



# Technology NEWS

March–April 2006



Local Technical  
Assistance Program

Providing transportation technology transfer for Iowa's cities and counties

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Iowa State University's Center for Transportation Research and Education (CTRE) is the umbrella organization for the following centers and programs:

- Bridge Engineering Center
- Center for Weather Impacts on Mobility and Safety
- Construction Management & Technology
- Iowa Local Technical Assistance Program
- Iowa Traffic Safety Data Service
- Midwest Transportation Consortium
- National Concrete Pavement Technology Center
- Partnership for Geotechnical Advancement
- Roadway Infrastructure Management Systems
- Statewide Urban Design and Specifications

# ctre

Center for Transportation  
Research and Education

## IOWA STATE UNIVERSITY

## Roundabouts in rural America

Hillary Isebrands wants to add roundabouts to Iowa's street and road agencies' toolbox for intersection solutions.

Isebrands, an Iowa State University doctoral student in civil, construction, and environmental engineering and CTRE research assistant, is studying the effects of modern roundabouts on rural Midwest highways.

According to Isebrands, there are three good reasons to build roundabouts.

**Safety.** Research shows roundabouts reduce crashes by 50 percent and reduce the severity of crashes by up to 80 percent. That's because drivers have to reduce speeds to get around them, especially if a roundabout replaces a highway intersection controlled by two stop signs.

Roundabouts also reduce potential crash points from thirty-two in a four-way intersection to eight. Roundabouts also eliminate head-on crashes and make "T-bone" crashes (one car's front crashing into another car's side) much less likely.

**Traffic flow.** Traffic at busy intersections doesn't pile up behind roundabouts, Isebrands says. Drivers entering a roundabout don't have to stop, but they do have to yield to vehicles already in the circle.

Cars continuously move in and out of roundabouts, increasing traffic flow and intersection capacity.

**Another tool.** Adding stop signs or traffic signals isn't always the solution to a problem intersection. Sometimes traffic signals are only warranted during peak travel times, and they can result in more severe crashes. Roundabouts give road designers and transportation engineers another solution to consider.

For all those reasons, roundabouts are on their way to Iowa's highways.

### Roundabouts in Iowa

John Abrams, an engineer for the rural design section of the Iowa DOT, says the department will build its first highway

*Roundabouts continued on page 2*



Three-leg roundabout in Coralville, Iowa.

## Acronyms in *Technology News*

AASHTO	American Association of State Highway and Transportation Officials
APWA	American Public Works Association
CTRE	Center for Transportation Research and Education (at Iowa State University)
FHWA	Federal Highway Administration
Iowa DOT	Iowa Department of Transportation
ISU	Iowa State University
LTAP	Local Technical Assistance Program
MUTCD	Manual on Uniform Traffic Control Devices
NACE	National Association of County Engineers



U.S. Department of Transportation  
Federal Highway Administration



Iowa Department  
of Transportation

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## Subscribe to *Tech E-News*

For brief, e-mail reminders about upcoming workshops and other LTAP news, subscribe to Iowa LTAP's new, free service: Tech E-News. Send an email to Marcia Brink, [mbrink@iastate.edu](mailto:mbrink@iastate.edu). Type "Subscribe Tech E-News" in the subject line.

## Roundabouts continued from cover

roundabout this summer. That roundabout will be at the south intersection of U.S. highways 63 and 34 in Ottumwa.

The roundabout should improve a three-way "spaghetti jumble" at the intersection, he said.

Will Iowans see more highway roundabouts over the next few years?

"I would definitely say yes," Abrams said. "Once the people of Iowa notice this one, there will be more of a demand."

Coralville has built two roundabouts since 2002, has one under construction, and is planning another. Scott Larson, Coralville's assistant city engineer, says the city built the first two roundabouts as alternatives to adding turn lanes and traffic signals.

He says drivers seem to like them and there have been few negative comments.

"People tend to appreciate how a roundabout is an alternative to traffic signals," Larson said. "As people learn to drive roundabouts—and there is a short learning period for some—they begin to appreciate how they can help themselves get through the intersection more smoothly by yielding and anticipating gaps in traffic, instead of being at the mercy of a stop sign or red light."

But will roundabouts work out in the country? What happens when a tractor pulls a disk plow into one?

Isebrands, who worked six years as a highway designer in Wisconsin and returned to Ames in 2003 for graduate school, answers by clicking through her laptop computer. She shows a picture of a Kansas roundabout with room for three big trucks pulling three long trailers. So there's room in a roundabout for tractors.

Isebrands thinks there's room in Iowa for roundabouts and their safety features.

"I think there's a place for them," she said.

"Roundabouts are a proven safety alternative for reducing crash severity at intersections, and this puts Iowa one step closer to reducing the number of Iowans who die every year in crashes."



Hillary Isebrands

## Future research

Isebrands is currently negotiating grants with the Iowa DOT, FHWA, the Minnesota DOT, and Minnesota's Local Road Research Board to help develop guidelines for considering and building roundabouts.

She's also working with Shauna Hallmark, an Iowa State associate professor of civil, construction, and environmental engineering and CTRE transportation engineer, to assess whether roundabouts can reduce vehicle emissions by decreasing idling time and creating fewer stops at intersections.

## For more information

Contact Hillary Isebrands, 515-294-7188, [hillaryi@iastate.edu](mailto:hillaryi@iastate.edu).

**Editor's note:** This article was adapted from articles by ISU News Service and in the Center for Transportation Research and Education's March 1, 2006, issue of CTRE en route. ■

## Roundabouts resources

Want to know more about roundabouts? Check out these resources.

### Consulting services

The Iowa DOT's Office of Traffic and Safety, through the Traffic Engineering Assistance Program, is providing agencies with free access to a consulting firm with nationally respected roundabout expertise.

To take advantage of this service, cities, counties, or Iowa DOT districts that are considering, planning, designing, or improving a roundabout should contact Tim Simodynes, Iowa DOT, Office of Traffic and Safety, through your district office's local systems representative.

### Iowa DOT website

The Iowa DOT's website is now hosting a special section on roundabouts, [www.dot.state.ia.us/roundabouts.htm](http://www.dot.state.ia.us/roundabouts.htm). The pages include a list of existing and proposed roundabouts in Iowa, test drives (demos) for several existing roundabouts, design information, frequently asked questions, and other resources.

### National conference website

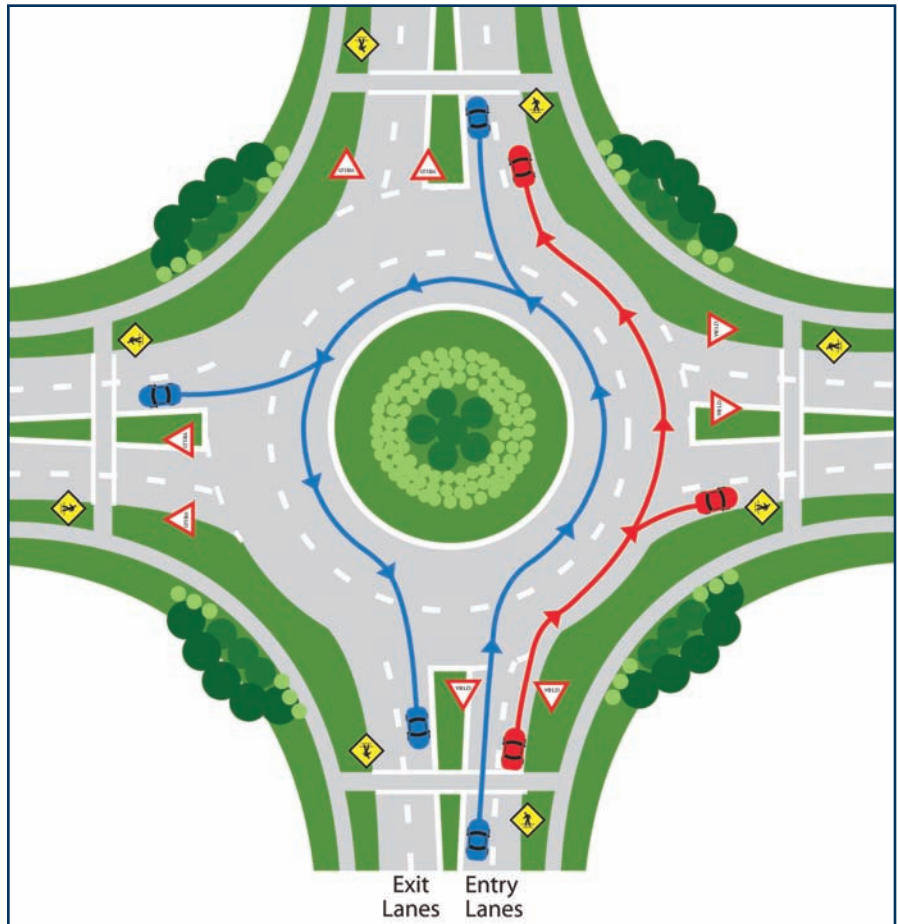
A new Transportation Research Board website includes a compilation of materials—proceedings, presentation slides with audio, etc.—from the TRB-sponsored National Roundabout Conference in May 2005. See [www.teachamerica.com/roundabouts/ra\\_conference.htm](http://www.teachamerica.com/roundabouts/ra_conference.htm).

### Online brochure

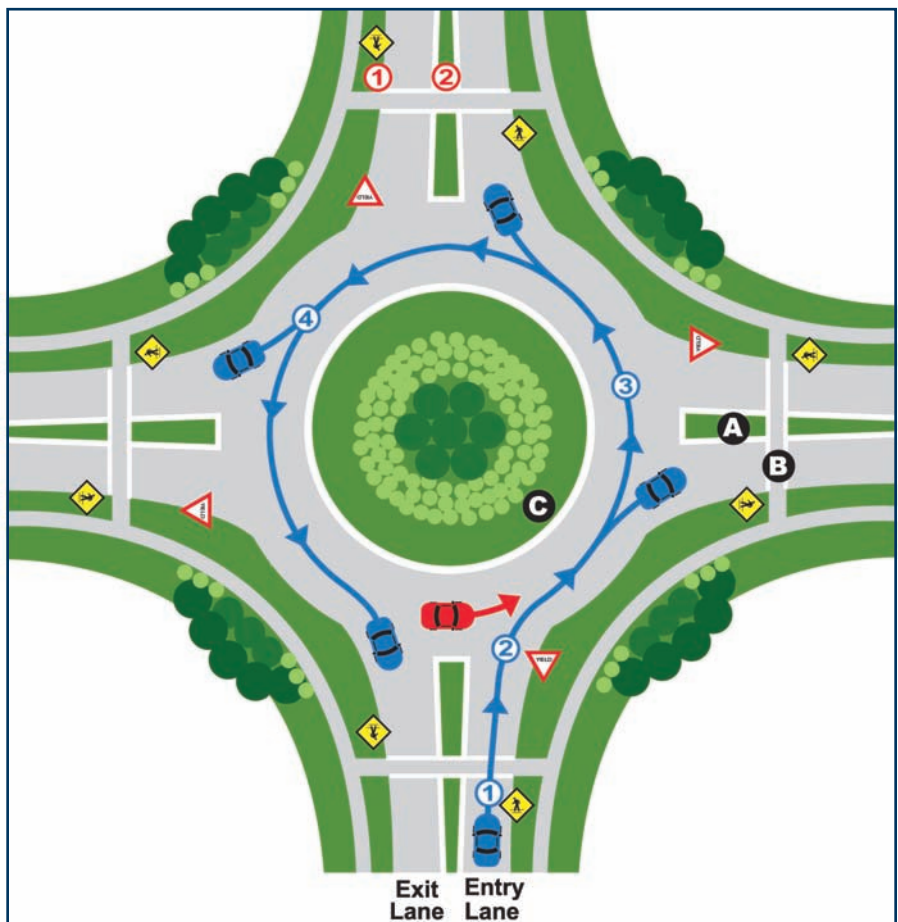
Many Iowans weren't introduced to roundabouts in driver's education and have never seen one. You can download a simple brochure, available online, to help wary drivers in your jurisdiction learn the rules of the road regarding roundabouts.

The brochure has step-by-step instructions for motorists driving through one-lane and two-lane roundabouts. It also provides navigation tips for pedestrians and bicyclists.

To download the brochure, go to [www.ctre.iastate.edu/pubs/trafficsafety.htm](http://www.ctre.iastate.edu/pubs/trafficsafety.htm). Click on "Brochures." ■



General guidelines for signing, marking, and navigating a two-lane roundabout.



General guidelines for signing, marking, and navigating a one-lane roundabout.

## Iowa LTAP Mission

To foster a safe, efficient, and environmentally sound transportation system by improving skills and knowledge of local transportation providers through training, technical assistance, and technology transfer, thus improving the quality of life for Iowans.

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## Safe Routes to School

Did you know?

- In 1969, roughly half of all children walked or biked to school. Today, only about 15 percent do so.
- There are more than three times as many overweight children today as there were 25 years ago.
- As much as 20 to 30 percent of morning rush hour traffic can be attributed to parents driving children to school.

Statistics like these have led to development of the national Safe Routes to School (SRTS) program. This concept has actually been in existence in a few states for several years. It is now being implemented across the nation as a result of the federal transportation bill—SAFETEA-LU—authorized last summer.

Basically, SRTS is a federal funding program to increase the number of children bicycling and walking to school. In addition, it is intended to encourage healthy and active lifestyles; improve safety; and reduce traffic, fuel consumption, and air pollution in the vicinity of schools.

### One million dollars in grants for Iowa

A few key points about this competitive grant program are

- The funds are intended to help get more children bicycling and walking to and from school safely.
- Eligible schools are elementary and middle schools (grades K through 8).
- Eligible applicants are cities, counties, local governments, schools, or nonprofit organizations.
- Some of the eligible projects include sidewalks, bicycle and pedestrian crossings, traffic calming improvements, public awareness campaigns, safety education and enforcement, and many others.
- All projects should address both infrastructure and noninfrastructure elements.



Source: Toolbox to Address Safety and Operations on School Grounds and Public Streets Adjacent to Elementary and Middle Schools in Iowa.

- Infrastructure projects must be within two miles of the school.
- No local match is required.
- Iowa will receive a minimum of \$1 million per year.

The Iowa DOT will administer the program for Iowa. It is in the process of developing the application and funding process with the assistance of an advisory committee and hope to be ready to receive applications by the end of this year.

### For more information

If you would like to be on the mailing list to receive additional information as it becomes available, please contact Kathy Ridnour, Iowa's Safe Routes to School Coordinator, Iowa DOT, 515-239-1713, [kathy.ridnour@dot.iowa.gov](mailto:kathy.ridnour@dot.iowa.gov). A website will soon be established. ■

**Editor's note:** This article was adapted from one written by Kathy Ridnour for the March 2006 issue of *Iowa Bicyclist*, the newsletter of the Iowa Bicycle Coalition.



## Low-volume rural intersections: How much control do they need?

Iowa has upward of 50,000 stop signs on county roads. Are they all absolutely necessary?

Maybe not.

Results of research led by Iowa State University Professor of Civil Engineering Reg Souleyrette suggest that stop control does not necessarily improve safety when an intersection is

- rural,
- unpaved,
- ultra-low-volume (fewer than 150 vehicles enter the intersection daily), and
- has adequate sight distance.

### About the research

Sponsored by the Iowa Highway Research Board (TR-527), Souleyrette and his team surveyed Iowa's county engineers about their practices and policies for traffic control at rural, local road intersections. Twenty-nine of the ninety-nine counties responded. Nineteen counties provided data describing the locations of STOP and YIELD signs.

The team analyzed ten years' worth of crash data for more than 6,000 locations in the nineteen counties. They compared the safety performance of stop-controlled versus uncontrolled intersections.

They also conducted three different analyses to try to quantify the relationship between the widespread use of stop control and intersection safety performance.

### Research findings

Souleyrette and his team found that ultra-low-volume unpaved rural intersections exhibit much lower crash rates than local rural roads in general. When the sight distance is adequate at ultra-low-volume intersections, the type of control has a negligible effect on safety performance.

In fact, signs at ultra-low-volume intersections may be a maintenance issue, and signs that are not well maintained could become a liability issue.

The magic number seems to be near 150 daily entering vehicles. When that figure rises above about 150, crash rates go up on uncontrolled rural intersections compared to stop controlled.

### Suggestions

If you think you have an intersection that may be appropriate for STOP sign removal, here are some suggestions.

Steps in deciding:

- Have a written policy approved by your board of supervisors and reviewed by your legal counsel.
- Visit the site(s) to be considered.
- Review crash records. Contact the Iowa Traffic Safety Data Service, [www.ctre.iastate.edu/itsds](http://www.ctre.iastate.edu/itsds), or your DOT District Office for support.
- Check traffic volumes and planned development that may affect volumes.

Steps to remove:

- Provide effective public notice.
- Plan removal steps (signage, time periods, traffic control).
- Monitor the operation of the intersection after removal and modify public notice or consider replacement, if needed.
- Document the entire process.

For seasonal sight distance issues, such as crops, consider using a YIELD application.

### For more information

Contact Reg Souleyrette, 515-294-5453, [reg@iastate.edu](mailto:reg@iastate.edu). You can download the report and a technology transfer summary from the project web page: [www.ctre.iastate.edu/research/detail.cfm?projectID=1602955190](http://www.ctre.iastate.edu/research/detail.cfm?projectID=1602955190). ■



Ultra-low-volume unpaved rural intersections like this one may not need stop signs

## Goodbye and thank you, Fred Short

Since Fred Short assumed leadership of Iowa's training program for motor grader operators (MoGO), Iowa has developed one of the premier rural-roads training activities in the nation. Iowa's MoGO training program is a model for many Local Technical Assistance Programs in other states.

Now, after 13 years with the MoGO program, Fred is retiring. For sure, this time. (He took over the MoGO program after retiring as Audobon County engineer in 1992.)

We recently reached Fred and his wife, Jonquil, in sunny Arizona where they spent part of the winter. But he was back in Iowa in time for the April train-the-trainer workshop, where he turned the MoGO program over to the new coordinator, Clarence Perry.

All of us who worked with Fred will miss him. He's earned the respect of county engineers and road workers alike not only for his expertise in motor grader operations but also for his caring respect for the literally hundreds of MoGO operators and trainers who participated in his workshops.

Best wishes, Fred and Jonnie! ■



Duane Smith (left), Iowa LTAP director, presented a certificate of appreciation to Fred Short at the December 2005 Iowa County Engineers Association annual meeting.

## Welcome, Clarence Perry—new MoGO workshop coordinator

If anyone can fill outgoing MoGO training coordinator Fred Short's shoes (or driver's seat), it is Clarence "Sonny" Perry. We enthusiastically welcome Clarence to Iowa LTAP's training team.

A lifelong Iowan, Clarence retired in 2001 from a career that spanned 40 years and several Iowa counties. At various times, he was assistant engineer in Lee County and county engineer in Jefferson, Lucas, and Henry Counties. During those years, Clarence served a term as president of the Iowa County Engineers Association, from whom he received a Lifetime Achievement Award in 2005. He also served a term as president of the National Association of County Engineers and, in 1989, was named NACE Engineer of the Year.

Clarence was enjoying retirement with his wife, Mary Lou, in Mount Pleasant when we convinced him to join the LTAP team and share his knowledge and experience with motor grader operators throughout the state.

Clarence will start his first MoGO training season this summer. "I think it's going to be a great opportunity," he says.

We're glad to have you with us, Clarence! ■

## About Iowa's MoGo workshops

Iowa's motor grader operator (MoGO) training program consists of one- or two-day workshops during which a team of experienced operators teach safe, efficient operating practices. The workshops cover both rural and urban operations.

The first day is a classroom session with presentations, videotapes, and discussion. Participants have many opportunities to exchange ideas.

The second day (optional) is spent in the field. Participants operate their own equipment on their own roads, accompanied by an instructor who provides guidance and advice. This site-specific assistance can be particularly useful, especially for new operators. Participants may attend the classroom session without attending the field day.

### Who should attend

Operators and their supervisors are encouraged to attend. New operators will get solid training in the basics of motor grader operations. Experienced operators will get a good refresher course and learn some new tips. Supervisors will stay abreast of new developments and operating techniques.

Course participants should be familiar with basic equipment operations before the workshop.

### Dates and locations

Dates and locations will be announced soon.

### For more information

Contact Duane Smith, LTAP director, 515-294-8817, [desmith@iastate.edu](mailto:desmith@iastate.edu); or Georgia Parham, secretary, 515-294-2267, [gparham@iastate.edu](mailto:gparham@iastate.edu). ■



## Careers in transportation

This year's career fair for area high school students was held April 20, 2006, in the Scheman Building at the Iowa State Center, Ames, Iowa. Over 60 students from 10 different schools attended and participated in a variety of hands-on indoor and outdoor activities, including the following:

- running a mini excavator
- playing construction Jeopardy
- using hand-held GPS devices for a scavenger hunt
- using outdoor surveying equipment
- viewing interactive presentations and booths

The career fair was hosted by CTRE and Des Moines Area Community College, and sponsored by several public and private agencies.

### For more information

[www.ctre.iastate.edu/events/careerfair/](http://www.ctre.iastate.edu/events/careerfair/) ■



Students learned to use surveying equipment.



One of this year's most popular activity stations was the mini excavator, where students could experience firsthand what it's like to work with construction equipment.

## Cedar Rapids uses speed-monitoring trailer in its safety program

Speed-display trailers, especially when used in combination with enforcement, can be effective tools for short-term reduction of traffic speeds in urban areas with chronic speeding problems. This is the conclusion of Bill Meeks, Cedar Rapids traffic engineering project administrator.

### A school zone study

In 2000, Cedar Rapids received a Traffic Safety Improvement Program (TSIP) grant from the Iowa DOT, Office of Traffic and Safety, to purchase a speed-monitoring trailer as part of a research project.

To determine the trailer's value as a tool for improving safety, the city selected six speed-study sites, five in school zones and one residential location. City staff performed before-and-after speed studies as part of a recommended methodology for monitoring and evaluating vehicle speeds at selected locations.

During the weeklong speed studies, the following protocol was used at each location:

- First day: No speed display, no enforcement. Baseline 85th percentile speeds were determined.
- Second day: Speed display only, no enforcement. 85th percentile speeds were evaluated.
- Third day: Speed display plus enforcement. 85th percentile speeds were evaluated.
- Fourth day: Speed display only, no enforcement. 85th percentile speeds again evaluated.
- Fifth day: Follow-up 85th percentile speeds evaluation; no visual speed display or enforcement involved.

### Observations

During both the “before” and “after” studies, the 85th percentile speeds decreased on the second day in about 90 percent of the studies. Likewise, during both the before and after studies, the 85th percentile speeds decreased on the third day in about 90 percent of the studies. This led to the conclusion that both the display and enforcement

portions of the study had a positive impact on speed reduction.

However, the fact that the 85th percentile speeds decreased steadily every day of the weeklong study in only about 15 percent of both the before and after studies was evidence that motorists were not adopting a permanent speed reduction mentality.

### Conclusions

The speed-monitoring trailer was generally an effective speed deterrent when the display was used in combination with enforcement. However, its effectiveness peaked with enforcement and typically declined the longer it was deployed at one location.

In addition, 85th percentile speeds measured on the first day of the after study were generally about the same as or higher than those measured on the first day of the before study. In other words, motorists adjusted their speeds only in the short term.

To provide long-term benefits, the city must periodically deploy the speed monitoring display, accompanied by increased enforcement.

Still, Meeks believes the trailer is a useful safety tool. “If more frequent reminders to slow down are required,” he says, “and even if it is necessary to write a few more speeding citations in the process, we feel it's worth it if we can achieve our bottom line of increased safety.”

### Using the technology

Meeks made the following observations about the equipment purchased by Cedar Rapids:

- The speed trailer is quick and easy to set up and remove.
- Data collection and download are relatively simple.
- There is a fairly stiff learning curve for using the software to read and interpret data, but the software supplier provides excellent customer support.
- With this particular equipment, the data recorder can be used as a stand-alone unit, without the display trailer, to collect speed data and record traffic

volumes using pneumatic hoses. This allows the city to deploy the speed display in one location and collect speed or traffic volume data at another location.

### Suggestions

Meeks provides the following suggestions for using speed-display trailers in urban school zones:

- Notify the general public, school staff, parents, and neighborhood residents in advance of a project using the speed trailer. Use the media extensively to advertise the upcoming project. The more buy-in you have from affected parties, the more effective your campaign will be.
- Conduct speed studies in school zones during non-dropoff and pickup times.
- Locate the speed trailer carefully. This is important both for obtaining accurate data and for providing good visibility of the unit. Good unit visibility improves public relations and provides better protection for motorists and the unit itself.
- For enforcement purposes, use supporting data, like that obtained with handheld lasers.

### For more information

Since this initial project, the city of Cedar Rapids has continued to use the speed-display trailer as part of its ongoing speed enforcement efforts. In addition, the city has used the trailer in a variety of special situations.

For more information, or for a copy of the Cedar Rapids Traffic Engineering Department's school zone study and conclusions, contact Meeks, 319-286-5176, [billme@cedar-rapids.org](mailto:billme@cedar-rapids.org). ■

## Planning program for small towns receives national honor

Main Street pocket parks. Roadside prairie plantings. Town entrance signs. Even a lighthouse. All along Iowa's roadways, improvements like these are testimonials to the success of the Living Roadways Community Visioning Program, a one-of-a-kind program that has helped 113 of Iowa's smallest communities.

### What is community visioning?

The program provides planning and landscape design assistance to communities with populations of less than 10,000. It helps citizens and officials in rural communities identify issues, set goals, envision designs, develop conceptual plans, write grants, and raise private funds.

The program brings together teams of ISU design students, professional landscape architects, and town residents in a participatory planning process.

"The program is designed to empower local leaders through a planning process, which ends with an enhancement plan that reflects the values and identity of the community," says Julia Badenhope, associate professor of landscape architecture at ISU.

In general, the program addresses issues common to many small communities: entryway enhancements, visual transitions for towns with new highways or bypass highways, signage and billboards, trails for walkers and cyclists, and streetscapes to enhance access to vital community services. The program also emphasizes sustainable landscape development using native plants.

ISU manages the Living Roadways Community Visioning Program in partnership with Trees Forever, a nonprofit environmental organization based in Marion. The Iowa DOT funds the program.

### National award

Now, Iowa's Living Roadways Community Visioning Program is being recognized nationally. The program received the American Planning Association's 2006 Outstanding Planning Award for a Project, Program, or Tool at the association's national conference in San Antonio.

### Apply to participate

Each year, 12 Iowa communities are selected to participate in the Community Visioning Program. Applications are due in mid-October. Application forms, along with more information about the program, are available online, [www.communityvisioning.org](http://www.communityvisioning.org). ■

**Editor's note:** This article was adapted from one by Teddi Barron, ISU News Service.



Gilbertville participated in the Living Roadways Community Visioning Program in 2005. The images depict the existing view of Cedar Creek and the same view with proposed enhancements in place.

## Stanley L. Ring Memorial Library: New acquisitions

Note: A few videos are available in both VHS and DVD format. New videos will generally be in DVD format.

### Publications

#### **P 1667 Operational Performance of Kansas Roundabouts: Phase II**

This study compared the operational performance of 11 modern roundabouts with other traffic control devices at five locations in Kansas. It found that there were statistically significant reductions in delay, queuing, and proportion of vehicles stopped after the installation of a modern roundabout.

#### **P 1668 Minnesota Snow and Ice Controls: Field Handbook for Snowplow Operators**

This handbook is divided into five chapters: Basic Concepts, Before the Winter, Before the Storm, During the Storm, and After the Storm. In addition to standard best practices, it emphasizes improved practices such as anti-icing, prewetting, and pretreating. It also includes application guidelines, materials, materials and quality control, and bibliography and reference information.

#### **P 1669 Common Native Roadside Wildflowers: A Roadside Field Guide for the Western Region**

This pocket-sized guide contains color depictions to identify 100 showy native forbs and grasses often found on roadsides.

#### **P 1670 Common Roadside Wildflowers: A Field Guide to Native Forbs and Grasses**

This pocket-sized guide contains depictions to identify 100 native forbs and grasses commonly found on highway right-of-way and other natural areas across Eastern America.

#### **P 1671 Diamond Grinding of Portland Cement Concrete Pavements**

This pocket-sized book is a checklist for diamond grinding of PCC pavements. It covers responsibilities, project inspection, and common problems and solutions.

#### **P 1672 Dowel-Bar Retrofit for Portland Cement Concrete Pavements**

This pocket-sized book is a checklist for dowel-bar retrofit for PCC pavements. It covers responsibilities, project inspection, and common problems and solutions.

#### **P1673 Partial-Depth Repair of Portland Cement Concrete Pavements**

This pocket-sized book is a checklist for partial-depth repair of PCC pavements. It

covers responsibilities, project inspection, and common problems and solutions.

#### **P 1674 Full-Depth Repair of Portland Cement Concrete Pavements**

This pocket-sized book is a checklist for full-depth repair of PCC pavements. It covers responsibilities, project inspection, and common problems and solutions.

#### **P 1675 Hot In-Place Asphalt Recycling Application Checklist**

This pocket-sized book is a checklist for hot in-place asphalt recycling application. It covers responsibilities, project inspection, and common problems and solutions.

#### **P 1676 Cold In-Place Asphalt Recycling Application Checklist**

This pocket-sized book is a checklist for cold in-place asphalt recycling application. It covers responsibilities, project inspection, and common problems and solutions.

#### **P 1677 Slurry Seal Application Checklist**

This pocket-sized book is a checklist for slurry seal application. It covers responsibilities, project inspection, and common problems and solutions.

### DVD

#### **DVD 16 Preventive Maintenance and Surfacing Systems**

This video, which was produced by the International Slurry Surfacing Association (ISSA), explains the advantages, benefits, and economics of pavement preservation and slurry system preventive maintenance treatments for existing asphalt roadways. The brochure and video explain in lay terms with graphs and graphics the reasons for acceptance and use of these types of surface treatments.

#### **DVD 22 Flagging in the Work Zone: Safety in Your Hands**

This video covers proper flagging practices and techniques that help make the work zone safer for flaggers, workers, and roadway users.

### Order LTAP library materials in three ways:

- Order online, [www.ctre.iastate.edu/library/search.cfm](http://www.ctre.iastate.edu/library/search.cfm).
- Contact Jim Hogan, library coordinator, 515-294-9481, [hoganj@iastate.edu](mailto:hoganj@iastate.edu), fax 515-294-0467.
- Mail or fax the order form on the back cover of *Technology News*.

### CD-ROM

#### **CR 73 Pavement Preservation Toolbox: Strategies for Preventive Maintenance Programs**

This CD-ROM presents a broad range of preservation strategies, preventive maintenance techniques, and technical information for managers and engineers and program information for planners and policymakers. From evaluation through quality control, these toolbox resources offer practical authoritative guidance on using preservation technologies in highway preservation programs.

#### **CR 74 Standard Specifications for Materials and Methods of Sampling and Testing**

This CD-ROM contains more than 400 materials specifications and test methods commonly used in the construction of highway facilities. The specifications have been developed and maintained by states' highway and transportation departments through participation in AASHTO's Subcommittee on Materials. Also included are pertinent ASTM specifications that have been approved by member states and 50 provisional standards.

#### **CR 75 Fracture Critical Inspection Techniques for Steel Bridges: Participant Workbook**

This NHI course was developed to further educate bridge inspectors in the hands-on inspection of fracture critical members. It also provides an opportunity for individual experience in the use of selective non-destructive evaluation equipment and techniques.

#### **CR 76 2005 National LTAP Conference**

This CD-ROM contains the presentations and photos from the 2005 National LTAP Conference in Dubuque, Iowa.

Library acquisitions continued from page 10

## Selected Iowa DOT library new acquisitions

To receive the following publications, contact Hank Zaletel, Iowa DOT librarian, 515-239-1200, hank.zaletel@dot.iowa.gov.

You can search the entire Iowa DOT library online as part of the State Library of Iowa. Go to the LTAP library site, [www.ctre.iastate.edu/library/search.cfm](http://www.ctre.iastate.edu/library/search.cfm); click on Iowa DOT Library.

**From Milestones to Mile-Markers: Understanding Historic Roads**, Paul Daniel Marriott. Prepared for America's Byways Resource Center by the National Trust for Historic Preservation. 2004, 216p. HE355/M349/2004

**Operational Performance of Kansas Roundabouts, Phase II**, Eugene R. Russell, Srinivas Mandavilli, and Margaret J. Rys; Kansas State University. Report No. K-TRAN: KSU-02-4. 2005, 138 p. TA1/K13r/KSU/02-4

**Performance of a Bridge Deck with Glass Fiber Reinforced Polymer Bars as the Top Mat of Reinforcement**, Kimberly A. Phillips and others; Virginia Transportation Research Council. Report No. FHWA/VTRC 05-CR24. 2005, 68p. TA1/V81r/05-CR24

**Railroads of Dubuque**, John Tigges and James Shaffer; Arcadia Publishing. 2005, 128p. HE2781/.D85/T448/2005

**Iowa Historic Property Study: Chicago, Burlington & Quincy Railroad Bridge No. 89**, Jan Olive Nash; Tallgrass Historians L.C. 2005, 21p + appendices. TG380/N174/2005

## Conference calendar

### August 2006

17–18	Mid-Continent Transportation Research Forum	Madison, WI	Get more information online at <a href="http://www.mrutc.org/ResearchPaysOff/index.htm">www.mrutc.org/ResearchPaysOff/index.htm</a>
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### September 2006

13–15	10th National Conference on Transportation Planning for Small and Medium-Sized Communities: Tools of the Trade	Nashville, TN	Get more information online at <a href="http://www.trbtoolsofthetrade.org/conference.html">www.trbtoolsofthetrade.org/conference.html</a>
20–22	APWA Fall Conference	Des Moines	Duane Smith 515-294-8103 <a href="mailto:desmith@iastate.edu">desmith@iastate.edu</a>
25–27	Iowa Streets and Roads Conference	Ames	Duane Smith 515-294-8103 <a href="mailto:desmith@iastate.edu">desmith@iastate.edu</a>

### October 2006

10	Iowa Snow and Ice Conference	Ames	Duane Smith 515-294-8103 <a href="mailto:desmith@iastate.edu">desmith@iastate.edu</a>
12	Iowa Snow and Ice Conference	Storm Lake	Duane Smith 515-294-8103 <a href="mailto:desmith@iastate.edu">desmith@iastate.edu</a>
24	Iowa Snow and Ice Conference	Burlington	Duane Smith 515-294-8103 <a href="mailto:desmith@iastate.edu">desmith@iastate.edu</a>
25	Iowa Snow and Ice Conference	Cedar Rapids	Duane Smith 515-294-8103 <a href="mailto:desmith@iastate.edu">desmith@iastate.edu</a>
26	Snow Plow Roadeo	Cedar Rapids	Duane Smith 515-294-8103 <a href="mailto:desmith@iastate.edu">desmith@iastate.edu</a>

### November 2006

2	Traffic and Safety Forum	West Des Moines	Mary Stahlhut 515-239-1169 <a href="mailto:mary.stahlhut@dot.state.ia.us">mary.stahlhut@dot.state.ia.us</a>
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Get more information and/or register online for these events at [www.ctre.iastate.edu/calendar/](http://www.ctre.iastate.edu/calendar/).

## 10th National Conference on Transportation Planning for Small and Medium-Sized Communities: Tools of the Trade

The Transportation Research Board is sponsoring the 10th National Conference on Transportation Planning for Small and Medium-Sized Communities: Tools of the Trade on September 13–15, 2006, in Nashville, Tennessee. The conference is designed to provide ready-to-use, economical, and practical techniques for transportation professionals in small (under 50,000) and medium-sized (50,000–250,000) communities.

Topics expected to be examined include small urban system planning, livable communities, transit planning, rural transportation planning, technology sharing, project programming process, transportation logistics, public involvement, and environmental issues. ■

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