

## NCHRP Workshops Develop Projects

When several research projects that represent parts of a larger problem are considered for funding and financial resources are limited, how do decision makers determine which projects are of the highest priority, both individually and as significant parts of the big picture? This is a dilemma that the NCHRP has faced in recent years.

### Tradition and Innovation

Projects for the NCHRP are intended to address high-priority problems that a number of state highway departments have wanted to solve. The problems have usually been self-contained—that is, specifically defined and limited in scope.

SCOR formulates the NCHRP annual program from a list of candidate problems during its annual meeting. At times, when several viable projects, all within a similar interest area, are under consideration, SCOR has instructed the NCHRP staff to assemble workshops of experts from government agencies, private organizations, and academia to identify and priority rank specific research needs. The NCHRP workshops are intended to provide potential research projects to the NCHRP, as well as to the research community at large. Three such workshops have now been conducted, and a fourth is scheduled for early 1990.

### Workshops

The first workshop was conducted under NCHRP Project 12-28, Load Capacity of Bridges, in 1984. Discussion focused on the structural evaluation of existing bridges and resulted in the development of 20 project scopes, 14 of which, totaling \$3.25 million, were suggested for funding within the NCHRP over three

program years. Thirteen projects were eventually funded; one was dropped because of duplication. The results of many of these studies are being used to modify AASHTO's *Manual for Maintenance Inspection of Bridges*.

The second workshop, organized and conducted under NCHRP Project 3-38, Traffic Management and Operations—Research Program, was held in 1986. Although not the only concern discussed, the growing problem of suburban traffic congestion received special attention during the workshop, which recommended 12 research projects, 4 synthesis topics, and 3 special projects at a total of more than \$3.4 million. Subsequently, SCOR approved seven projects and one synthesis, and work that will extend over three program years is now under way.

The third, most recent workshop was for NCHRP Project 14-9, Workshop on Research Needs in the Management of Highway Maintenance, in June 1988. Management of maintenance activities

at both the project and program levels was discussed. Special consideration was given to management of resources, including the most important—personnel. Fifteen projects with an estimated cost of \$3 million were identified. Three of these projects have been approved by SCOR and contracts will be executed soon.

A fourth workshop, now in the planning stage, will be held under NCHRP Project 2-17, Transportation and Economic Development.

Workshop participants, SCOR, and the NCHRP staff are convinced that workshops are an effective mechanism for sorting out the highest priority issues within general problem areas. The minimal expense involved in the conduct of the workshops is more than offset by a better coordinated program of activity in a world of limited financial resources. NCHRP can be expected to use this innovative approach for some time to come.

## Top Managers Get Help

### NCHRP project addresses needs of CAOs

The changing character of state transportation agencies requires chief administrative officers to deal with a wide range of multimodal issues during their usually short tenure.

Much of the research conducted under the NCHRP is designed to solve specific problems experienced by practitioners—problems related to the planning and operational functions of state highway departments. Although top management is certainly affected by these problems and benefits from improved agency performance that results from such research, this type of research does not necessarily address the most immediate needs of top management. To

provide top managers with a resource to support their decisions and improve their effectiveness, SCOR approved NCHRP Project 20-24, Research Program Design—Administration of Highway and Transportation Agencies, in September 1986, and a panel of top officials of transportation departments, academicians, and representatives of both private industry and government agencies was selected to guide and administer the project.

### Research Program

The panel selected Apogee Research, Inc., Bethesda, Maryland, to prepare the recommended research program under NCHRP Project 20-24. Apogee Research surveyed and interviewed CAOs to identify their concerns and used this information to develop project descriptions, which contain background details

and plans to guide future research. A total of 17 projects were selected and grouped in three major categories: resource development, decision support, and financial management.

A variety of options for implementing the research program was recommended. Many of the options require resources beyond those available to the NCHRP—the initial investment to perform all of the recommended research is estimated to exceed \$6 million—and some of the recommended research projects may be conducted by other agencies. SCOR will consider these projects for future funding and the NCHRP will carry out several of the higher-priority projects within the next few years.

## Activities Under Way

Activity has begun on three studies under Project 20-24:

1. Using Market Research To Improve Management of Transportation Systems is nearing completion; a draft report is now being reviewed. The findings of this research project will help state departments of transportation add modern marketing techniques to their program development and evaluation methods.

2. Executive Management Information Systems for State Departments of Transportation is also nearing completion. Guidelines for such systems are being developed in conjunction with an AASHTO task force.

3. Recruitment, Training, and Retention of Professional Employees is expected to begin early in 1990. Activities under this research project will be coordinated with those of another AASHTO task force interested in finding solutions to the problems of attracting and keeping highly qualified transportation professionals.

Completion of successful projects and continued involvement of the NCHRP panel should ensure that a portion of the annual NCHRP program will be devoted to research identified and guided from a top management perspective.

*Copies of the final report, NCHRP Project 20-24: Research Program Design, are available for loan from the NCHRP.*

# University Transportation Centers

## *Attracting the nation's best talent to study transportation issues*

MILTON PIKARSKY

**W**hen interest in transportation research wanes and funding dwindles, among the organizations hardest hit are universities, which depend on outside support to help train future professionals and develop research programs. Current trends indicate that the future of transportation in the United States may be in jeopardy:

- Federal funding for transportation projects, especially major mass transit capital programs, and education has been reduced.

- Fewer transportation professionals are being hired.

- Enrollment in civil engineering programs at U.S. universities has dropped significantly.

- Transportation infrastructure is deteriorating.

- Senior transportation professionals are retiring at a greater than average rate.

These factors, along with the completion of the Interstate program in 1991, are contributing to the simultaneous decrease in the number of transportation professionals and rise in their average age. This profound personnel deficit is expected to continue well into the next century.

Sensing the need to reverse this discouraging situation, several transporta-

tion educators got together in the late 1970s to discuss ways to draw federal attention to these problems and obtain federal funds to support solutions. The Council on University Transportation Centers (CUTC) grew out of that group. CUTC consists of universities from various U.S. regions that together serve as a nationally coordinated and cooperative university program.

## Laying the Groundwork

Members of the fledgling CUTC outlined plans to secure increased support for individual researchers through enhanced funding of existing U.S. Department of Transportation university research programs and to gain additional interdisciplinary research support by establishing a reliable new dedicated source of funding. The new funds would be used to encourage university faculty members and researchers to undertake

*This article by Milton Pikarsky appears posthumously. Pikarsky was Distinguished Professor of Civil Engineering at the City College of New York and Director of the City University Institute for Transportation Systems.*