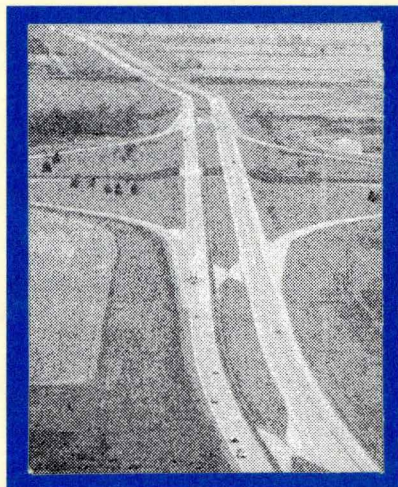


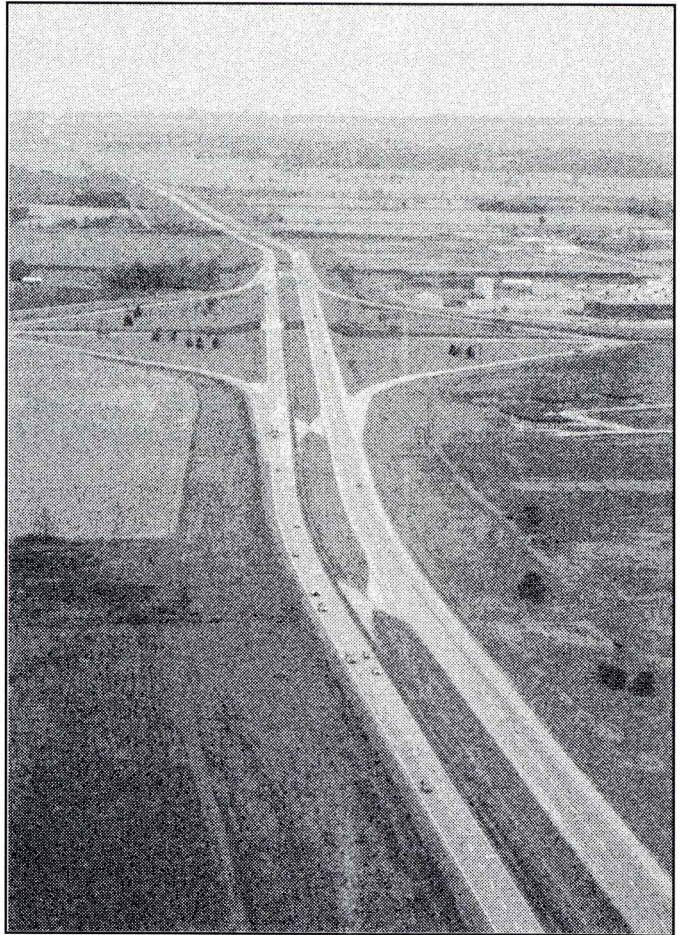
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# **Iowa Transportation Center**

***Research, Education,  
and Extension***



# Iowa Transportation Center



## ***Iowa Transportation Center***

*The Iowa Transportation Center: Research, Education, and Extension* was published by the Iowa Transportation Center, 2521 Elwood Dr. - Suite 125, Ames, Iowa 50010-8263 Phone: 515/294-8103 Fax: 515/294-0467

The opinions, findings, or recommendations expressed here are those of the Iowa Transportation Center and do not necessarily reflect the views of the Federal Highway Administration or the Iowa Department of Transportation.

Director: Tom Maze  
Editing and Design: Larry Mendenhall

### **And justice for all . . .**

Appointment, promotion, admission, and programs of extension at Iowa State University are administered to all without regard to race, color, creed, sex, national origin, disability, or age. Call the Affirmative Action Office at 515/294-7612 to report discrimination.

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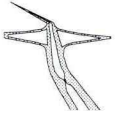
# Introduction

The Iowa Transportation Center (ITC) began in 1982 as one of the 10 original Federal Highway Administration Rural Technical Assistance Program Centers, commonly referred to as "T-Square" Centers. Its mission was to disseminate the latest in transportation technology and techniques to local governmental agencies.

Technology transfer remains a major part of ITC activities. But since 1982, when it began as the Local Transportation Information Center, changes at the Center have been dramatic.

The changes brought additional activities within the scope of the Center's mission. This brochure describes those activities and how they fit into the Center's operation.

# Mission and Staff



Until early 1992, the Iowa Transportation Center was one of the many Iowa State University Extension programs. Extension remains at the heart of the ITC's mission, but it is now a university center without department or college affiliation.

As a university center, the ITC is able to gather diverse faculty and staff members to provide a multi-disciplinary approach to its programs of extension, research, and education. The



*Eric Damian Kelly, Chair of the Department of Community and Regional Planning; Mary Kihl, a professor of Community and Regional Planning; and Kathleen Waggoner, an Interdisciplinary Research Associate in the Department of Civil and Construction Engineering, represent some of the diverse academic disciplines that are tapped by the ITC for its research projects.*

approach is critical to its success. Because the role of transportation in our society is so great that it encompasses many disciplines, the Center finds that sociolo-



***C. Phillip Baumel, a distinguished professor at Iowa State University, is one of many faculty members whose research efforts are supported by the Iowa Transportation Center.***

gists, economists, logisticians, engineers, planners, political scientists, and gerontologists provide fresh views and insights to transportation issues.

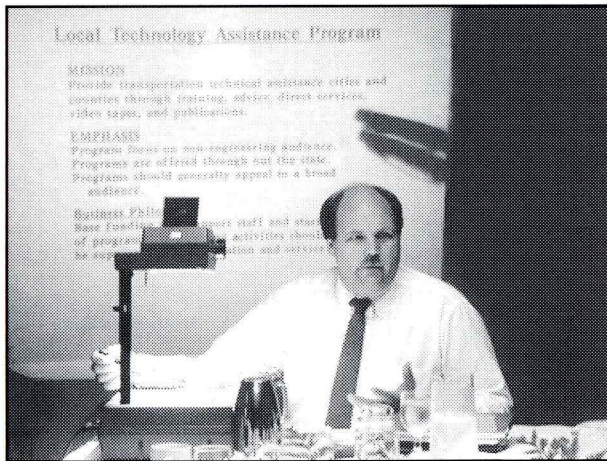
As a university center, the Iowa Transportation Center

is the focal point for transportation at Iowa State University. Specifically, the ITC manages its own educational program for transportation students, conducts transportation services and continuing education programs, and performs transportation research for public and private agencies and companies.

At the core of the Center is the expertise of its

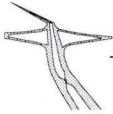


nationally recognized experts in transportation engineering, planning, safety, systems management and operation, and policy. The Center excels in combining resources with other university-based organizations, and with transportation agencies, consulting firms, and industry to develop superb research teams. These teams collaborate on transportation-related topics such as facility management, operations planning, safety, advanced transportation technology, and regional and national transportation policy.



**Center Director Tom**

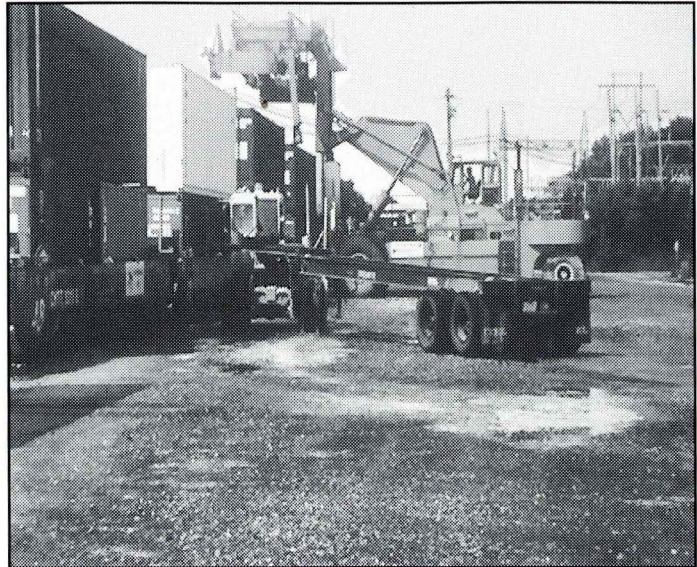
The Iowa Transportation Center also acts as a contact for agencies and companies wishing to utilize university-based resources not only at Iowa State University, but at the University of Iowa and other Midwest universities. The Center develops university-based, interdisciplinary teams to address a sponsor's



The Center administers several contracts, grants, and programs. The two largest are the Iowa Department of Transportation's (DOT) comprehensive research, education, and extension program; and the Midwest Transportation Center.

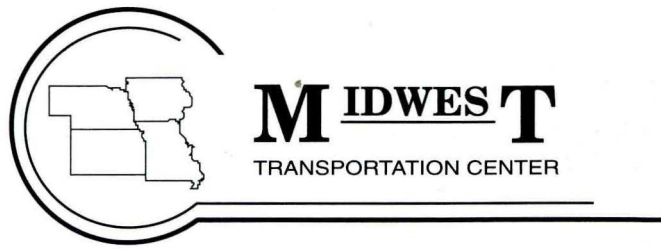
The Iowa DOT's comprehensive program is a new initiative with Iowa State University which links the resources of the two institutions. This agreement allows Iowa State and the DOT to become partners in creating an innovative program of multidisciplinary research, education, and training.

The Midwest Transportation Center (MTC) is the



*The Iowa Transportation Center has conducted and sponsored several projects involving such topics as intermodal transportation, public policy, regulation, public investment, and management and planning.*

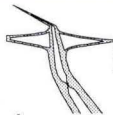
# Programs



tation University Transportation Center for Federal Region VII (Iowa, Kansas, Missouri, and Nebraska). The MTC is a consortium of Iowa State University and the University of Iowa.

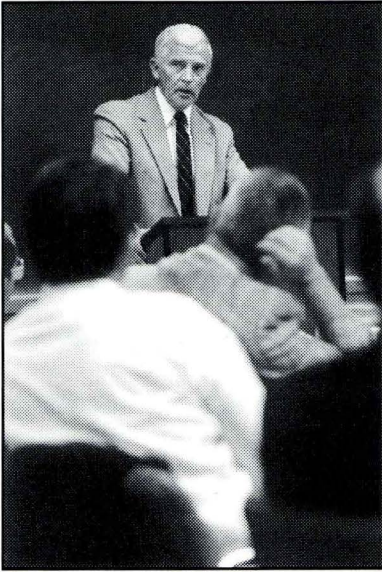
The ITC manages many other programs including the Federal Highway Administration Local Technical Assistance Program for Iowa. The Center employs 15 full-time staff members, supports roughly 50 graduate and undergraduate students, and has more than 30 faculty members involved in ongoing Center or Center-affiliated projects at several major Midwest universities.

## The Midwest Transportation Center



In 1990, the Iowa Transportation Center became the lead organization for the Midwest Transportation Center, a consortium of Iowa State Univer-





***Iowa Department of Transportation Director, Darrel Rensink, addresses Center researchers and government staff members at a Midwest Transportation Center program.***

sity and the University of Iowa. The Midwest Transportation Center is one of the original 10 U.S. Department of Transportation University Transportation Centers. The MTC focuses on issues involving midwestern and rural transportation policy, transportation planning, and transportation system management issues.

MTC activities include conducting and funding research, managing its own educational programs, and conducting technology transfer activities. The Center's technology transfer products – which include workshops, publications, or videotapes – expose other transportation experts to the Center's research results and create forums for discussion of relevant transportation issues. For example, the Center sponsored an Intelligent Vehicle - Highway Systems (IVHS) seminar where transportation planning and traffic engineering





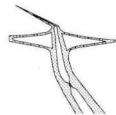
*Several MTC projects examine issues involving rural transportation services and the special needs of elderly citizens.*

staff members from federal and state agencies, Iowa cities and counties, and technology

suppliers were invited to discuss IVHS and provide input to the Iowa IVHS plan.

The Center distributes reports that arise from MTC research projects, and publishes a newsletter. Several of the Center's educational lectures and seminars are videotaped and a lending library of these videotapes are maintained by the Center.

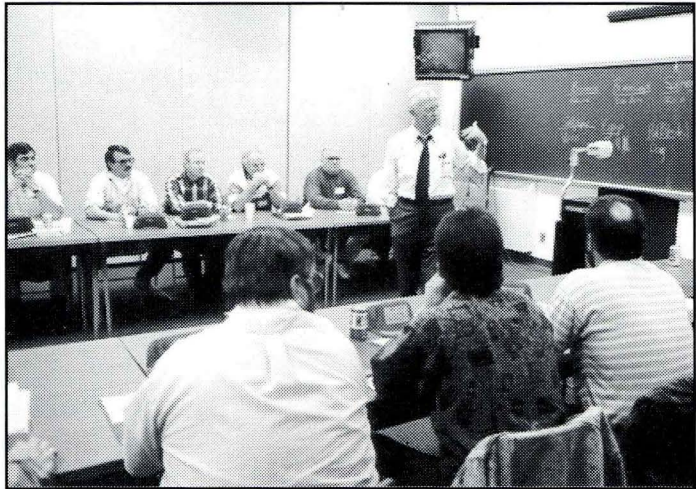
## Center Extension Activities



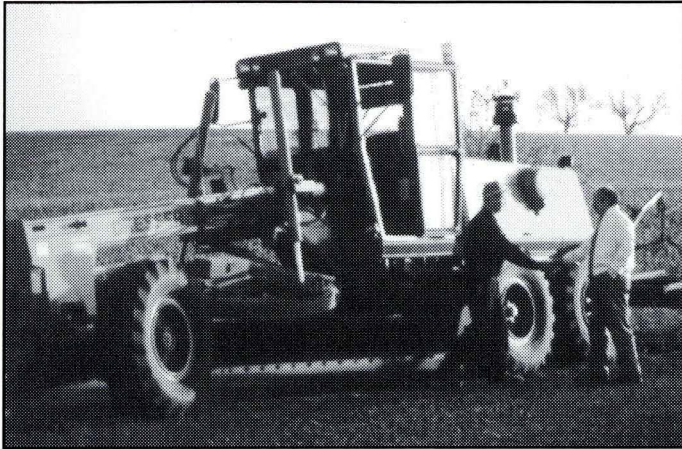
The Iowa Transportation Center manages the Federal Highway Administration Local Technical Assistance Program (LTAP) for Iowa. It also conducts other transportation extension services for specific sponsors such as state transportation departments,

cities, and counties. The Center organizes between 50 and 80 formal training programs per year that were attended by more than 2,000 local and state transportation agency staff members. One of the Center's ongoing technology transfer activities won the *Best Overall and Most Effective Program* award in the Federal Highway Administrator's biannual safety awards competition.

Through the Iowa Transportation Center's extension activities, the



***Ed Bigelow directs the Center's popular extension programs.***



***Many of the Center's extension programs are taught off-campus in the communities that stand to benefit directly from them.***

Center maintains a lending library of publications and videotapes, which serve as reference, information, and training materials for local and state highway and transit agencies. Periodically, the

Center publishes reports and

manuals which identify good practices for use by local governmental agencies. For example, "Alternative Fuels - What You Need to Know" has been distributed nationally by the American Public Works Association.

The Center also provides direct services to cities and counties. These services include software installation, data collection, and in-office training for the Center's own microcomputer pavement management system. In addition, the Center provides limited traffic engineering assistance and traffic signal retiming services, as well as software installation and data collection for sign management.



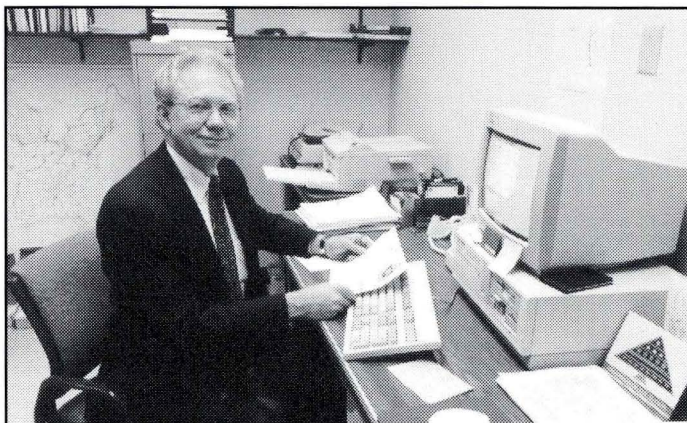


The Iowa Transportation Center conducts research using its own staff or with collaborative efforts of other faculty members. Projects led by Iowa Transportation Center staff range from studies dealing with recruiting women and minorities into the transportation work force to pavement management optimization.

An important Center initiative is to develop expertise in rural, intercity, and small urban applications of Intelligent Vehicle Highway Systems (IVHS). Now that the interstate highway system is nearly complete, transportation agencies must focus their attention on managing exist-

# Research Activities

*Bill McCall is the Center's Associate Director in charge of advanced transportation technology research.*



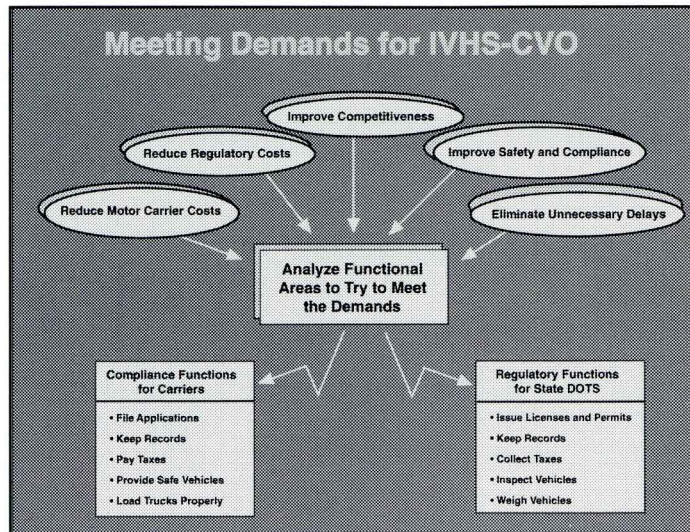


more efficiently and safely.

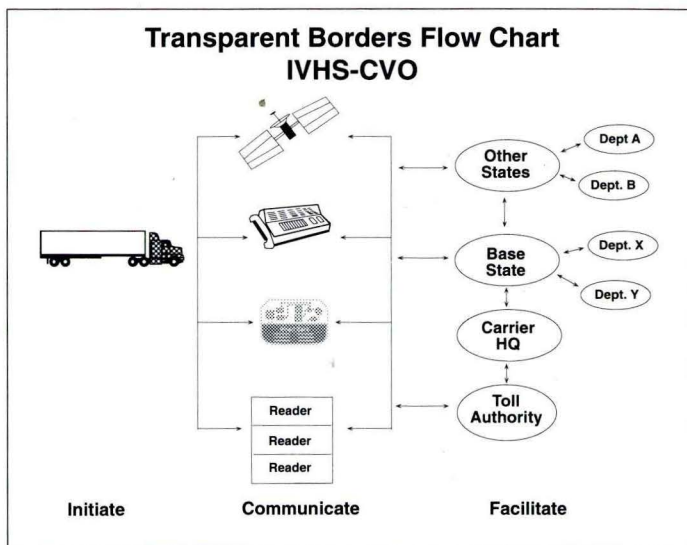
IVHS is expected to be the key element in these efforts.

The Center has taken the lead in conducting research of institutional issues that act as barriers to the deployment of IVHS commercial vehicle applications. These, and not technical issues, are the real barriers to IVHS implementation. The Center's study of Iowa institutional issues which may inhibit IVHS has been adopted as the national model for similar studies done by other states.

Other Center IVHS research studies include supporting the Federal High-



*The Center's research into institutional barriers preventing the implementation of IVHS-CVO applications has been used as a national model for other states conducting similar investigations.*

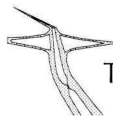
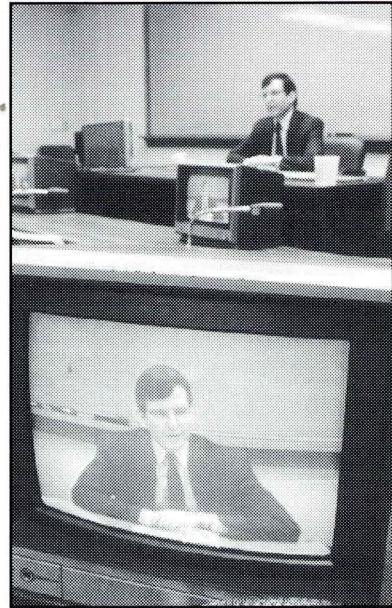


*The Iowa Transportation Center is a national leader in implementing the transparent border concept for commercial vehicle operations (CVO).*

way Administration in establishing a third intelligent commercial vehicle corridor along I-80; developing related concepts, procedures, and databases for using an automatic vehicle location system to coordinate rural-urban transit interfaces in Des Moines; and the development and evaluation of automation of truck and bus supplemental accident data reporting. The Center works in collaboration with the Iowa DOT on IVHS operational tests and deployment and implementing the Iowa IVHS plan.

# Educational Activities

*The Center shares a "TV classroom" with the University of Iowa.*



The Center manages the Midwest Transportation Center's Transportation Scholars Program at Iowa State University; a parallel program exists at the University of Iowa. Educational programs at both universities combine research experience with specially designed course requirements. Students selected for the Transportation Scholars Program are competitively chosen and work on a transportation research project under the direction of their major professor.

The Center also manages its own graduate degree program, the Master of Science in Transportation Planning. This is a true interdisciplinary program



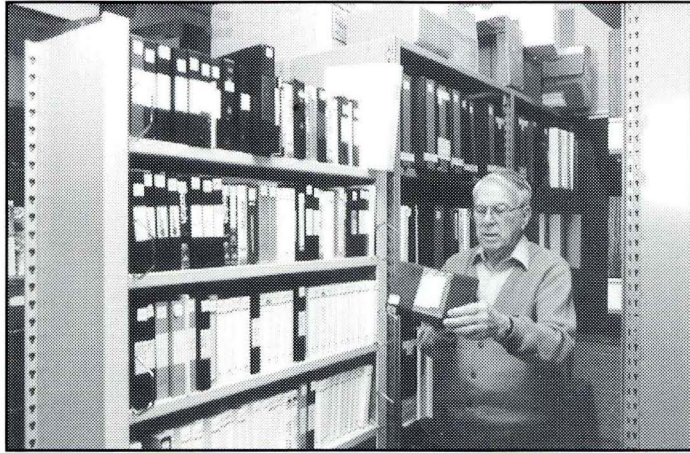
neering, Community and Regional Planning, and Transportation and Logistics. The Transportation Planning program also allows students to emphasize one of several supporting disciplines, including Political Science, Sociology, Psychology, Industrial Engineering, and Economics.

***Transportation Scholars  
"talk shop" during one of  
two scholar seminars held  
each year.***

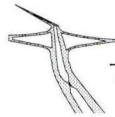




# For More Information



*Stan Ring oversees the Center's technology transfer library.*



The Iowa Transportation Center has a wealth of material available to those interested in transportation issues and research. These materials include copies of all Midwest Transportation Center research reports, videotapes of Center-sponsored classes and programs, as well as videotapes and publications from its technology transfer library. To discover what's available from the ITC phone 515/294-8103 or fax a request for information to 515/294-0467. Our address is:

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