EDA PROJECT INVOLVES INSTITUTE FOR TRANSPORTATION

In this era of budget cuts and government downsizing, federal institutions and agencies across the country are focusing their energies on getting the most from their investments.

The U.S. Department of Commerce (DOC) has joined these ranks, asking researchers at NJIT’s Institute for Transportation to take part in a project to determine the results and return on federally-supported infrastructure projects.

NJIT, in collaboration with researchers at Rutgers, Princeton and Columbia Universities, the National Association of Regional Councils (NARC), and the University of Cincinnati, has been involved for the past six months in a comprehensive examination of federal infrastructure investments funded under the DOC through the Economic Development Administration (EDA).

“No one has done this kind of work before," said Louis Pignataro, executive director of NJIT’s Institute for Transportation. "This will have a significant impact. If an agency is expending public funds it needs to know the impact and return on that investment."

Infrastructure is defined as roads, water/sewer lines, water/sewer treatment facilities, piers and ports, public buildings, energy and communications facilities and other capital facilities required by the citizenry. Infrastructure in the nation’s 83,000 cities and other local jurisdictions is directly linked to the national economy.

"Public infrastructure is the foundation upon which industrial wealth is created; it is utilized by every citizen and all industries," said Robert W. Burchell, the project’s Principal Investigator, of Rutgers’ Center for Urban Policy Research. "The linkage of infrastructure investment to national productivity means that if the United States is to improve its competitiveness and economic growth, there must be sustained investment in, and development of, basic local infrastructure."

Since 1965, EDA’s mission has been to promote the long term recovery of economically depressed areas by assisting local governments in generating and retaining jobs and in stimulating commercial and industrial growth. While the United States disperses approximately 140 billion infrastructure dollars per year through various federal, state, county and municipal agencies, little has been done to document its economic impact.

The project partnership has been evaluating the EDA performance measurement testing and impact assessment of 205 public works projects. Another phase of the project is evaluating 200 defense adjustment projects, those which traditionally address economic distress caused by unanticipated closures of military bases, laboratories, or major plants, as well as natural disasters.

Surveys were initially sent to all grantees involved in the study. Subsequently, researchers visited regional offices to review files, and held seminars at 13 locations nationwide. NJIT’s team was responsible for 25% of the projects.

In addition, teams personally traveled to 100 locations across the country during January and February of this year to conduct in-depth discussions with grantees and verify both scale and relative health of the project, the number of direct and indirect jobs created, and grantee relationship with EDA regional offices throughout project evolution. Extensive telephone interviews were held with all sites not visited.

"I hope the partnership will be able to tell us how much direct and indirect economic impact each dollar of federal investment generates on a public works project," said Awilda Marquez, a senior policy advisor for EDA. "This will give us a snapshot of what one year’s worth of investment can bring to the taxpayer."

"The time is right for us to be able to articulate what we get from all of the projects that we fund across the country," continued

Continued on page 3
Response to the inaugural issue of On-Route was heart-warming. Welcome feedback included a letter from a former student of mine, now a transportation professional in upstate New York.

In an early response to the termination of federal transportation legislation this fall, the National Center for Transportation and Industrial Productivity (NCTIP) sponsored a symposium here at NJIT last June. Addressing massive highway, transit, bridge, port and freight needs, it was one of many steps the region has been taking to prepare for the reauthorization of ISTEA. Prominent representatives of all facets of government and industry discussed several relevant regional transportation issues — transportation funding, marine port access, freight linkages, and surface transportation. Speakers included U.S. Senator Frank Lautenberg (D-NJ) and former NJ Congressman Robert Roe, co-authors of the 1991 legislation, and Assemblyman Alex DeCroce of the NJ General Assembly Transportation and Communications Committee, who gave the keynote address.

The symposium highlighted the importance of intermodality in the region and the necessity of public agency interaction with private industry. Proceedings of the symposium are available (see Publications, Page 4).

With the publication of the last of five detailed reports, the Institute for Transportation has just completed a major study on pipeline safety for the federal Office of Pipeline Safety, which was triggered by the March, 1994 explosion in Edison, New Jersey. We are currently participating in a $685K research project sponsored by the federal Economic Development Administration to measure success of and test performance measures used to evaluate EDA-funded public works and defense adjustment projects (see EDA Project, Page 1).

I have recently accepted appointment as a member of the TRB Steering Committee for the planning of a 1997 Conference on Education and Intermodal Transportation. TRB’s last major conference on transportation education took place in October, 1984! It is therefore most timely that this new conference be undertaken.

Money Magazine’s seventh annual ranking of the top values in four-year undergraduate schools places NJIT 3rd on the list of scientific and technical schools in the United States and 59th on the list of best college buys. NJIT also was listed 11th among the Best Values in the Mid-Atlantic Region.

Our annual student paper competition resulted in a $1,000 award to Caroline J. Rodier of the University of California at Davis, for her paper entitled “A Method of Obtaining Consumer Welfare from Regional Demand Models.” Congratulations to Ms. Rodier from the staff of the Institute.

And so the challenge here at IT continues. Dr. Steven Chien is a very welcome addition to our Transportation faculty (see Page 3). We have initiated a series of seminars, described in the following column. An excellent group of graduate students continues its studies in the transportation profession. And, once more, if you are “in the neighborhood” you are invited to stop by for a visit.

SEMINAR SERIES

A series of transportation seminars was inaugurated this past fall with the presentation of “The Role of the MPO in Transportation Planning,” by Joel Weiner, Executive Director of the North Jersey Transportation Planning Authority (NJTPA). The ISTEA legislation greatly expanded the responsibility and authority of Metropolitan Planning Organizations (MPOs) for coordinating and prioritizing the transportation needs of a region. Mr. Weiner’s presentation was significant in its portrayal of a national model for a successful MPO and in putting forth his formidable argument for the presence and continuation of MPOs in this year’s reauthorization of ISTEA.

“The Indirect Effects of Transportation Improvements,” was presented in November by Larry Pesesky, of Louis Berger & Associates. As co-principal investigator (with Berger’s Nicholas Masucci) of a National Cooperative Highway Research Program (NCHRP) project on the subject, Pesesky developed an analytical framework to measure some difficult-to-assess effects of transportation improvements, including changes in social and economic conditions, natural resources, cultural or historical resources, accessibility, induced traffic, noise levels and air quality.

Dr. Roger Nortillo, Executive Vice President of Maher Terminals, Inc., a major terminal and stevedoring operation in the Port of New York and New Jersey, gave an operator’s vision of Intelligent Terminal Systems’ applications. Under his direction, sophisticated computer systems and communications programs have been developed to service multiple ports, steamship lines, container operations, intermodal trucking and rail and multiple customer applications.

Seminars are held Thursdays at 3 p.m. in the William S. Guttenberg Information Technology Center, Room 3510. Please contact us if you wish to be included on our mailing list.
EDA PROJECT

Continued from page 1

Marquez. "This study will help explain the value and importance of the programs we fund. It will also give us guidance and direction for determining how a project should be planned in the future. That is what performance measurement is, and what it will do for us."

A second part of the research will be to develop a model to determine the economic impact of both the public works and defense adjustment projects. Final reports will be presented at workshops and training sessions at EDA regional offices throughout the country.

EDA hopes the findings will result in the creation of more jobs in local communities and increased tax bases and private sector investment.

"It's not necessarily saving money as it is knowing where money is going," said Marquez. "The research is designed to help taxpayers and communities get a number of different benefits that now are simply conjecture or estimates. The study will try and make this more quantifiable."

CHIEN JOINS FACULTY

Dr. Steven Chien, an Assistant Professor of Civil and Environmental Engineering, has joined the Institute for Transportation of the New Jersey Institute of Technology. His primary responsibilities will be with the National Center for Transportation and Industrial Productivity in the areas of teaching and research.

Prior to joining the NCTIP staff, Dr. Chien was a senior transportation engineer in Washington, D.C. in which capacity he was associated with several projects for the Federal Highway Administration, including a traffic management lab project, TRAF simulation models technical support project and complex systems theory applied to traffic modeling.

His academic experience includes work for the FHWA, Corps of Engineers and Maryland DOT while at the University of Maryland where he received his M.S. in 1991 and Ph.D. in 1995, both in Civil Engineering (Transportation). He also holds a B.S. in Civil Engineering from Tamkang University in Taiwan, received in 1983.

Chien's main research interests are in the application of advanced mathematical techniques to transportation problems, including transportation system analysis, urban transportation planning, intelligent transportation systems, and intermodal transportation service planning and design.

HIGHLIGHT

As noted in the Director’s Column, a significant symposium was held at NJIT by NCTIP, the national transportation center within the Institute for Transportation. Highlighted items included surface transportation and port issues, funding and the unique means by which the funding resources might be used. The symposium resulted in the following suggestions:

- Although ISTEA stressed intermodalism, there is a need to allow more innovative and flexible sharing of funds for the freight and public transit modes.
- A streamlining and acceleration of the transportation project development process can reduce inflation-driven project costs.
- An infrastructure trust fund can make financial resources more readily available to non-traditional aspects of the transportation system.
- An increase in funds available for transportation needs can be achieved through appropriating all authorized federal funds and increasing a dedicated proportion of state gasoline taxes to transportation.

- With current improvements in technology, user fees (including congestion pricing) can be fairly applied.
- Private interests should be sought for both traditional projects and large scale commercial developments. Public/private ventures and design-build options should be fostered.

With transportation accounting for a significant percentage of the GDP, every effort must be made to maintain the region’s economic viability by sustaining a reliable transportation system.
**RECENT PUBLICATIONS**


**TRANSPORTATION COURSES - FALL, 1997**

**NEWARK**

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<th>Course Code</th>
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<th>Days and Time</th>
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<tr>
<td>Tran/CE 552</td>
<td>Geometric Design of Transportation Facilities</td>
<td>Wed. 6:00 - 9:05 p.m.</td>
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<tr>
<td>Tran/IE 610</td>
<td>Transportation Economics</td>
<td>Fri. 6:00 - 9:05 p.m.</td>
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<tr>
<td>Tran 615/CE 660</td>
<td>Traffic Studies and Capacity</td>
<td>Mon. 6:00 - 9:05 p.m.</td>
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<td>Tran/IE 643</td>
<td>Transportation Finance</td>
<td>Mon. 6:00 - 9:05 p.m.</td>
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<td>Tran/CE 650</td>
<td>Urban Systems Engineering</td>
<td>Tues., 6:00 - 9:05 p.m.</td>
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<td>Tran 702</td>
<td>Selected Topics in Transportation</td>
<td>TBA</td>
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<tr>
<td>Tran/CE 705</td>
<td>Mass Transportation Systems</td>
<td>Wed., 6:00 - 9:05 p.m.</td>
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<tr>
<td>Tran 755</td>
<td>Intelligent Transportation Systems</td>
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**TRENTON**

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<tr>
<td>Tran/EM 640</td>
<td>Distribution Logistics</td>
<td>Thurs., 6:00 - 9:05 p.m.</td>
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Inquiries relating to either matriculating or non-matriculating programs in Transportation should be addressed to: Mabel Rodriguez, Assistant to the Director, Institute for Transportation, University Heights, Newark, New Jersey 07102. Tel: (201) 596-3355; Fax: (201) 596-6454; email Rodriguez@admin.NJIT.edu.