Iowa’s pavement management program: an update

by Omar Smadi, Pavement Management Specialist

This is the sixth in a series of periodic articles updating Iowa’s local government agencies on the progress of the state’s pavement management program. Iowa’s pavement management program covers all of Iowa’s non-National Highway System (non-NHS) federal aid eligible roads under state, county, and city jurisdictions.

Iowa’s pavement management program (IPMP), under development since 1994, is in the final stages of completion. Most of the project’s major tasks (GIS database, data collection, pavement management software, and data delivery) have been implemented, and the remaining tasks (pilot training programs and system evaluation) will be completed by the end of 1998.

Some IPMP tasks will continue on an annual basis. These tasks include collecting automated condition information, maintaining and updating the GIS database, and delivering information. The following sections will cover each of these tasks.

Collecting data
The first cycle of condition data collection was com-
completed in 1997. Roadware, Inc. collected condition data for 12 RPAs and all of the MPOs in the state between 1996 and 1997. In the beginning of 1998, a survey was sent to the remaining RPAs, and three of them decided to join the IPMP (10, 11, and 17). The second cycle of data collection started in the summer of 1998 and should be completed by the end of November.

RPAs 2, 3, 4, 6, 7, 12, and 18 will have condition data again this year, while RPAs 8, 9, 10, 11, 14, 15, 16, and 17 will have condition data collected in 1999. Also during 1999, we will conduct another evaluation of the automated distress data collection technology to determine if Roadware will remain the vendor to provide distress data to the IPMP.

Updating the database
The IPMP GIS database had been fully designed and implemented. Annual maintenance and update of the database is an integral part of the IPMP.

The GIS database must be updated with new Iowa DOT base records and new graphics at least once a year. As more distress data become available, the IPMP database is updated with the new information, and dynamic segmentation is run to summarize the information for individual pavement management sections. Finally, as rehabilitation and reconstruction projects are completed, the IPMP database will reflect those changes to the system. This is going to be an ongoing process to ensure the validity and accuracy of the IPMP database.

Delivering the data
The IPMP task force has established a mechanism for delivering and distributing the data. Data can be delivered in three formats: GIS (includes data and graphics—Geomedia, Mapinfo, Arcinfo), a CAD environment (graphics only), or a database (data only) where it can be converted to a spreadsheet or any other required format.

The schemata on page 4 shows the different options for IPMP data delivery.

A data delivery workshop will be held each year to discuss project progress, get input from local and regional governmental agencies, and deliver the collected distress data. Currently, the plan is to distribute data via CD-ROM. Agencies without access to a CD-ROM drive will be accommodated by other means.

IPMP operations: your input is needed
As the IPMP went into the operation phase, local and regional governmental agencies were asked to provide information on two operational features of the IPMP. The first one is the purchase of the pavement management software, and the second is the collection of condition data on paved roads off the federal aid system.

The Iowa DOT, local, and regional governmental agencies were asked to make a decision regarding the purchase of the pavement management software early in the summer of 1998. So far, the majority of agencies have not responded.

To finalize the contract negotiations with the software vendors, we need to get a firm idea about how many agencies are interested in purchasing the software. The initial cost of the software depends on the number of users.

The two software selected are dTIMS from the Deighton company and FNOS from VEMAX. dTIMS is a project selection tool, while FNOS is more of a network level tool.

Local governmental agencies were also given the option of collecting, on the rest of their paved network, the same automated distress data collected on the federal aid routes. There was a very good response from cities and counties wanting to participate. This option is still available for cities and counties.

Data collection will cost about $35 for rural areas and $50 for urban areas if it can be done while the vendor is in the area collecting data on the federal aid system. So, if your city or county is in an RPA that is not part of the IPMP, we will not be able to offer these costs.

For more information on the IPMP, contact Omar Smadi, 515 294-7110, omar@ctre.iastate.edu.

Useful WWW links

www.cals.cornell.edu/dept/aben/localroads/intro.htm
This work zone safety and flagging tutorial was developed by Cornell in New York. (Differences between the New York MUTCD and the federal MUTCD are clearly noted.)

www.tfhrc.gov/its/newarts.htm
This collection of research projects in the Advanced Rural Transportation Systems Compendium includes projects across the country.

www.ota.fhwa.dot.gov/walk/index.html
The Pedestrian Safety Roadshow site provides facts, links, a bulletin board, and a way to request that the Roadshow come to your area to give a presentation.

www.asphaltpages.com
This index of 1,500 links to public and private organizations is a good place to start if you’re looking for information about asphalt.

www.icesb.org
The Iowa County Engineers Association Service Bureau is online.