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Editor's note: The “news” bits on the cover of this issue were adapted from several resources, including The New York Times online archives; first four issues of Technology News, 1983; and monthly issues of Iowa DOT's 1983 employee newsletter TransTopics (thank you, Tracey Bramble, editor, Iowa DOT).

25 years of service for Iowa LTAP

What were you doing 25 years ago? Here's a little context from spring 1983:

AN UNUSUALLY HEAVY invasion of mayflies gives street and road crews along the Mississippi River headaches. At least one bridge is closed due to pileups of the sticky, stinky, inch-long pests.

THANKS TO increased federal fuel taxes, dollars for bridge replacement and rehabilitation in Iowa double this year. From 15 to 35 percent of the $37.3 million must be spent on structures not on the federal-aid system.

Funded by the U.S. DOT, Iowa studies the connection between tough drunk-driving laws and number of crashes [in 1983 lingo, "accidents"] linked to alcohol.

RAGBRAI XI BICYCLISTS prepare to test their mettle along southern Iowa's hilly terrain from Onawa to Dubuque.

SHOTBLASTING a pavement surface to prepare it for a bonded overlay is one of three pavement projects showcased on an Iowa tour. More than 400 people from 26 states and Canada attend this one-day event.

ELIZABETH DOLE becomes U.S. Secretary of Transportation.

NEW, PORTABLE SCALES (handheld and trailer-mounted) help Iowa's motor vehicle enforcement officers crack down on overweight trucks traveling the state's highways.

BOB GIVEN begins what will be a four-year stint as director of the Iowa DOT's highway division.

AN IOWA STATE UNIVERSITY study suggests ways to reduce counties' potential liability from the use of low-water stream crossings on unpaved, rural roads.

IOWA'S FARMERS hope for a rebound in the farm economy after several years of low commodity prices and plunging land values.

ROUSED FROM SLEEP at 3:30 a.m. by the sheriff, equipment operators from Iowa DOT's Manchester garage check and re-check a section of Highway 13 in the dark using magnets to pick up nails found scattered on the pavement. It cannot be determined who dropped the nails or when, or if they were dropped deliberately.

NORTHWEST IOWANS say goodbye to one of the state's largest cottonwood trees, a longtime landmark along Highway 10 near Sutherland. Carefully preserved during road reconstruction in 1971, but suffering the combined toll of lightning hits and ice and wind storms, the proud old giant is felled.

JANUARY 1983

AMES, IOWA — Iowa State University is selected to manage one of only 10 statewide pilot programs in the country to provide transportation technology transfer and related services to small urban and rural areas. Funded through FHWA’s Rural Technical Assistance Program (RTAP) and administered through ISU’s Engineering Extension Service, Iowa's new RTAP center is charged with meeting local agencies’ needs through a free, quarterly newsletter; a toll-free “hotline”; a library service distributing publications, films, and other resources; and a variety of short courses conducted throughout the state.

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 Statewide Urban Design and Specifications
Iowa Traffic Safety Data Service
Midwest Transportation Consortium
National Concrete Pavement Technology Center
Partnership for Geotechnical Advancement
Roadway Infrastructure Management & Operations Systems
Sustainable Transportation Systems Program
Traffic Safety and Operations
25th Anniversary

Iowa’s Mr. LTAP: Stan Ring

“Please call me if you have any questions. My phone number is 515-294-6777.” So Dr. Stan Ring ended his front-page column in the first issue of Technology News in April 1983.

This was the personal style that earned Ring his reputation as “Mr. LTAP.” The original director of Iowa’s Rural Technical Assistance Program (RTAP, later Local Technical Assistance Program or LTAP), Ring made himself available to Iowa transportation agencies needing information or assistance.

With his knowledge, experience, and passion about transportation engineering, Ring was a quiet powerhouse of a resource.

Ring spent the first nearly two decades of his career with the Iowa DOT (then the Iowa State Highway Commission). There he managed urban work on Iowa’s federal-aid highways and acted as the commission’s liaison with federal and local agencies in transportation planning.

In 1967 Ring left the agency to teach transportation courses in ISU’s Department of Civil and Construction Engineering.

For 20 years, in addition to teaching, Ring advised graduate students and conducted research, most significantly, wind-tunnel analysis of snow drifting, and design of low-water stream crossings.

Ring had a special interest in and talent for outreach, and eventually he led ISU’s Civil Engineering Extension Program. It was in this role that he competed for and won the RTAP contract.

As RTAP-then-LTAP director, Ring set a standard for service that Iowa LTAP staff still remember and try to emulate.

Ring personally connected with transportation workers around the state, tirelessly promoting transportation engineering, teaching workshops, and building his extensive knowledge base and photo library of Iowa’s transportation history.

Whether discussing civil engineering initiatives with new county engineers or quizzing old hands about Iowa’s transition from mud-clogged byways to well-drained paved roads, Ring brought an enthusiastically engaging spark to every interaction.

After retiring from ISU in 1988, Ring continued serving Iowans for 12 years as LTAP’s part-time librarian.

Ring oversaw the library as enthusiastically as he had built the LTAP center. He stocked the shelves with an up-to-date collection of slideshows, videos, and publications and sent them, on request, to towns and counties across the state. He oversaw the transition from a paper catalog of holdings to a user-friendly online electronic catalog, www.ctre.iastate.edu/library/search.cfm. He developed a display about LTAP’s services and carted it to dozens of events where transportation workers gathered, like APWA and ISAC conferences.

One lovely day in September 2000, Ring dismantled the LTAP display he had just hosted at Iowa’s annual road maintenance expo, then went home for a little nap. He died that afternoon. Mr. LTAP was 77.

Next time you’re in Ames, stop by the LTAP office and visit the Stan Ring Memorial Library, now under the able stewardship of Jim Hogan. Stan would have appreciated the convenient, moveable stacks.
In 1983, ISU was introducing its new RTAP center to towns and counties throughout Iowa.

Due to the success of pilot RTAPs in Iowa and nine other states, FHWA eventually funded technology assistance centers in every state, plus regional tribal centers. The “rural” in RTAP was later changed to “local.”

As we begin 2008, Iowa’s RTAP-now-LTAP has been helping local jurisdictions address their transportation-related challenges through training and technology transfer for 25 years.

During those years, LTAP has seen many changes. For example, Iowa LTAP has been housed in at least six different office spaces on and off the ISU campus. During its first year, Iowa LTAP offered fewer than a dozen workshops. In 2007, it offered 144 training opportunities, including 55 related to safety topics.

One thing that’s remained constant, however, is the staff’s loyalty to the program. With the exception of newcomer Bob Sperry (see page 4), everyone on staff has been with LTAP for at least 10 years.

Jan Graham has been Iowa LTAP’s bean counter and whatever-needs-to-be-done right-hand-woman almost since the program’s beginning. Duane Smith has been director and Marcia Brink has been newsletter editor for more than half the program’s 25-year history. Together, Graham, Smith, Brink, Tom McDonald (safety circuit rider), Georgia Parham (secretary and event coordinator), and Jim Hogan (librarian)—are personally invested up to the eyeballs in Iowa LTAP, and Sperry promises to be equally dedicated. We care about helping you make a difference in Iowa.

Iowa LTAP was the foundation program that eventually grew into CTRE, a major university transportation research and outreach center. Today LTAP is one of several long-term funded programs managed by CTRE, but many people in Iowa’s towns and counties know CTRE best for its LTAP workshops, newsletter, and library.

Throughout 2008, Technology News will cover various aspects of Iowa LTAP’s history. We’ll highlight some achievements and point to future goals. We’ll ask you what LTAP services you find useful, and what kinds of additional help you need.

While telling you a little about LTAP’s past, we hope to encourage you to take advantage of its present and help plan its future.

With the construction and maintenance season approaching, now is a good time to assess your shop’s personal protective equipment (PPE). PPE is defined by OSHA as any equipment worn to minimize workers’ exposure to hazards.

To maximize the effectiveness of PPE, both employers and employees have roles to play.

According to OSHA, employers are responsible for:
- Performing a “hazard assessment” of the workplace to identify and control physical and health hazards;
- Identifying and providing appropriate PPE for employees;
- Training employees in the use of PPE;
- Maintaining PPE, including replacing worn or damaged PPE; and
- Periodically reviewing, updating, and evaluating the effectiveness of the PPE program.

To ensure their own safety, employees should:
- Properly wear PPE;
- Attend training sessions on PPE;
- Care for, clean, and maintain PPE; and
- Inform a supervisor of the need to repair or replace PPE.

Following is a brief overview of OSHA’s guidelines on the use of personal protective equipment.

**Eye and face protection**

Employees exposed to eye or face hazards from flying particles or harmful chemicals should wear eye and face protection. Adequate eye and face protection should fit properly, be reasonably comfortable, and provide unrestricted vision and movement.

**Head protection**

Head protection, such as hard hats or protective helmets, should resist penetration by objects, absorb the shock of a blow, and be water-resistant and slow burning. Protective headgear should fit properly and should be worn by all construction and maintenance workers.
Just call Bob:
Another safety resource for Iowa's cities and counties

Iowa LTAP is pleased to welcome Bob Sperry, recently retired Story County engineer and long-time Iowa LTAP advisor, to the staff.

On March 3, Sperry begins his new LTAP assignment as part-time Local Roads Safety Liaison.

Sperry will be traveling the state to share crash data with cities and counties, especially agencies not currently using Iowa's rich crash database or perhaps interested in more fully exploiting this valuable resource.

He will also provide information about state-of-the-art techniques that are helping some Iowa local agencies make strategic, data-based safety improvements in their jurisdictions.

This new safety liaison position signals another first for Iowa's LTAP. Our introduction of the country's first LTAP Safety Circuit Rider in 1989 broadened the impact of Iowa's safety-related outreach by taking workshops to local agencies' garages and offices in every corner of the state.

Bob will supplement Safety Circuit Rider Tom McDonald's safety workshop offerings with individualized consultations and training in crash-data tools for local agencies.

As with so many of LTAP's safety-related services, this opportunity is the result of a grant from the Iowa DOT's Office of Traffic Safety.

Tom Welch, director of the office, is acutely aware that half of all crash fatalities in Iowa occur on local roads.

"We want to give county engineers as much assistance as possible," Welch says.

"Through Bob's position, we can interact personally with every county engineer in Iowa and make sure they are aware of and have access to all the safety resources available to them from the Iowa DOT and CTRE."

Bob Sperry is a fortunate match for this position. After graduating from Iowa State with a bachelor's degree in civil engineering, he worked for several years as a bridge designer at the Iowa DOT.

Then, during more than 30 years as county engineer in Taylor, Webster, and finally Story Counties, he worked with county representatives, regional planning authorities, the Department of Natural Resources, the Iowa DOT, LTAP, and others to meet a variety of challenges.

Sperry knows firsthand the road safety-related issues Iowa's local jurisdictions face.

"I want to keep up my contacts with people," he says, "and show them the value of the safety programs in reducing crash fatalities."

For more information give Bob a call, 515-294-8103, 515-231-6902 (cell).
New sign retroreflectivity rules require management plans

After years of work—starting as long ago as 1992—the FWHA recently released MUTCD Section 2A.09, which establishes new minimum levels of retroreflectivity for signs. The new standard also outlines compliance deadlines for the new regulations, and requirements for sign assessment and management plans.

**Compliance deadlines**
The new rule specifies three-stage compliance deadlines. Assuming agencies get started now, the deadlines are generous.

First, agencies must have a sign assessment or management plan in place by 2012. The plan must cover improved sign inspection, data management, and sign replacement within a typical sign replacement cycle. Second, all regulatory, warning, and ground-mounted signs must comply with the retroreflectivity standards by 2015. Finally, overhead guide signs and street name signs must comply by January 2018.

**Sign assessment or management plans**
Tom McDonald, CTRE’s safety circuit rider, emphasizes the importance of starting now to put together a sign management plan. Four years might seem like plenty of time, but a major part of developing the plan is compiling a required comprehensive set of data about all signs in your jurisdiction.

That will take time.

Some people who have already started working on their plans have been surprised to find out just how many signs are in their jurisdictions and how little data they actually have on all those signs compared with what they’ll need to be in compliance.

And it will take money.

Assessing all signs in your jurisdiction will be the most expensive part of developing your plan. Many personnel hours and certain equipment will be needed to identify, classify, locate (using GIS techniques for accuracy), and measure every sign and record the data.

This may be the time to seriously consider using sign management software if you’re not using it already. This software can help you gather, record, and analyze information about your signs that you’ll need to meet the second and third compliance deadlines.

Using software doesn’t guarantee compliance, but it may help you set sign replacement schedules without having to undertake expensive and time-consuming visual inspections.

Like many projects, the least expensive elements of the sign management process are the hardware and software required to do the job right.

**Exceptions**
The following roadway signs may be excluded from the requirements for minimum retroreflectivity:

A. Parking, Standing, and Stopping signs (R7 and R8 series)
B. Walking/Hitchhiking/Crossing signs (R9 series, R10-1 through R10-4b)
C. Adopt-A-Highway signs
D. All signs with blue or brown backgrounds
E. Bikeway signs that are intended for exclusive use by bicyclists or pedestrians

**Compliance methods**
The new MUTCD language describes five methods that agencies can use to maintain traffic sign retroreflectivity at or above the minimum levels, including visual nighttime inspection. Agencies can choose from these methods or combine them.

Agencies are allowed to develop other appropriate methods based on engineering studies, as long as the method(s) consistently provide results corresponding to the values in the new standards.

At any one time, some individual signs in a jurisdiction may not meet the minimum retroreflectivity levels. As long as the agency has a management plan in place and is maintaining signs in accordance with Section 2A.09 of the MUTCD, the agency will be considered to be in compliance.

**For more information**
Contact Tom McDonald for more information about the new regulations or sign management software, or to arrange training, 515-294-6348, tmcdonal@iastate.edu.

Some information in this article is excerpted from a short, straightforward FHWA brochure, “Know Your Retro: New MUTCD Sign Retroreflectivity Requirements.” This useful publication provides details about the new requirements, including a table of minimum standards for various signs. The brochure is online at www.tsp2.org/news/Retroreflectivity_Brochure.pdf.

Information about three sign management software products can be found online, rowekamp.com/SimpleSigns.htm; www.ecountyworks.com/page.php?10#SM; and http://www.cartegraph.com/signview.html. Other products may also be available.

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<th>Date</th>
<th>Aspect of Compliance</th>
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<tbody>
<tr>
<td>January 2012</td>
<td>Sign assessment or management plan in place</td>
</tr>
<tr>
<td>January 2015</td>
<td>Regulatory, warning, and ground-mounted signs</td>
</tr>
<tr>
<td>January 2018</td>
<td>Overhead guide signs and street name signs</td>
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Stanley L. Ring Memorial Library: New acquisitions

Note about delivery of materials: The library now sends orders through the U.S. Postal Service. This change is resulting in important savings for LTAP, but ordered materials do not arrive as quickly. If you have an urgent need for library materials, let us know when you place your order and we will arrange faster delivery.

Three ways to order LTAP library materials

- Use the online catalog, www.ctre.iastate.edu/library/search.cfm.
- Contact Jim Hogan, library coordinator, 515-294-9481, hoganj@iastate.edu, fax 515-294-0467.
- Mail or fax the order form on the back cover of Technology News.

Publications

P 1709 Prairie Seedling and Seeding Evaluation Guide

This guide features color photos and field descriptions for seedlings of native grasses, forbs, and common agricultural weeds as well as their seeds. It also includes a method for assessing a prairie seeding during the first few years after planting.

P 1710 Central Region Seedling ID Guide for Native Prairie Plants

This guide helps identify native plants at various stages of growth. Color photos illustrate seed, seeding, juvenile, and flowering stages, and distinguishing characteristics.

Videos

V 663 Night Lights: How Retroreflectivity Makes Roads Safer

This video explains retroreflectivity and provides nighttime driving and safety tips.

DVDs

DVD 112 Personal Protective Equipment

This video describes the safe use and maintenance of PPE, including everything from hard hats to eye protection and hearing aids. It includes a training manual with exam questions.

Historical

Iowa’s first LTAP director and later part-time librarian, Stan Ring, was a transportation history buff who, until he died, collected slides and information documenting Iowa’s journey from mud-caked byways to paved roadways. The following library holdings are highlighted in his memory.

DVD 65 / V 580 A History of Iowa’s Rivers, Rails, Roads, & Runways

This videotape provides an excellent overview of the role of transportation in the state’s development.

P 1288 Building Better Roads

This book, prepared in celebration of the Transportation Research Board’s 75th anniversary, documents the history of highway research in Iowa and Iowa’s critical role in instituting the original Highway Research Board in 1920. It includes several personal interviews and dozens of photos and offers an overview of the period from 1904 through 1974. It was produced by CTRE with support from the Iowa DOT.

P 1450 Iowa Highway Research Board: 1949–1999 Videos

This book reviews the history of the Iowa Highway Research Board’s activities, beginning with its inception in 1949 as the first organized effort in the United States to investigate local road construction problems. It was produced by CTRE with support from the Iowa DOT.

P 1710 Central Region Seedling ID Guide for Native Prairie Plants

This video describes the safe use and maintenance of PPE, including everything from hard hats to eye protection and hearing aids. It includes a training manual with exam questions.

November 24: Worker visibility compliance

The compliance date for FHWA Final Rule on Worker Visibility is near. Effective November 24, 2008, the rule states that “all workers within the right-of-way of a Federal-aid highway who are exposed to either traffic or to construction equipment within the work area shall wear high-visibility safety apparel.”

Workers are people on foot whose duties place them in the right-of-way of a federal-aid highway. This includes roadway workers, survey and utility crews, incident responders, and law enforcement personnel.

High-visibility safety apparel is defined as personal protective safety clothing intended to provide conspicuity during both daytime and nighttime usage and that meets Class 2 or 3 performance requirements of ANSI/ISEA 107-2004.
Conference calendar

March 2008

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<tr>
<td>20–21</td>
<td>Iowa Concrete Pavement Preservation Workshop</td>
<td>Ames</td>
<td>Sharon Prochnow 515-294-3781 <a href="mailto:prochnow@iastate.edu">prochnow@iastate.edu</a></td>
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<tr>
<td>24</td>
<td>Work Zone Safety</td>
<td>Storm Lake</td>
<td>Tom McDonald 515-294-6384 <a href="mailto:tmcdonal@iastate.edu">tmcdonal@iastate.edu</a></td>
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<td>25</td>
<td>Work Zone Safety</td>
<td>Sioux City</td>
<td>Tom McDonald 515-294-6384 <a href="mailto:tmcdonal@iastate.edu">tmcdonal@iastate.edu</a></td>
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<td>26</td>
<td>Work Zone Safety</td>
<td>Council Bluffs</td>
<td>Tom McDonald 515-294-6384 <a href="mailto:tmcdonal@iastate.edu">tmcdonal@iastate.edu</a></td>
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<td>Work Zone Safety</td>
<td>Ames</td>
<td>Tom McDonald 515-294-6384 <a href="mailto:tmcdonal@iastate.edu">tmcdonal@iastate.edu</a></td>
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<td>Work Zone Safety</td>
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April 2008

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<td>4</td>
<td>Pervious Concrete Forum-Iowa City</td>
<td>Iowa City</td>
<td>Anne Leopold 515-964-2020 <a href="mailto:aleopold@snyder-associates.com">aleopold@snyder-associates.com</a></td>
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<td>8</td>
<td>Tech Transfer Concrete Consortium</td>
<td>Baton Rouge, LA</td>
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<tr>
<td>9–10</td>
<td>National Concrete Consortium (NC2)</td>
<td>Baton Rouge, LA</td>
<td></td>
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<tr>
<td>TBD</td>
<td>Motor Grader Operator Workshops</td>
<td>various locations TBD</td>
<td>Georgia Parham 515-294-2267 <a href="mailto:gparham@iastate.edu">gparham@iastate.edu</a></td>
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June 2008

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<td>17</td>
<td>Mower Safety Workshop</td>
<td>Davenport, IA</td>
<td>Tom McDonald 515-294-6384 <a href="mailto:tmcdonal@iastate.edu">tmcdonal@iastate.edu</a></td>
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<td>18</td>
<td>Mower Safety Workshop</td>
<td>Iowa City, IA</td>
<td>Tom McDonald 515-294-6384 <a href="mailto:tmcdonal@iastate.edu">tmcdonal@iastate.edu</a></td>
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<td>19</td>
<td>Mower Safety Workshop</td>
<td>Waterloo, IA</td>
<td>Tom McDonald 515-294-6384 <a href="mailto:tmcdonal@iastate.edu">tmcdonal@iastate.edu</a></td>
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<td>Mower Safety Workshop</td>
<td>Eldora, IA</td>
<td>Tom McDonald 515-294-6384 <a href="mailto:tmcdonal@iastate.edu">tmcdonal@iastate.edu</a></td>
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September 2008

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<tr>
<td>10</td>
<td>Snow Roadeo (Truck, Motor Grader, Loader)</td>
<td>Newton</td>
<td>Duane Smith 515-294-8103 <a href="mailto:desmith@iastate.edu">desmith@iastate.edu</a></td>
</tr>
<tr>
<td>11</td>
<td>Iowa Maintenance Training Expo</td>
<td>Newton</td>
<td>Duane Smith 515-294-8103 <a href="mailto:desmith@iastate.edu">desmith@iastate.edu</a></td>
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Applications for traffic safety funds due June 15

Beginning in 2008, applications from cities and counties for Traffic Safety Funds will be due at the Iowa DOT Office of Traffic and Safety by June 15. Note the earlier date.

Iowa’s Traffic Safety Fund (TSF), also known as the Traffic Safety Improvement Program (TSIP) or the Half-Percent Program, provides funding for local safety-related projects in three categories: site improvements, materials to install new or replace obsolete signs or signals, or traffic studies or public information initiatives.

Advancing the application deadline from August to June 15 allows successful applicants to be notified of their awards in time to begin designing approved projects during the winter.

In anticipation of related changes to the state administrative rules, likely in June 2009, applications for 2009 projects will be due June 15, 2008. For more information about the program itself, see the TSF program website, [www.dot.state.ia.us/tsip.htm](http://www.dot.state.ia.us/tsip.htm).

Supervisory Techniques & Skills online training available by end of April

Some Roads Scholar courses will be available soon in a new online format through Engineering Distance Education at ISU. The first course will be offered soon: Supervisory Techniques and Skills (formerly called Successful Management), a core course to achieve the level of Senior Roads Scholar. The $75 registration fee covers all course materials.

Supervisory Techniques and Skills is designed for city, county, and state transportation personnel, as well as other public works employees in supervisory positions. Among other things, the course can help supervisors learn to:

- motivate employees,
- communicate effectively, and
- handle disciplinary issues.

Offered through an online system called Moodle, the online courses will allow participants to view informational videos, conduct self-assessment inventories, and review course materials when it is convenient and at their own pace. In the case of the Supervisory Techniques and Skills, participants will have six months from the time of registration to complete the course.

On completion of any of these courses, participants will receive a certificate of completion and appropriate credit in the Roads Scholar program.

For more information, contact Duane Smith, 515-294-8817, desmith@iastate.edu.
To make a change to the Technology News mail list or to order library materials, please complete the information below and mail or fax this page (including mail label) to CTRE’s address below:

Center for Transportation Research and Education
2711 S. Loop Drive, Suite 4700
Ames, IA 50010-8664
Fax: 515.294.0467

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Title:
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