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Iowa projects win national awards



Newly paved Mississippi River Road
Photo courtesy of the Iowa Concrete Paving Association



A PAVING PROJECT in Lee County, Iowa, bested competition from around the country to win the 1997 American Concrete Pavement Association's National Award for Excellence in Concrete Pavement, county roads category. The 1995–96 project took first prize in the Iowa competition before competing nationally. National awards were presented in Scottsdale, Arizona, in December 1997.

Lee County teamed up with Fred Carlson Co., Inc., a contractor out of Decorah, Iowa, to pave a seven-mile stretch of roadway with a shoulder/bike trail along Iowa's Mississippi River Road from Keokuk to Montrose.

"It was a fairly complicated project," says Dennis Osipowicz, Lee County engineer, because of 54 vertical grade changes, some as steep as eight percent, and 25 horizontal curves. The smoothness of the finished pavement along the curved surface was a key factor in earning first place.

A second key factor was the significance of nondestructive maturity testing research on the project. Led by Jim Cable, associate professor of civil and

construction engineering at Iowa State University, researchers determined that the concrete reached an allowable strength to withstand traffic much sooner than the seven-day state specification. As a result, the Iowa Department of Transportation has revised its specifications to allow for wider use of PCC maturity testing to reduce traffic delays during construction.

Another Iowa project took a first-place award. The Iowa DOT's 27-mile, I-80 reconstruction project in Jasper County won first place in the rural divided highways category. In addition to surpassing smoothness

incentives, the project was completed ahead of schedule, largely due to contractor Manatts Inc.'s (Brooklyn, Iowa) use of an in-place concrete recycling "train." The system removed and recycled the entire width of the old pavement in one pass to build the subbase for the new concrete.

Of 85 projects submitted from around the country, Iowa walked away with first place prizes in two out of eight categories.

For more information on the Lee County project, contact Osipowicz, 319-372-2541. For information on the maturity testing research, contact Cable, 515-294-2861; jkcable@iastate.edu. ■



Manatts Inc.'s recycling "train"

The preparation of this newsletter was financed through the Local Technical Assistance Program (LTAP). LTAP is a nationwide effort financed jointly in Iowa by the Federal Highway Administration and the Iowa Department of Transportation. The mission of Iowa's LTAP:

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

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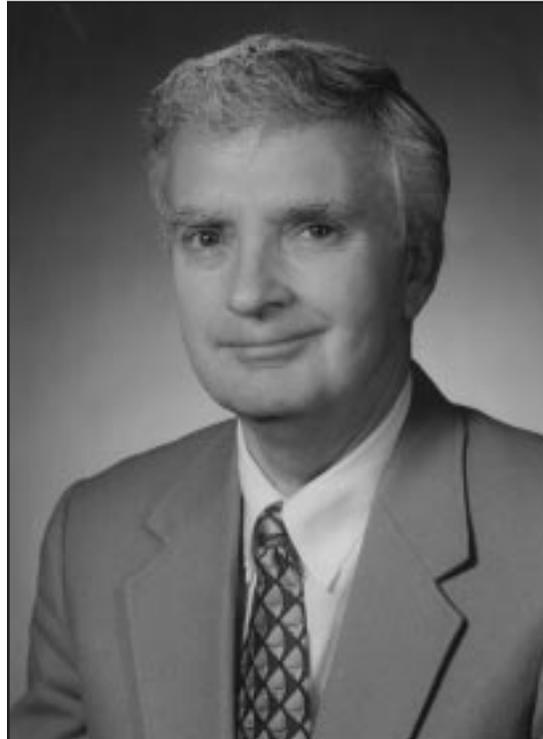
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TECHNOLOGY NEWS
nameplate was designed by
Jennifer Reed.



Tom McDonald is Iowa's new Safety Circuit Rider



TOM McDONALD joins CTRE's staff as Iowa's new Safety Circuit Rider. He comes to CTRE from the Iowa Department of Transportation's Southeast Transportation Center, where he served as district engineer from 1988 to 1994 and then as development engineer. McDonald, a professional engineer, worked for the Iowa DOT for more than 30 years.

McDonald has spent most of his life in Iowa and graduated from Iowa State University in 1964 with a bachelor's degree in civil engineering.

As Safety Circuit Rider, McDonald will continue and enhance CTRE's award-winning safety program. He is already conducting flagger training workshops, planning a statewide pavement markings conference (see page 11), and acting as membership chair for the Iowa Traffic Control and Safety Association.

With his Iowa roots, a thorough and diverse engineering background, and a passion for highway safety, McDonald is sure to be a valuable resource for Iowa's transportation agencies.

You can reach McDonald at 515-294-8103; tmcdonald@ctre.iastate.edu. ■■

Early intervention key to repairing defects in unpaved roads

This is the third article in a series of tips for motor grader operators.



MAINTAINING UNPAVED ROADS is like taking care of your teeth. If you brush and floss regularly and avoid too much sugar, your teeth will stay healthy and clean. Neglect them, and they'll develop tartar, plaque, and cavities requiring extensive treatment from a dentist.

Without regular maintenance, unpaved roads will flatten out, develop ruts and potholes, and lose their surface material to the wind. Timely maintenance will stop the deterioration before roads become unsafe.

Defects should be corrected while they're still within the low to medium range of severity. Low and medium severity are defined for each defect below. These guidelines pertain to a 50-mph unpaved road.

Improper cross section

Low severity: The road crown is less than one-half inch per foot.

Medium severity: Moderate amounts of ponding water exist, and the road has a bowl-shaped surface.

Inadequate roadside drainage

Low severity: Small amounts of ponding water and debris exist in the ditch.

Medium severity: Moderate amounts of ponding water and debris exist in the ditches, and some erosion may exist in the shoulder.

Corrugations

Low severity: Corrugations are less than 1 inch deep.

Medium severity: Corrugations are 1–2 inches deep.

Potholes

Low severity: Potholes are from one-half to 1 inch deep and their diameter is less than 2 feet.

Medium severity: Potholes are 1–2 inches deep and their diameter is less than 3 feet.

Ruts

Low severity: Ruts are less than 1 inch deep.

Medium severity: Ruts are 1–2 inches deep.

continued on page 3

continued from page 2

Loose aggregate

Low severity: Loose aggregate on the surface or a berm of aggregate is less than 1 inch deep.

Medium severity: Loose aggregate on the surface or a berm of aggregate is 1–2 inches deep.

Dust

Low severity: Normal traffic dust does not obstruct visibility.

Medium severity: Normal traffic dust does obstruct visibility.

Information for this article was taken from Cold Regions Research and Engineering Laboratory Special Report 92-26, *Unsurfaced Road Maintenance Management*. To borrow this publication, contact Stan Ring, CTRE library coordinator, 515-294-9481, stan@ctre.iastate.edu. ■■



If corrugations like these aren't repaired, they'll turn into . . .

. . . a puddle-filled mess.



Photos courtesy of the Story County Engineer's office.



Water ponding on the shoulder (above) indicates inadequate roadside drainage.



Poor drainage causes water to seep into the roadbed and cause problems like this frost boil (right).

LTAP Advisory Board

The people listed below help guide and direct the policies and activities of the Center for Transportation Research and Education's Local Technical Assistance Program (LTAP). The board meets at least annually.

Contact any of the advisory committee members to comment, make suggestions, or ask questions about any aspect of LTAP.

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Center for Transportation Research and Education

IOWA STATE UNIVERSITY

Coming soon: Iowa Access Management Conference

GET READY FOR Iowa's first Access Management Conference, May 7-8, 1998, at the Gateway Holiday Inn, Ames, Iowa.

In addition to presenting results of the Iowa access management study (see the article on this page), the conference will offer training sessions by CTRE and national experts, as well as breakout presentations.

Presentations will emphasize

- impacts and benefits of access management
- best practices in access management
- marketing strategies and public involvement

Mark your calendar now for this important event. Registration materials will be mailed in March.

Managing roadway access in Iowa: Why, how, and is it working?



UP TO 50 PERCENT of traffic accidents involve vehicles turning off or onto a roadway at a driveway connecting the roadway to an adjacent property. These accidents happen when turning traffic interferes with through traffic.

Access management, which efficiently manages vehicles' access to and from major arterial roadways, can reduce accidents and generally improve traffic flow. Side benefits include better fuel economy, reduced vehicle emissions, and reduced delays along managed roadways.

In addition, incorporating access management strategies into existing streets often increases their capacity, reducing the need to build costly new roadways and providing a maximum return on the investment in existing roadways.

An Iowa study

A recent study by CTRE, the Iowa Department of Transportation, the Iowa Access Management Task Force, and the University of Northern Iowa asked the following questions about access management practices in Iowa:

- How is roadway access being managed in Iowa?
- What are the perceived and actual benefits of access improvements?
- How does incorporating access management strategies affect Iowa businesses along managed roadways?
- What are the barriers to implementing access management strategies?

To answer these questions, the research team studied seven access management projects in Iowa. The projects represented a variety of access issues, geographic situations, and management strategies. Suburban, urban, small city, and rural access management projects were included. Most of the access improvements studied were completed in the mid-1990s. Where possible, at least three years of before-and-after data were used.

Iowa access improvements

According to the Federal Highway Administration, the basic elements of access management include limiting the number of driveways with access to roadways, providing plenty of space between

driveways, and improving the design and location of driveways.

Typical access management projects in Iowa include one or more of the following specific improvements:

- consolidating or closing selected driveways to reduce conflicts associated with turning traffic
- adding continuous left-hand turning lanes to generally separate turning and through traffic
- adding frontage roads and backage roads to completely separate turning traffic from through traffic
- adding raised medians near major intersections to prevent some turning movements
- adding raised medians along entire roadways to eliminate many conflict points

The study focused primarily on the measured effects of access management on traffic safety and on adjacent business vitality, as well as the reaction of motorists to the improvements.

The study team used four methods to examine the seven selected case studies.

(1) Each case was examined in the field and as much historic information as possible was gathered, generally via project files from the Iowa Department of Transportation.

(2) Detailed before-and-after accident studies were conducted using the Iowa DOT's computerized Accident Location and Analysis System (PC-ALAS).

(3) Business trends for the studied corridors were analyzed, primarily using retail sales tax data.

(4) Opinion surveys of business owners and managers, as well as motorists and customers, were conducted along the corridors.

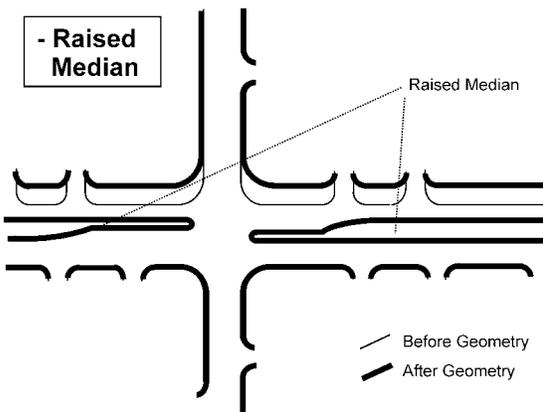
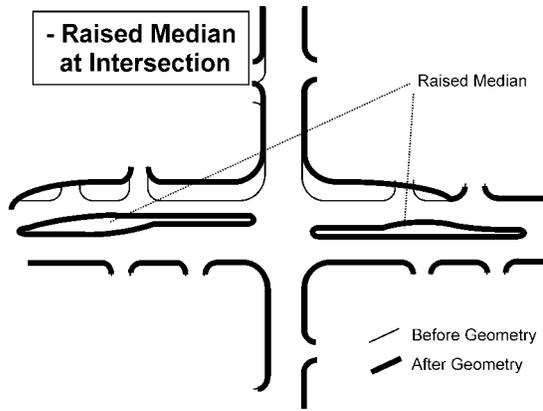
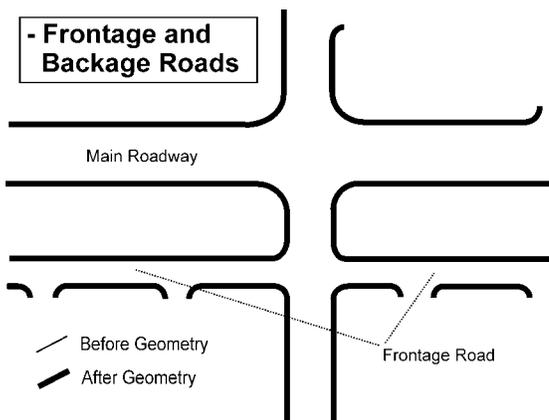
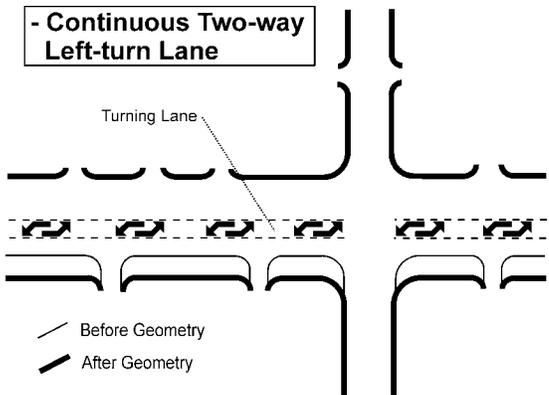
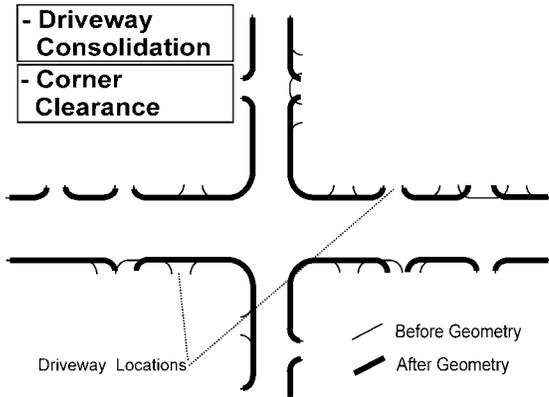
Case study results

The results from the Iowa case studies were overwhelmingly positive.

Traffic safety. A typical access management project in Iowa may be expected to reduce accident rates by 10 to 65 percent. The average reduction in accident rates for the seven projects was 40 percent.

ACCESS . . . continued on page 5

The illustrations on this page depict five popular access management strategies used in Iowa.
 Graphics by Chris Albrecht, graduate research assistant.



ACCESS . . . continued from page 4

Personal injury accidents and property damage accidents were reduced significantly, but property-damage-only accidents were reduced by a greater percentage.

At the same time, the access management projects raised the level of traffic service to motorists along the improved corridors during the peak hour by one level. Motorists could travel faster with less traffic congestion and fewer delays.

Business vitality and corridor development. Corridors with completed access management projects performed better in terms of retail sales than the surrounding communities. Business failure rates along access management corridors were generally at or below the statewide average for Iowa.

Eighty percent of businesses along access management corridors reported sales at least as high after access improvements were finished. Relatively few business owners (about five percent) felt they were hurt by the project.

ACCESS . . . continued on page 6

Who should attend Iowa's Access Management Conference?

PARTICIPANTS will include personnel from

- city, county, and state transportation agencies
- metropolitan planning organizations
- city councils, administrators, planning and zoning boards, and planners
- county boards of supervisors
- chambers of commerce
- land developers and commercial realtors
- consulting engineers and planners
- university and college transportation educators
- interested others

ACCESS . . . continued
from page 5

About 80 percent of businesses reported no customer complaints about access to their businesses after the access projects were completed. Those businesses that tended to report complaints were highly oriented toward automobile traffic (e.g., restaurants, auto sales, and auto service).

Furthermore, some evidence from the Iowa case studies shows that business redevelopment, investment, and revitalization begins to occur along a corridor a few years after access management projects are completed.

Motorist opinions. Ninety to 100 percent of motorists surveyed in this study had favorable opinions about the roadway improvements. The

Before (top) and after photos show the addition of a left-turn lane, an effective strategy for managing roadway/driveway access.
Photos courtesy of Snyder Associates.



vast majority agreed that the improved roadways were safer, easier to drive on, and more efficient.

Barriers to access management

A major obstacle to implementing access improvements, not only in Iowa but across the country, can be the lack of communication between the agencies responsible for roadways and agencies responsible for local land use planning and regulation.

In addition, the Iowa study found that a minority of businesses and motorists along a corridor proposed for access management improvements will not support the proposal because of feared sales declines and traveling inconvenience. Their perceptions can lead to difficulties for the agencies that must implement access management projects.

For more information

A vital first step in improving cooperation and support for access management strategies is to identify and communicate the benefits of access management to all stakeholders. The study group (CTRE, the Iowa Department of Transportation, the Iowa Access Management Task Force, and the University of Northern Iowa) is taking several actions to educate and inform the various constituents interested in and affected by access management.

A statewide conference is being planned for May 1998 (see sidebars on pages 4 and 5). The conference will bring a variety of Iowa stakeholders together, focusing on the benefits of access management and identifying best access management practices.

The study group has published three reports: *Access Management: A Review of Recent Literature*; *Access Management: Current Policies and Practices in Iowa*; and *Access Management: Phase II Report* (as well as a *Phase II Summary Report*). These reports are online at the Iowa Access Management Project World Wide Web site: <http://www.ctre.iastate.edu/access>.

Limited printed copies of the reports are available through CTRE; call 515-294-8103. Loan copies are available through CTRE's library; contact Stan Ring, library coordinator, 515-294-9481; stan@ctre.iastate.edu.

Educational materials—booklets, brochures, and a short videotape—will be available through CTRE later this spring.

For information about the Iowa study and ongoing educational efforts, contact David Plazak, transportation policy analyst, 515-294-8103; plazak@ctre.iastate.edu. ■■■

Fence of light stops deer



PREVENTING DEER from crossing the road at night and

colliding with cars

could save millions of dollars in property damage. The Iowa Department of Transportation (Iowa DOT) is testing a reflector system that may do just that.

In 1996 the Iowa DOT set up demonstration project areas in one-mile sections along the following roadways:

- Iowa 9 east of Decorah
- U.S. 34 near Viking Lake State Park
- Iowa 1 near Lake Darling State Park
- Iowa 175 east of Eldor
- Iowa 14 north of Parkersburg

The special reflectors, made in Austria, are mounted on posts 24 inches higher than the top of the pavement. They reflect light from headlights, forming a light fence that's only visible from beyond the roadway.

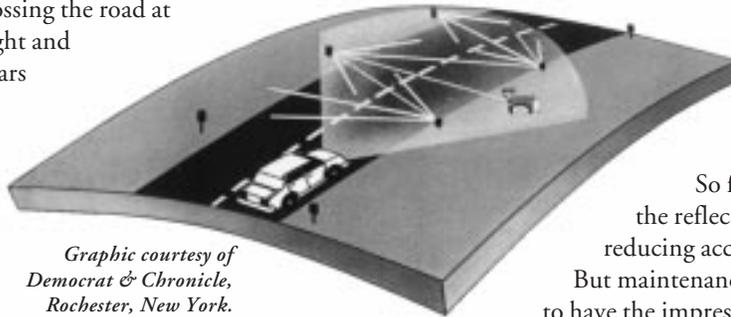
Drivers cannot see the fence.

The spacing of the reflectors along the side of the road is equal to their spacing across the road. Narrower roads require more reflectors.

The reflectors cost about \$17 each. The cost of the posts depends on the type used. The Iowa DOT used tube-in-tube posts that cost \$10-12 each.

Per mile the whole reflector system cost between \$8,000 and \$10,000 up front, according to Tim Crouch, an Iowa DOT traffic engineer. That does not include continuing maintenance costs for keeping posts aligned and reflectors cleaned twice a year.

After the three-year review period is up, Crouch will have a clear idea about the cost effectiveness of the whole system compared to the cost of cleaning up carcasses and estimated property damage. In 1996 8,279 reported deer-car accidents in Iowa resulted in



Graphic courtesy of Democrat & Chronicle, Rochester, New York.

several million dollars of property damage. Such accidents are rarely fatal for people but often fatal for deer.

So far it's hard to tell if the reflectors are actually reducing accidents, Crouch says. But maintenance people he's talked to have the impression that fewer deer are being killed in the test sections.

The Washington state department of transportation conducted a four-year study of a similar reflector system in the early 1980s. The reflectors were alternately covered and uncovered at regular intervals. During periods when the reflectors were covered, 52 deer were killed at night, compared to six killed when the reflectors were uncovered and operational.

Crouch believes the reflector system will be feasible for counties.

For more information about the Iowa DOT project, contact Crouch, 515-239-1545. To borrow videos about the reflector system, contact Stan Ring, CTRE's library coordinator, 515-294-9481, stan@ctre.iastate.edu. ■■

Spacing of the reflectors is determined by the width of the road.
Photos courtesy of the Iowa DOT.

The special reflectors are manufactured in Austria.



Alan Estvold is a professional engineer and land surveyor. He has a bachelor of science degree in civil engineering from North Dakota State University and a master of arts degree in management from Bellevue University.

The "golden rule" of personnel management

Alan Estvold, Montgomery County Engineer

This is the first in a series of articles by Estvold on personnel management.



MANAGEMENT is a common topic of discussion in both public and private business. While most people think of personnel management when they hear the word management, there are other facets: operations, project, organization or department, financial, and strategic management. However, the subject of this series is personnel management.

Of all the different types of management, personnel management is the most abstract, inexact, obscure, and by far the most difficult. What's more, extensive training and education are available to managers regarding other, more technical facets of management, but very little formal training is available on managing personnel.

Most managers get their personnel management "training" by observing previous supervisors or by participating in one-day workshops on specific subjects. Managers' skills with personnel generally reflect their own personalities.

Personnel management has been formally studied since 1903, when a mechanical engineer named Frederick W. Taylor published a time-and-motion study called "Shop Management." Taylor has since been called the Father of Scientific Management. Taylor's was an efficiency study of Bethlehem Steel employees. Subsequent studies by others began to delve into subjects like motivation, discipline, and supervisors' interaction and style with employees.

Personnel management evolves over time as society changes. Today's great managers would not have been successful with their personnel management style in the years shortly after World War II, nor would a 1940s management style work today.

During the late 1960s and early 1970s, the baby boomer generation began to challenge authority and question everything, including their supervisors. Those same baby boomers make up the majority of today's work force. Therefore, it is highly unlikely that an authoritarian or autocratic supervisor would be very successful in managing these employees. Supervisors' management techniques and styles must change with changing times.

It is interesting, however, that a management style that is highly successful with today's employees was developed in 1913 by James F. Lincoln of the Lincoln Electric Company, who developed, built, and sold the Lincoln welder. Lincoln's employees were devoted to him and the company, and yet he was very demanding. He paid his employees by the number of pieces produced and insisted that his employees compete with each other for monetary rewards. In other words, he worked them hard and, if they produced, he paid them well.

I believe that the devotion of Lincoln's employees stemmed from the fact that he was just as devoted to them. His underlying management philosophy was the biblical Golden Rule: "Do unto others as you would have them do unto you."

In modern terminology: Manage people the way you would like to be managed.

If followed, this philosophy will help today's manager be a good one. I would venture to say that to become a great manager, it is necessary to take this philosophy one more step. That is, manage people the way *they* would like to be managed. This is more difficult, because it requires managers to become aware of the personalities and feelings of their employees.

In summary, the Golden Rule of personnel management is to *manage people the way they would like to be managed. Or, if you're not familiar with your employees, manage them the way you would like to be managed.*

I hope this introduction to the subject of personnel management supplies some food for thought for managers in transportation-related agencies. Future articles will discuss motivating employees and handling discipline issues. ■■■

References

- Bower, Joseph L., Bartlett, Christopher A., Uytterhoeven, Hugo E. R., and Walton, Richard E. (1995). *Business policy: Managing strategic processes* (8th ed., pp. 594-624). Boston: Richard D. Irwin.
- Rue, Leslie W. and Byars, Lloyd L. (1989). *Management: Theory and application* (5th ed., pp. 34-38). Homewood, Ill.: Richard D. Irwin.

Online forum shares PCC research

Midwest Concrete Consortium



<http://www.ctre.iastate.edu/mcc/>

THE MIDWEST CONCRETE CONSORTIUM (MC²) is a new, online forum for Midwesterners interested in portland cement concrete.

The consortium will provide an ongoing regional forum for

- sharing portland cement concrete research and technology
- encouraging uniform specifications
- solving problems
- promoting quality design and construction

Mission

MC² was formed in 1997 by representatives of state highway departments; cement, aggregate, and admixture producers; industry and paving associations; equipment suppliers; academics; and Federal Highway Administration representatives, all from FHWA Regions 5 and 7. The vision of the group is to provide an avenue for industry, suppliers, government agencies, and academia to work together to continuously improve concrete performance and durability in a cost-effective manner.

Online forum

The heart of the organization is a World Wide Web site: <http://www.ctre.iastate.edu/mcc/>

At this site you can

- review abstracts of recent or ongoing concrete-related research and get contact information for the researchers
- publish an abstract of your own research
- post a concrete-related question on an electronic bulletin board and/or respond to others' questions

- find a list of MC² members with contact information
- get updates about upcoming MC² meetings

The Web site is new, and your participation will help make the forum successful.

Membership

MC² is governed by people representing various concrete interest groups from FHWA Regions 5 and 7. General membership is open to anyone who wishes to participate in one or both of two meetings anticipated each year. There are presently no dues; travel and other expenses related to attending the meetings is the responsibility of participants.

You do not have to be an MC² member to participate in the online forum.

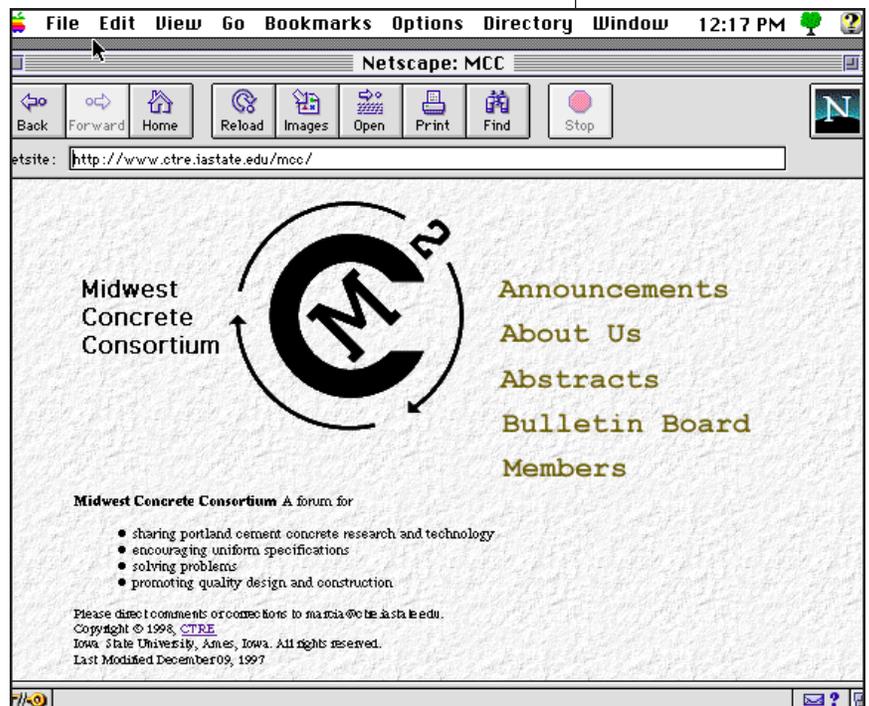
The MC² World Wide Web site is designed and maintained by CTRE. Jim Cable, associate professor of civil and construction engineering at Iowa State University, oversees the addition of abstracts and monitors the online question-answer forum. ■■

Questions?

IF YOU HAVE questions about MC²'s organization and mission, contact Gary Whited, Wisconsin Department of Transportation, 608-266-3707; fax 608-266-8459; whiteg@mail.state.wi.us.

If you have questions about its Web site, contact Jim Cable, Iowa State University, 515-294-2862; fax 515-294-8216; jkcable@iastate.edu.

MC²'s Web site is the heart of the organization.



**conference
calendar**



This calendar lists training events and conferences sponsored by CTRE, as well as events sponsored by ISU's Engineering Extension, the Iowa DOT, or other organizations that may be of interest to local transportation agencies.

*For information about this workshop, contact ISU's Office of Continuing and Extended Education, Scheman Building, Ames, Iowa, at the number(s) listed.

**Iowa's
Summer
Maintenance
Expo**

May 11-12, 1998
Polk County
Convention Center,
Des Moines

Local and national experts will share their knowledge about repairing bridge decks, using herbicides, managing vegetation, using appropriate traffic control techniques, identifying distress in PC and AC pavements, and other topics. Each participant will choose four educational sessions from 24 options.

Registration materials will be mailed in March.

March 1998

		Location	Contact
11	Iowa Pavement Management Program: Automated Distress Workshop	Ames	Omar Smadi 515-294-8103
11	Flagger Workshop	Burlington	Tom McDonald 515-294-6384
12-13	SLSI Land Surveyors Conference	Ames	ISU ECE* 515-294-6222 or 800-262-0015
17	Flagger Workshop	Glenwood	Tom McDonald 515-294-6384
20	Flagger Workshop	Indianola	Tom McDonald 515-294-6384
24	Accident Location and Analysis System	Ames	Sharon Prochnow 515-294-3781
24-25	Video for Traffic Management	Newton	Sharon Prochnow 515-294-3781
25	Accident Location and Analysis System	Ames	Sharon Prochnow 515-294-3781
27	ASCE Geotech Conference	Williamsburg	ISU ECE* 515-294-6222 or 800-262-0015
30	Flagger Workshop	Oskaloosa	Tom McDonald 515-294-6384

April 1998

1	Pavement Markings Conference	Ames	Tom McDonald 515-294-6384
1-2	ASCE Environmental Design and Water Resources Conference	Ames	ISU ECE* 515-294-6222 or 800-262-0015
2	Flagger Workshop	Adair	Tom McDonald 515-294-6384
7	Accident Location and Analysis System	Ames	Sharon Prochnow 515-294-3781
8	Accident Location and Analysis System	Ames	Sharon Prochnow 515-294-3781
8	Flagger Workshop	Fairfield	Tom McDonald 515-294-6384
20	Flagger Workshop	Atlantic	Tom McDonald 515-294-6384
22-24	APWA Mid-America Conference	Kansas City	Duane Smith 515-294-8103
28	Accident Location and Analysis System	Ames	Sharon Prochnow 515-294-3781
29	Accident Location and Analysis System	Ames	Sharon Prochnow 515-294-3781
29	Flagger Workshop	Cedar Rapids	Tom McDonald 515-294-6384

May 1998

7-8	Iowa Access Management Conference	Ames	Dave Plazak 515-296-0814
11-12	Iowa Summer Maintenance Expo	Des Moines	Duane Smith 515-294-8103
15	Iowa Traffic Control and Safety Association Conference	Ames	Tom McDonald 515-294-6384
19-20	Flagger Workshop	Pocahontas	Tom McDonald 515-294-6384

Free continuing education via the ICN

EVERY SPRING Iowa State University offers a series of weekly seminars for transportation students. Speakers of national and international repute provide a broad perspective on contemporary transportation issues.

Seminars are broadcast Friday mornings at 10:00 via the Iowa Communications Network (ICN) to the University of Northern Iowa and Iowa Department of Transportation's central offices.

With ample lead time, seminars can be viewed remotely at other ICN classrooms in Iowa. Check out the topics for remaining seminars, and plan to "attend" one or two via the ICN.

February 20 "The NAFTA Superhighway," Keith C. Leftwich, State Senator, Oklahoma Senate; President, North America Superhighway Coalition

February 27 "Regulation and Innovation: Lessons from the American Railroad Industry," Robert Gallamore, Director of Strategic Planning, Union Pacific Railroad, Omaha, Nebraska

March 6 "Systems and Markets for Onboard Navigation Systems," Harry Voccola, Senior Vice President for Industry Relations, Navigational Technologies Corp., Rosemont, Illinois

March 13 "I-35 Corridor Feasibility Study," Scott Smith, HNTB Corporation, Kansas City, Missouri

March 20 (No seminar; spring break)

March 27 "ITS/CVO: Can It Really Work?" Gene Bergoffen, Vice President, TransCore, McLean, Virginia

April 3 "Alternative Transportation Fuels," Jon Van Gerepen, Associate Professor of Mechanical

Pavement markings conference

April 1, 1988
Scheman Building, ISU, Ames

THIS WORKSHOP is for city, county, and state street and highway administrators responsible for effective, safe traffic markings on their roads; pavement marking crew chiefs and contractors; and traffic



Engineering, Iowa State University

April 10 "Urban Sustainability: Potential Energy Futures for Belfast, Northern Ireland," E. F. Granzow, Research Fellow, University of Ulster-Jordanstown

April 17 "Transportation and Sustainable Communities," Lee Munich, Senior Fellow, Hubert J. Humphrey Institute of Public Affairs, University of Minnesota

April 24 "Reauthorization of the U.S. Transportation Program," Norman Mineta, Senior Vice President, Lockheed IMS, and former chair of the Transportation and Public Works Committee of the U.S. House of Representatives

May 1 "Asset Management's Relationship to Transportation Investment Policy," Darrel Rensink, Director, Iowa DOT, Ames, Iowa

safety engineers. Topics will include environmental issues; glass beads; materials; other states' experiences and practices; city, county, and state perspectives; views from contractors; and changes in Part 3 of the Manual of Uniform Traffic Control Devices.

Registration materials are in the mail.

Representative Thomas E. Petri (R-Wisc) spoke at ISU's transportation seminar in May 1997. Petri chairs the U.S. House of Representatives subcommittee on surface transportation and is a key player in the debate regarding reauthorization of the transportation bill.

More seminar information

FOR MORE INFORMATION about viewing a seminar remotely (or to borrow a videotape of a seminar), contact Sharon Prochnow, 515-294-8103; sharon@ctre.iastate.edu.

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