

by the temperature sensors and the friction meter. Yet many of the operators pointed out that even when equipment malfunctioned, they could still operate the truck at or above the same level of service at which they operated conventional plows. This kind of operator feedback is essential if the vehicle is to have optimum utility and receive operator buy-in.

### **Expected Impact/Research Needs**

In essence, the private vendors had already done the feasibility studies for the technological components they contributed. Beyond the individual components, a large-scale economic impact study was unnecessary. Although DOT personnel have spent a significant amount of time on the project, the contribution of the vehicle itself—a standard truck—was not a major financial investment.

In the future, the data gathered by the prototype snowplow will have uses beyond improving the ability to combat snow and ice. A future goal of the project is to make winter driving safer by

learning (a) how adverse driving conditions develop and (b) when the average driver responds to these conditions. When this information is available, winter maintenance activities can be focused intensively on those areas in which they can be the most effective.

A 2-year study that has been proposed by CTRE and the University of Iowa would correlate information gathered by the equipment on the snowplow truck (for example, friction, visibility, and treatments used) with data on accident rates and traffic volume/speed. This information would be used to create a predictive model of changes in driving behavior as winter weather conditions develop. Ultimately, a benefit-cost model would be developed to measure how well the new technologies (especially friction measurement) perform in winter conditions.

Such strides are within reach thanks to the involvement of CTRE. Says Smithson, "At the DOT, we don't have the staff to do projects like these anymore. The concept vehicle project would not be taking place at all without this unique partnership."

## **AASHTO's Snow and Ice Cooperative Program**

KEN F. KOBETSKY

In 1994 the American Association of State Highway and Transportation Officials formed a Winter Maintenance Policy Coordinating Committee to provide guidance on improvement of snow and ice control among the member departments. AASHTO also invited cities and counties to join this effort. It was apparent from the experiences of the member departments and other local agencies that improved customer service in the area of snow and ice control could be achieved at significantly reduced costs. A great deal of the equipment and materials used for snow and ice control in the past was based on operational experience rather than research and development.

In April 1997, AASHTO held a national workshop on snow and ice control. This workshop was attended by more than 100 representatives of the research community, state and local operations, and industry. The objectives of the workshop were to identify ways of applying research findings, share operational successes and failures in improving customer service, and challenge industry in the development of new products and equipment for snow and ice control. Following the workshop, AASHTO's Standing Committee on Highways established a Snow and Ice Coop-

erative Program (SICOP) with the following mission, goals, and strategies.

**Mission:** Provide leadership, innovation, and results in order to improve the safety, service, environmental quality, reliability, and cost-effectiveness of winter highway operations.

**Goals:** Change culture, build capacity, close the gap between knowledge and practice, and advance technology.

**Strategy:** Identify needs, opportunities, and priorities; develop resources; build partnerships; coordinate programs; communicate; promote and inform; educate; plan and conduct projects; and ensure deployment.

Rodney Pletan of the Minnesota Department of Transportation is serving on loan to oversee SICOP. He is currently working to establish national programs in the areas of training, customer service, and material specifications. By late 1998, a training program is expected to be available for use by state, county, and local governments in enhancing the state of the art in snow and ice control.

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