that enables local and state transportation officials to make better, more efficient use of resources, save time and make more informed decisions about which repairs to use on our region's roads and bridges and when to use them. The cost of repairs to a road or bridge skyrockets if they are not performed at the appropriate time. It is therefore less expensive and more efficient to keep good roads and bridges in good shape.

GVMC's new, advanced technology PaMS will help decision makers at area cities and villages, the Kent and Ottawa County Road Commissions (on behalf of area townships) and the Michigan Department of Transportation select the proper repair treatment and apply it at the appropriate time.

As the Metropolitan Planning Organization (MPO) for the Grand Rapids metropolitan area, the GVMC uses a collaborative, cooperative process to leverage federal transportation dollars and share equipment and operational costs among the MPO members. That saves money for our region's taxpayers.

The Old System

- Pavement condition data gathered for 1050 miles of federal aid roads (350 miles per year)
- Pavement condition data gathered by consultants on contract to GVMC
- The new federal aid road miles based on the new functional classification roadway system within the Grand Rapids urbanized area is 1350 miles
- Pavement condition data used by GVMC MPO members to develop priorities for federal investment on the federal aid system for:
 - Road resurfacing projects

- Road reconstruction projects
- MPO does not collect pavement data on the local road network (3000 miles)

The New System

- Semi automated, advanced technology mobile data collection system
- Data collected for
 - Federal Aid System annually (1350 miles)
 - Local road network (up to 3000 miles)
- Pavement condition data gathered and analyzed by trained and experienced GVMC Transportation Planners working on behalf of MPO members
- Pavement condition data will be used by the MPO members to develop improvement priorities for federal funding on the federal aid system for:
 - Road resurfacing projects
 - Road reconstruction projects
- Pavement condition data will be used by local staff to develop improvement priorities for local funding and meet asset management requirements within their jurisdiction

Goals and Objectives

- Reduce costs for analyzing and cataloguing pavement conditions for:
 - Grand Rapids metropolitan area Cities and villages, Kent and Ottawa County Road Commissions (performing road and bridge maintenance functions on behalf of townships) and the Grand Region of the Michigan Department of Transportation
 - GVMC MPO
- Improve efficiency and flexibility
- Data consistency among different jurisdictions
- Improve safety
- Maintain current management systems

Benefits of the New, Semi-Automated System

- Cost effective in the long term
- Safer than current data collection method

- Data more flexible and accurate
- Ability to collect data for MPO members at low or no cost
- Ability to maintain current MPO and local systems
- Allows for the maintenance of individual jurisdiction systems
- Allows for consistent data collection throughout the MPO area
- Increases efficiency by gathering large amount of data in short time period
- Data can be processed in the office at a rate of up to 8 miles per hour
- The entire 4,000 mile system could be surveyed each year.

Other Potential uses for the new GVMC PaMS beyond pavement data collection

- Infrastructure Asset Management System
- GIS/GPS
- Travel Times/Delay Studies
- Airport Infrastructure Inventory

Quick Facts

- Cost of fully-equipped PaMS vehicle: \$400,000
- Annual Insurance Cost: \$ 14,000
- Annual Vehicle Storage Cost: \$ 500
- Cost per mile to MPO members: \$ 70 - \$ 80 per mile
- Maximum Mileage Per Year: 15,000

The vehicle will be stored and maintained at the City of Wyoming Public Works Center