UNIVERSITY at ALBANY UNDERTAKES COMPREHENSIVE TRANSPORTATION STUDY

Understanding commuter patterns and behavior plays a vital role in successfully managing and encouraging the use of alternative modes of transportation. The University at Albany is currently conducting a comprehensive transportation study which will provide a blueprint for other institutions to follow. This was made possible by funding through Program Opportunity Notice 1239, Sustainable Transportation Systems, a joint effort of the New York State Department of Transportation (NYSDOT) and the New York State Energy Research and Development Authority (NYSERDA).

The research team is completing work in four main areas: assessing the availability of alternative transportation opportunities for the campus community and Harriman campus, identifying the geographic base of the commuting population, gathering data of the on time reliability of selected bus routes used by the campus, and using a survey and focus groups to examine campus commuting behaviors.

Several techniques are being employed within this project. A Geographic Information System (GIS) is being used to map the home base of the current commuting populations of UAlbany and the nearby Harriman campus to identify cluster patterns. (See figure 1)

Figure 1: An example of a GIS map showing the location of commuters’ home address. The colors indicate the level of density.
Additionally, GIS was engaged to identify geographic access to CDTA bus routes. (See figure 2) A comprehensive transportation survey and supplementary focus groups were developed to gauge commuter concerns and desires. A Global Positioning System (GPS) is being used to assess on time performance of the UAlbany shuttles and CDTA routes 11 and 12.

Preliminary results were presented to an advisory group consisting of individuals from NYSDOT, NYSERDA, the Capital District Transportation Committee, and the Capital District Transportation Authority.

The main findings include:

1. The availability of commuting by bus is sparse, especially if one is not living along a CDTA bus route.
2. Over half of the commuting population does not have a geographically accessible bus route on which to commute.
3. A comprehensive service of the campus community revealed that 73% of the employees and 39% of the students commute in single occupancy vehicles on a daily basis.
4. The survey identified convenience and scheduling issues as the main reasons why alternative transportation is not being used.
5. Availability of bike lanes and safety while biking were top concerns of employees and students.

The research team will continue to work on this project over the next few months to complete the data analysis and make recommendations. Specifically, the areas identified by the GIS mapping for carpooling and vanpooling opportunities will be targeted with educational and marketing campaigns. The GPS information will be evaluated and each route given a grade according to the level of service provided by the transit agency. A comprehensive analysis of the survey results and focus group input will be completed. Protocols documenting the procedural tasks and tools employed in this study will be developed in order to create a handbook for other institutions to use as a resource when conducting comprehensive commuting assessments.

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NYSDOT PARTICIPATION IN AURORA

Overview

NYSDOT has participated in the Aurora Program pooled fund for the past eleven years. There are numerous benefits as an active participation team and voice regarding national research associated with winter maintenance and road weather information systems (RWIS) within transportation. Aurora, internationally recognized as a leader among the snow and ice community, provides invaluable knowledge, opportunities, and professional associations critical to efficient operations, innovative technology, and winter maintenance leadership.

Aurora Program

Established in 1996, the Aurora Program is an international partnership of public agencies who work together to perform joint research activities related to road weather. Efforts focus on collaborative research, development, and deployment of RWIS that best serves the interest and needs of public agencies. As a result, Aurora’s initiatives are supporting technological advancement and improvement of existing RWIS, significantly reducing the adverse impacts of inclement weather on mobility and public safety. Members include 14 DOTs (Alaska, Illinois, Indiana, Iowa, Michigan, Minnesota, Nevada, New York, North Dakota, Ohio, Pennsylvania, Utah, Virginia and Wisconsin), Quebec, Ontario, and Sweden. Agency participation requires a $25,000 annual commitment, which typically comes from federally provided SP&R funds. Agency representatives include international leaders in RWIS research, technology, and deployment, many of whom have an affiliation with AASHTO’s Snow and Ice Cooperative Program (SICOP) and other related programs. Agency benefits from participation include:

- Provide input into creating the agenda for collaborative research, development, and deployment of road and weather information systems (RWIS)
- Multiply agency’s financial resources to address the most pressing RWIS related challenges
- Develop relationships with national and international public and private leaders in RWIS equipment, decision support systems, standards, and training (Note: NYSDOT utilized a statewide RWIS vendor. Termination of the contract in its early stages saved the Department millions of dollars in what would have been an underperforming system).
- Help advance the state-of-the-art of technologies in the RWIS industry.

Aurora Projects

The Aurora Program fosters a number of new project ideas each year. Program members then review them for areas of common interest and develop an annual work plan that outlines project funding for the coming year. Since the inception of the program, there are over thirty completed research efforts and several others near completion. A comprehensive list of all completed projects is located on the Aurora Program website at:

http://www.aurora-program.org/
NEWS FROM THE TRANSPORTATION RESEARCH BOARD E-NEWSLETTER

TRB Annual Meeting and Transportation Research Record Call for Papers

TRB standing committees have issued calls for papers for the TRB 90th Annual Meeting, January 23-27, 2011, in Washington, D.C, and the Transportation Research Record: Journal of the Transportation Research Board (TRR). While papers addressing any relevant aspect of transportation research will be considered, some committees are soliciting papers in specific subject areas to help potential authors identify topics for their papers. Committees will be producing calls for papers through June, so authors should visit this site periodically. [More]

Transitions to Alternative Transportation Technologies–Plug-in Hybrid Electric Vehicles

The Board on Energy and Environmental Systems, part of the National Academies' Division on Engineering and Physical Sciences (DEPS), has released a report that explores the current and projected technology status of plug-in hybrid Electric Vehicles (PHEVs); considers the factors that will affect how rapidly PHEVs could enter the marketplace, including the interface with the electric transmission and distribution system; determines a maximum practical penetration rate for PHEVs; and incorporates PHEVs into the models used in a 2008 National Research Council report on hydrogen fuel cell vehicles to estimate the costs and impacts on petroleum consumption and carbon dioxide emissions. [More]

State of the States: Fuel Cells in America

Fuel Cells 2000 has released a report designed to provide a snapshot of fuel cell and hydrogen activity in the 50 states and District of Columbia. [More]

Transportation's Role in Reducing U.S. Greenhouse Gas Emissions

The U.S. Department of Transportation has released a report that examines greenhouse gas (GHG) emissions levels and trends from the transportation sector and analyzes the full range of strategies available to reduce these emissions. [More]

U.S. Carbon Dioxide Emissions in 2009: A Retrospective Review

The U.S. Department of Energy's Energy Information Administration (EIA) has released a report that examines the level and drivers of energy-related carbon dioxide emissions in the United States in 2009. According to EIA, 2009 saw the largest absolute and percentage decline in energy-related carbon dioxide emissions since the start of EIA's comprehensive record of annual energy data in 1949. [More]