



## PLANNING AND ENVIRONMENT

### Rural Development Efforts by FHWA

U.S. DOT and FHWA are working to understand the needs of small towns and rural communities and provide training, technical assistance, and outreach to strengthen and promote rural development. Within FHWA, the Office of Intermodal and Statewide Programs (HEPS) is involved with several initiatives to improve rural transportation planning and rural development planning. Outreach efforts include:

**Rural Transportation Planning Handbook:** FHWA, in conjunction with the Federal Transit Administration (FTA), is producing a handbook on rural planning to help address many of the concerns rural communities have when developing transportation systems. This handbook will be a resource to rural planners, decision makers, and tribal transportation officials and planners about the characteristics of rural transportation, jurisdictions, planning, transit, ITS, and access management. The handbook includes case studies of successful planning efforts. The handbook is still in draft form but will be released within 6 months to field offices.



**Training:** HEPS is developing a new course based on the release of the new *Rural Transportation Planning Guidebook*. The course will look at rural development issues and focus on transportation. The course will be delivered through a new and innovative partnership with Local Technical Assistance Program (LTAP) and Rural Technical Assistance Program (RTAP) centers. Many LTAPs and RTAPs have expressed an interest in building their planning training capacity and will be field testing this course soon. Information on course offerings will be out shortly.

**Outreach:** HEPS is working with the National Rural Development Partnership (NRDP)—an organization that

## Serving Rural America

U.S. Department of  
Transportation  
Rural Program Guide



**A Rural Planning Guide to help planners and officials find the right DOT programs to help their communities is available on-line and is being updated. It can be found at: <http://ntl.bts.gov/data/programa.doc>**

works to strengthen rural America through collaborative partnerships. NRDP brings together partners from local, State, tribal, and Federal governments, as well as from the for-profit and non-profit private sector to leverage U.S. DOT transportation  
*(Continued on page 2)*

The *Research and Technology Transporter* communicates FHWA research, development, and technology accomplishments, findings, information, and technology transfer opportunities. Its audience is transportation engineers and professionals in State and local highway agencies, State DOTs, Local Technical Assistance Programs, Divisions, Resource Centers, Core Business Units, academia, and the research community. The eight-page newsletter is published monthly by FHWA's RD&T service business unit. Editorial offices are housed at the Turner-Fairbank Highway Research Center. Comments should be sent to the managing editor at the address below. Field offices are encouraged to submit articles for publication via the appropriate agency technology leader from the editorial board listed below. The newsletter can be viewed online at [www.tfhrc.gov](http://www.tfhrc.gov). Subscriptions to the *Transporter* are free. Send your request to Judy Dakin at the address below, or send email to [judy.dakin@fhwa.dot.gov](mailto:judy.dakin@fhwa.dot.gov).

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## New Publication Streamlines Environmental Decision Making

FHWA's Office of National Environmental Policy Act (NEPA) Facilitation, in collaboration with the Louis Berger Group, has produced a study examining the impacts of NEPA on the time and costs of various transportation projects. The study is called *Evaluating the Performance of Environmental Streamlining: Development of a NEPA Baseline for Measuring Continuous Performance*.

The research study provides a better understanding of how the NEPA process impacts the total time and cost involved in completing a Federal-aid highway or bridge project. Despite the overall benefits of NEPA in addressing the wide array of public interests that can be impacted by transportation facilities, the process itself has been the target of criticism on the basis that it delays and increases cost for completing projects. This is the perception for projects that require an Environmental Impact Statement.

The study had three main objectives:

- Develop a methodology to establish an historical and

statistically-generated baseline of the time required to comply with the NEPA process;

- Develop a methodology to statistically assess the impact of the NEPA process on project delivery time and cost under a variety of conditions;
- Identify future data needs and improvements for the continuation of this research.



By achieving these objectives, the study made baseline measurements. These measurements make it possible to develop goals, performance measures, and benchmarks for evaluating environmental decision making. Setting these goals meets the "environmental streamlining" effort called for in TEA-21.

This first-of-its-kind study presents a number of conclusions concerning relationships between the NEPA project development process and the delivery of projects for transportation facilities that will be of interest to environmental practitioners and stakeholders alike.

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*(Continued from front page)* planning and programming with other planning efforts at the State, Federal, and local level. NRDP is holding their National Conference in Washington, D.C., from March

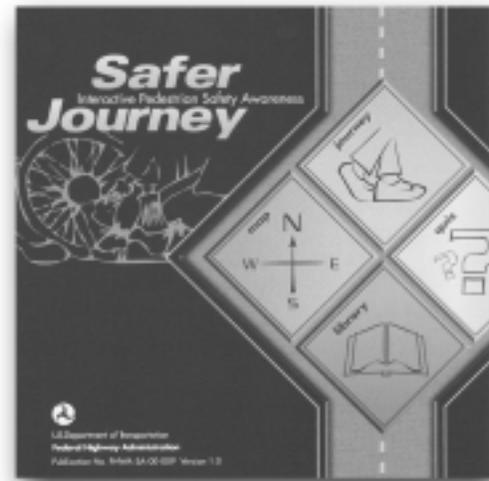
30 through April 4. HEPS is presenting a panel on rural transportation.  
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## New Pedestrian Products

A pedestrian is injured in a traffic crash every six minutes. In 1999 there were 4,906 pedestrian fatalities—about 12 percent of all traffic related fatalities. With this in mind, FHWA's Safety Core Business Unit is developing a range of products targeting the general road user and the safety practitioner. The following products were just completed and launched:

*Pedestrian/Bicyclist Safety Resource Set* is a CD-ROM containing a library of information on how to improve pedestrian/bicyclist safety in communities across the nation. Included in the set is information on facility design, planning, guidelines, good practices, and tools to aid in problem identification, and countermeasures development. This CD-ROM contains about 15,000 pages of information classified by various categories (e.g., design, planning, outreach, tools, etc.) and is intended for safety practitioners and other advocates who want to create walkable/bikeable communities.

*Safer Journey—Interactive Pedestrian Safety Awareness* is an interactive CD-ROM that takes the user through various pedestrian safety scenarios encountered every day across America. It has been developed to improve the level of pedestrian knowledge for all road



Products such as these inform users about safer practices that may help save lives.

users (including schools, driver education groups, enforcement, etc.) and safety practitioners. The CD-ROM activities include the Journey, the Quiz, and a library of resources. During the Journey section the user interacts with the software to determine the outcome of the scenario. A crash-type safety countermeasure matrix is included in the library section. This CD-ROM can also be included in State/local community pedestrian awareness materials kits and/or used at seminars or conferences.

*A Walkable Community* is a brochure that provides a snapshot on designing for a walkable community. Creating a walkable community is much more than just sidewalks; it is important to understand the needs and characteristics of pedestrians and the issues that affect their travel. A crash-type safety countermeasure

matrix is featured with related graphics. More detailed information on each of the 60 plus countermeasures illustrated in this brochure can be found on the Safer Journey CD-ROM in the library section. This brochure is intended for safety practitioners, advocates, and other special road users who want to create walkable/bikeable communities.

These publications are being distributed nationwide, but specific audiences will be targeted, e.g. highway safety representatives, traffic engineers, enforcement officers, driver education groups, schools, and safe community groups. For additional information or to request copies contact Levenson Boodlal at (202) 366-8044, [leverson.boodlal@fhwa.dot.gov](mailto:leverson.boodlal@fhwa.dot.gov).  
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## New Capability Added to TFHRC Sign Simulator

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An improved sign simulator at TFHRC can create dynamic sign images from 35-mm slides and can project three-dimensional images onto a 150-cm diagonal rear projection screen using a unique computer graphics projection system. The simulator (SIGNSIM) is equipped with a new participant response station that uses a Vectra Smart Wye keyboard encoder to translate button pushes into standard computer keystrokes. Together these improvements greatly enhance the range of human factors experiments that can be conducted at TFHRC.



The sign simulator is one of five simulators comprising the Human Centered Systems Laboratory at TFHRC. Traditionally the sign simulator has been used to present dynamic images of roadway signs to

observers. The signs appear to approach the observer at varying rates of speed. As the signs approach, research participants make judgments about the recognition distance and/or comprehension distance for each particular sign. Many different roadway signs have been tested in this manner over the years. In order to present high-resolution signs approaching at different speeds, a special Zoom Lens Slide Projection System was developed. This slide-based rear-projection system has supported most of the previous research conducted in SIGNSIM.

The current SIGNSIM study is examining possible pedestrian confusion at crosswalks with both standard and proposed alternative pedestrian crossing signals. Future studies will investigate ways to mitigate



**The sign simulator is one of five simulators comprising the Human Centered Systems Laboratory.**

run-off-road crashes, speed management, intersections, and visibility.

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## OPERATIONS

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### New Architecture Conformity Rule

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On February 7, FHWA and FTA published Notices in the *Federal Register* to extend, for 60 days, the effective dates of their respective rule and policy regarding conformity with the National ITS Architecture and Standards.

The new effective date is April 8. This extension was in response to a January 20 memorandum from the White House. In order to

ensure that the incoming administration has the opportunity to review any new regulations, the memorandum asked agencies to temporarily postpone for 60 days the effective dates of any regulations that have been published in the *Federal Register* but have not taken effect. The 60-day period allows time for department and agency heads to assume their offices, become aware of upcoming regulations, and help

shape their implementation where appropriate.

To view the White House memorandum, the FHWA notice extending the effective date of its rule, and the FTA notice extending the effective date of its policy, go to [www.ops.fhwa.dot.gov](http://www.ops.fhwa.dot.gov).

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## New ITS Standards Web site

The standards section of the ITS Joint Program Office Web site has been improved to provide users with an easier and more complete method of obtaining the range of resources available. Located at [www.its-standards.net](http://www.its-standards.net), the home page of the site describes what ITS standards are and the role of the ITS Standards Program.

In essence, industry consensus-based ITS standards define how system components operate within a consistent framework known as the National ITS Architecture. By specifying how systems and components interconnect, the standards promote interoperability. To expedite deployment of nationally interoperable ITS systems and services, U.S. DOT supports specific ITS standards initiatives, especially in areas that have significant public benefit.

The U.S. DOT ITS Standards Program is working toward the widespread use of standards to encourage the interoperability of ITS systems. Through cooperative agreements with five standards development organizations (SDOs), the Standards Program is accelerating development of about 100 non-proprietary industry-based consensus ITS standards, and is encouraging public-sector participation in the development process.

The Web site offers seven key categories of information:

- (1) About ITS Standards,
- (2) Resource Documents, (3) ITS Standards Fact Sheets,
- (4) Deployment Status, (5) Testing,
- (6) ITS Standards Deployment Assistance, and (7) Training.



The resource documents section includes brochures, primers, an overview, lessons learned documents, case studies, and guidance. The deployment status section includes details on standards that are published, approved, in ballot, and under development. The latter information is available in the form of printable milestone charts.

The testing section includes volumes I & II of the test report for the National Transportation Communications for ITS Protocol (NTCIP) *Dynamic Message Sign Standards*. The deployment assistance section includes contacts at FHWA Resource Centers, and FTA Regional & Metropolitan Offices, an entire database of ITS standards contacts, and links to the ITS Peer-To-Peer program.

The Web site also provides easy access to the range of training programs in general ITS seminars, national ITS architecture, general ITS standards, NTCIP standards, and transit standards.

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## TECHNOLOGY TRANSFER

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### Ghasemi Named FHWA Engineer of the Year

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**H**amid Ghasemi, recipient of the FHWA Engineering Excellence Award, was named FHWA Engineer of the Year for 2000.

Ghasemi has achieved a great deal over the past three years in the field of seismic isolation of highway bridges. He developed the test plan and became the driving force behind the testing of 11 seismic isolation devices. In addition, he authored 12 of the project's 14 reports. These highly innovative reports and findings are now being used by bridge engineers internationally. As a key member of the American Association of State Highway and Transportation Officials (AASHTO) Subcommittee on Bridges and Structures' Technical Committee T3, he assisted in the development of the new *AASHTO Guide Specifications for Seismic Isolation of Bridges*. Ghasemi is also a member of the American Society of Civil Engineers (ASCE), the

Civil Engineering Research Foundation (CERF), and the Highway Innovative Technology Evaluation Center's (HITEC) seismic isolation evaluation panel. He is currently the technical manager of a major contract to build this country's largest seismic shake-table at the University of California at San Diego.

Ghasemi has frequently made presentations to State and private industry engineers on bridge dynamics and isolation. He conducted an analytical/experimental study on modal analysis of skewed bridges and has authored more than 15 technical publications. Ghasemi received his bachelor's and master's degrees from the University of Louisville, and he earned his doctorate in structural engineering at the University of Kentucky. He joined FHWA in 1992 and is currently a research structural engineer in FHWA's Office of Infrastructure Research and Development.



**Mr. Ghasemi is one of FHWA's experts in the field of seismic isolation of highway bridges. He has received the FHWA Engineering Excellence Award and was named FHWA Engineer of the Year for 2000.**

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### Bright Minds Building Cities of the Future

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**T**wenty-one middle schools from across the country participated in the finals of the 2001 National Future City Competition, which was held in Washington D.C. during National Engineers Week, February 18 through 24. These schools won local and regional competitions to advance to the national level, where teams of professionals, representing the public and

private sectors and academia, evaluated plans and models of cities of the future created by the middle school students. The students competed in the overall competition for five awards and were evaluated by special teams of judges for the best essay (an essay was required from each team of students); the People's Choice Award; and 15 special awards.

U.S. DOT presented a special award for the best transportation system to Drexel Hill Middle School from the western suburbs of Philadelphia. Their winning city, named Aquarius, is a floating city that travels the oceans in the year 2050 with a mission of bringing peace and harmony to the world. U.S. DOT judges, who evaluated the cities for the transportation award,

*(Continued on page 7)*

(Continued from page 6)

were Martha Soneira, Bill Zaccagnino, and Elizabeth Fischer of FHWA; Ed Christopher and Nelda Bravo of BTS; and Bill Siegel of FTA.

St. Barnabas Catholic School in Beverly, IL, won first place in the overall competition as well as winning the best essay award. The school had won the Chicago regional competition to advance to the finals.

Middle school students used off-the-shelf design software to create their cities, incorporating residences, industry, commercial buildings, public infrastructure, transportation modes, and other features. While many students in a school contributed to the final products, three students were selected to make the presentation of their city to the judges and to respond to questions, such as those from the U.S. DOT team about the movement of people and goods; accommodations for pedestrians, bicyclists, and people with disabilities; and the



**A team from Drexel Hill Middle School was awarded the Best Transportation System special award by the U.S. DOT.**

location of transportation access points.

The creativity and innovation reflected in the city designs and models and the presence and professionalism of all the student

presenters was remarkable and is to be commended as a reflection of the Nation's bright engineering future.

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## PROFESSIONAL DEVELOPMENT

### Academic/Transportation Research Forum Will be Held June 25–27

The FHWA Universities and Grants Programs is sponsoring the first annual Academic/Transportation Research Forum from June 25–27, 2001. Approximately 200 participants are expected at the forum, which will be held in Washington, DC.

Jackson State University, through the FHWA Minority Institutions of Higher Education (MIHE) Initiative, is coordinating the forum.

The Academic/Transportation Research Forum is designed to share information on transportation research and educational opportunities and to involve the academic community to assist in meeting the research priorities and workforce needs of the U.S. DOT. The workshops will include participation from TFHRC, FHWA business units, and the former and current Dwight David Eisenhower Transportation Fellowship

(DDETFP) recipients. One common theme is meeting the workforce challenge of the 21st century through planning and partnerships. For further information contact Dr. Sheila Porterfield at (601) 979-3326 or [sporterf@ccaix.jsums.edu](mailto:sporterf@ccaix.jsums.edu) or Leslie Porter at (703) 235-0536 or [leslie.porter@fhwa.dot.gov](mailto:leslie.porter@fhwa.dot.gov).

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## International Symposium Coming this Summer

A Transportation Technology Transfer Symposium will be held July 29–August 2, 2001 in St. Petersburg, FL. The objective of this Symposium is to bring together major transportation technology transfer entities world-wide to exchange advances and current technology transfer practices and techniques, and in doing so to improve their efficiency. The Symposium presents a unique beneficial opportunity for participants to interact with colleagues and counterparts from around the world to learn and share. All practitioners involved in technology transfer should plan to attend.

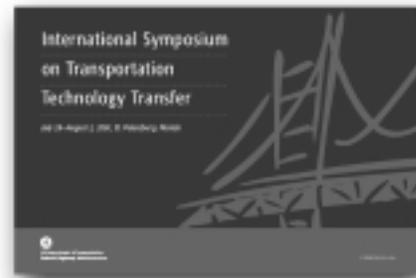
This Symposium is being held in conjunction with other world organizations' meetings, including the U.S. Local Technical Assistance Program's (LTAP) annual meeting. Sponsor organizations will hold simultaneous meetings that are open to all participants.

Topics for the joint sessions include:

The Technology of Technology Transfer, Worldwide Library and Information Resources, International Transportation Training and Workforce Development, International Partnerships: Twinning and Networking, and Expanding and Strengthening Partnerships.

George Shrieves, former director of the National Highway Institute and coordinator for the conference said, "This is a great opportunity to meet people from other groups, from the U.S. and internationally, and for people to update their knowledge of the practice." Shrieves has been involved in hosting previous international technology transfer meetings.

The Symposium is sponsored by world-wide transportation entities, including: FHWA's Office of International Programs and NHI; LTAP and the Tribal Technical Assistance Program (TTAP); the World Road Association (PIARC);



**A brochure regarding the August 2 symposium was distributed at TRB and has been mailed out to FHWA customers and partners.**

the Transportation Research Board (TRB); the Bureau of Transportation Statistics (BTS); the Organization for Economic Cooperation and Development (OECD); and the Pan American Institute of Highways (PIH).

For more information about the International Symposium visit [www.international.fhwa.dot.gov](http://www.international.fhwa.dot.gov).

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