

Focus on Research

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"Focus on Research updates engineers and technicians on items of interest upcoming in active TxDOT research projects."

Project Helps TxDOT, MPOs Meet ISTEA Requirements

Many new requirements for urban transportation planning have resulted from the Clean Air Act Amendments of 1990 (CAAA) and from ISTEA. Under Research Project 7-1960, *Assisting TxDOT in Meeting ISTEA Requirements*, the Texas Transportation Institute provides professional and technical staff services to help TxDOT, MPOs, and other local agencies in Texas urban areas as they:

- ◆ Develop and improve the functional processes, technical methodologies, and administrative procedures for urban transportation planning
- ◆ Acquire and train transportation planning staff
- ◆ Prepare the initial transportation plans and programs required by the new legislation

Project objectives include the following:

- ◆ Identifying the requirements of ISTEA and the 1990 CAAA
- ◆ Preparing strategies to address requirements
- ◆ Establishing processes and procedures
- ◆ Training staff from MPOs and other local agencies to handle the added transportation planning activities
- ◆ Developing technical procedures and then validating them using available data
- ◆ Providing transitional assistance

One benefit from Project 7-1960 is a financial plan prepared for the 1996-98 Statewide Transportation Improvement Program. Another is that researchers will continue to provide assistance in the Career Development Program and Training for MPO managers and staff. Also, rules prescribing procedures for the Statewide and Metropolitan Transportation Improvement Plans, developed under this project, will be published in the Texas Administration Code. Phase 1 of establishing a Statewide Transportation Information Database, a computer bulletin board system for the MPOs and TxDOT, has been completed. TTI staff demonstrated how to use the bulletin board at the Planning Conference in Houston in June 1995. A number of other reports and workshops have been developed during this project and published or presented by TxDOT.

Project 7-1960 started in June 1992 and ends in August 1995.

RMC 1 — PD: Eddie Shafie, TPP
Researcher: Monte Wade, TTI



Texas Department of Transportation

A New Focus in TxDOT Research

Research Management Committees (RMCs)

Effective June 1, 1995

- RMC 1 Management and Policy
- RMC 2 Multimodal Transportation
- RMC 3 ROW, Hydraulics, and Environmental Conservation
- RMC 4 Roadway Planning and Design
- RMC 5 Structures
- RMC 6 Pavements
- RMC 7 Materials
- RMC 8 Construction and Maintenance
- RMC 9 Traffic Operations

Evaluating a Decade of Travel Surveys

During the past decade, TxDOT conducted travel surveys in different urban areas in Texas in order to update trip generation models. Now TxDOT needs information from these various studies to be compiled and compared. This comprehensive information will lead to an understanding of travel pattern changes that have occurred over time and will permit development of appropriate methods and procedures to best use the data.

Project 1-1099, *Urban Travel in Texas: An Evaluation of Travel Surveys*, will:

- ◆ Develop a comparative assessment of the travel surveys,

Research and Technology Transfer Office, in cooperation with the FHWA

Training Modules to be Developed from TxDOT's High-Performance Concrete Experience

Engineers all over the country are interested in the casting and installation of high-strength, high-performance concrete. TxDOT's Research Project 9-580, *Design and Construction of Extra-High-Strength Concrete Bridges*, will be documented and prepared in modular presentation format. This information can then be used in technology training seminars to be held at technical meetings both in Texas and at various locations throughout the country.

This spin-off project, 9-590, *Development of a Two-Day Workshop on the Design and Construction of Extra-High-Strength Concrete Bridges*, will create a two-day workshop consisting of five presentation modules:

1. Development of the Louetta Road Overpass Bridge Project mix design
2. Structural design features associated with the use of high-performance concrete (HPC)
3. Fabrication at the prestressed plant
4. Construction of the bridge
5. Bridge performance measurement. A pilot workshop will be conducted prior to the actual technical presentation.

The FHWA Office of Technology Applications (OTA) will be able to use the two-day workshop to educate transportation people about the methods and benefits of using high-performance concrete (HPC) in new bridges constructed in their respective regions. Because of the workshop's modular design, OTA will be able to take this two-day seminar on the road to various locations, adapting its format regionally to accommodate local conditions. This project started in July 1994 and will end in August 1996.

RMC 5 — Mary Lou Ralls, DES

Researchers: Ramon L. Carrasquillo, Ned H. Burns, and David W. Fowler, CTR, and Susan Lancaster, TTI

Project 1-1099 continued from page 1.

including differences between urban areas and changes in travel characteristics over time.

- ◆ Determine the most appropriate procedure for: 1) estimating trip productions in urban areas in Texas; 2) estimating trip attractions; 3) estimating trips for special generators; and 4) conducting external station travel surveys.
- ◆ Measure the changes in travel characteristics that have occurred since the original surveys were conducted.
- ◆ Determine the need for additional workplace surveys and the appropriate sample sizes for use in those surveys.
- ◆ Measure the ability of the current trip length frequency distribution (TLFD) procedure to estimate the observed distributions from the surveys.

The findings of this study will allow TxDOT to update the travel demand models now being used in many urban areas in Texas. These improvements in travel demand modeling are expected to be substantial. Project 1-1099 began in September 1991 and ended in August 1995.

RMC 4 — PD: Paul Tiley, TPP

Researcher: David Pearson, TTI

Focus on Research

The purpose of *Focus on Research* is to update engineers and technicians on items of interest in active or upcoming projects. The contents of the various articles do not necessarily reflect the official views of the FHWA or TxDOT.

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