



Mineta Transportation Institute

Annual Report 2005-2006



MTI

Created by Congress in 1991

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Center Theme



As originally designated by Congress in ISTEA in 1991 and reaffirmed by the Institute's Board of Trustees after reauthorization in TEA-21 in 1998, the Mineta Transportation Institute (MTI) undertakes research, education, and information/technology transfer programs relative to the policy control and management of all surface transportation modes. In short, MTI produces case studies of the best examples of surface transportation policy and management activities in the world, accumulates those into peer-reviewed publications, and communicates those "best practices" to MTI's professors, students, and the leaders of the nation's transportation community.

During the 1991 ISTEA and 1998 TEA-21 debates, Congress strongly expressed the desire to assure the international competitiveness of the nation's transportation systems. Because of the availability of much larger motor vehicle fuel taxes in other industrialized countries, the U.S. will not be able to outspend the competition, so we must instead outsmart them. MTI's objective is, therefore, to identify through research, to teach through education, and to broadly disseminate through information/technology transfer programs the best transportation practices in use throughout the world. MTI's work encompasses all modes of surface transportation, including the interface between modes.

MTI is organized by function, with principal staff operating in each of four departments: Administration, Research, Education, and Information/Technology Transfer.





A Note from the Executive Director



Background:

The Mineta Transportation Institute (MTI), formally known as the Norman Y. Mineta International Institute for Surface Transportation Policy Studies, has experienced a metamorphosis during the past authorization. MTI was originally designated in the Intermodal Surface Transportation Efficiency Act of 1991 as a policy research center attached to the College of Business at San José State University (SJSU). At that time MTI was the only university transportation center in the nation not affiliated with a college of engineering. At the end of ISTEA eight years ago, with a total annual budget of \$500,000, MTI had four research projects in process and was offering a newly accredited Master of Science in Transportation Management (MSTM) and graduate Certificate in Transportation Management (CTM), with fewer than a dozen students enrolled. Though a webpage existed, funding shortages precluded frequent updates.

In 1998, a four-year Transportation Equity Act for the 21st Century (TEA-21) grant for \$750,000 per year was authorized for MTI through the U.S. Department of Transportation's Research and Special Programs Administration (RSPA). A matching grant from the California Legislature was provided through the California Department of Transportation (Caltrans). TEA-21 required that the 17 Group B and C University Transportation Centers (UTCs) compete, with 10 to be selected to continue at \$1 million each per year for the final years of the authorization. After an extremely competitive application and interview process, MTI was chosen

as one of the 10 continuing Centers of Excellence. Though the state faced a major budget deficit, Caltrans matched the federal grant, confirming the state's commitment to MTI.

During this evolutionary period, MTI's ISTEA surface transportation policy and management legislative mandate was honored and became focused on three specialties: 1) security and emergency response management, 2) finance, and 3) land use, transportation, and environment interrelationships. Though other issues are studied when requested by the designated research needs assessment liaisons with U.S. DOT Western Resource Center, Caltrans, and the MTI Trustees, MTI has become a preeminent resource to the national transportation community on these three priority topics.

Research:

Since mid-1999, MTI has published 43 expertly conducted, peer-reviewed policy research projects and has 19 more under contract and in process. Research supported by the TEA-21 and Caltrans grants engaged 90 of MTI's 154 certified Research Associates (RA), most of whom are Ph.D.s, as well as 98 student research assistants. Significant research and information transfer efforts (local and regional forums, national symposia or summits, etc.), often sponsored by non-grant funds, have also been completed. Research topics are selected annually through a carefully structured needs assessment process involving designated U.S. DOT and Caltrans committees, the internationally prominent MTI Board of Trustees, and other national transportation leaders. The projects and research teams are chosen annually after a structured bidding and selection process. Final project selection is made by the MTI Research Associate Policy Oversight Committee

(RAPOC), which is made up of the seven chairs, or their designees, of the interdisciplinary academic departments at SJSU that are associated with MTI.

Education:

Sixty-one California State University accredited Master of Science in Transportation Management (MSTM) degrees have been granted since 1999, five of which were conferred this fiscal year. Thirty-four professional Certificates in Transportation Management, requiring completion of 12 core units from the MSTM program, were conferred during the TEA-21 contract period. Currently 51 students are enrolled in the MTI MSTM and certificate programs at SJSU. Those students are receiving instruction via the Caltrans 24-site, statewide videoconference network. That network is supplemented with two-way online, videostreaming instruction, available to mobility-impaired and out-of-state students. To support this unique instructional capacity, Caltrans installed a state-of-the-art videoconference origination site for MTI. The student counseling, syllabi, assignments, homework, testing, and a chat room for each class are provided through the education section of MTI's webpage (<http://transweb.sjsu.edu>).

These MSTM and certificate programs, specifically granted to MTI by the California State University Board of Trustees, are supplemented by the related traditional SJSU undergraduate and graduate programs in Business, Criminal Justice, Engineering, Library Science, Political Science, Public Administration, Urban Planning, Psychology, Sociology, and others. A significant number of the students from those programs pursue transportation careers, and many of the professors provide transportation policy research via MTI. Consequently, MTI provides recruitment and scholarship assistance from non-grant funds donated to MTI to selected aspects of those traditional programs.

Prior to the 15th Annual MTI Board of Trustees Scholarship Awards Banquet on June 24, 2006, the MTI Alumni Association, including current students as well as prior MSTM and certificate recipients, met to elect new officers. This association assists MTI in tracking the graduates and offers the opportunity for peer support and networking between the members.

Information/Technology Transfer:

TransWeb, MTI's website, has been revamped to make it easier to find MTI publications and research in progress. *TransWeb* has won several national awards and, remarkably, averages over 150,000 unique visitors and over 5,000 pages downloaded each month.

To promote information transfer, MTI has conducted and published the proceedings of seven national symposia and summits and eight regional or statewide forums since 1999. Two more national symposia and two more regional and statewide forums will be conducted and published before the end of the coming fiscal year. During the past year, MTI Research Associates and staff have testified before legislative committees, given several dozen speeches and panel presentations on transportation issues throughout the U.S., and conducted over 100 media interviews related to MTI research. Those outreach successes will be summarized in the following sections.

In addition, MTI continues to publish *The World in Motion*. This quarterly newsletter is distributed to nearly two thousand national transportation leaders by mail and many thousands more electronically via *TransWeb*.

Finally, MTI is proud to be considered a model UTC and has hosted two briefings with RITA



A Note from the Executive Director

Administrator Kaveeshwar. In addition, MTI is advising during the development of five of the new SAFETEA-LU centers. I continue to attend national UTC-related meetings, assist with the negotiation of more UTC support for the U.S. DOT modal administrations, and am vice chair of the national Council of University Transportation Centers.

Staffing:

After running several successful events for MTI, Jim Swofford was hired in July to manage information and technology transfer projects. No other changes in the exemplary core MTI staff team occurred during the past year. But the broader MTI programs are now rapidly expanding to meet the needs of the national transportation community.

During 2005-06, the MTI National Transportation Security Center (MTI-NTSC) was formalized under the direction of Brian Michael Jenkins, who is assisted by Deputy Director Dr. Frances Edwards. With MTI support, Dr. Edwards was recruited by SJSU to also direct the Master of Science in Public Administration program. After presenting the first national “counterterrorism” summit in 1996 and the second “National Transportation Security Summit” in October 2001, MTI-NTSC hosted the well-received third National Transportation Security Summit — co-sponsored by AAR, AASHTO, APTA, DHS/TSA, FHWA, FRA, FTA, and others — on September 29, 2005 in Dallas. Evolving from the MTI-NTSC has been the creation of a new professional Certificate in Transportation Security Management (CTSM), an education concentration that requires the completion of 12 units from the MSTM. Completion of the CTSM not only provides the knowledge to manage transportation security

programs but also provides the legally required California Standardized Emergency Management System (SEMS) and the implied National Incident Management System (NIMS) certifications.

Research Associate recruitment, concentrating on only the finest Ph.D.-level talent, continues with certification required by MTI’s SJSU RAPOC before the RAs are allowed to propose on MTI projects. Note that, though some of the RAs are not located at SJSU, every MTI research team must have at least one SJSU RA and student assistant in order to bring the research knowledge to the university.

Conclusion:

During the past year MTI’s remarkable recent growth was intentionally moderated to protect resources during the fiscally unpredictable reauthorization debates. With the approval of SAFETEA-LU, MTI has resumed the prior rapid, though focused, growth. The staff enjoys this extraordinary opportunity to identify, teach, and share with the nation the world’s best surface transportation policy and management practices. Indeed, the U.S. transportation community, with the help of the national University Transportation Center program, will outsmart the competition and prevail in the global geo-economic competition of the 21st century.

Rod Diridon, Sr.
Executive Director

Administration

The Administration Department provides general management and support of areas such as budget control, grant acquisitions and management, personnel functions, facilities support, office management, coordination and support to the Board of Trustees, the Research Associates Policy Oversight Committee and university, state, and federal relations, and both internal and external communications.



Administration



Honorable Rod Diridon, Sr.
Executive Director

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Rod Diridon is considered the “father” of modern transit in California’s Silicon Valley. His political career began in 1971 on the Saratoga City Council. Due to term limits, he retired in 1994 after five terms and six times as chair of both the Santa Clara County Board of Supervisors and its transit board. He is the only person to chair the nine-county, 110-city, 27-transit-district San Francisco Bay Area’s three regional governments: Metropolitan Transportation Commission, Bay Area Air Quality Management District, and Association of Bay Area Governments.

Mr. Diridon chaired over 100 international, national, state, and local activities, most regarding transportation and the environment. He is chair emeritus and the governor’s appointee to the California High Speed Rail Authority Board and vice chair of the national High Speed Ground Transportation Association. He chaired the American Public Transit Association in Washington, D.C., and was vice chair of the International Transit Association in Brussels and continues as a director. Mr. Diridon chaired the National Association of Counties’ Transit and Railroads Committee, advised the Federal Transit Administration, and chaired the Transportation Research Board’s Transit Cooperative Research Program.

Mr. Diridon is vice chair of the national Council of University Transportation Centers. He also serves on the corporate boards of directors of San Jose National Bank and the Empire Broadcasting Company. From 1969 to 1976, he served as founder and president of the Decision Research Institute, which developed a “shared survey” research procedure adopted by UNICEF. He frequently provides testimony to Congress and speaks throughout the world on sustainable transportation. Mr. Diridon earned both a BS and MBA at San José State University, served two combat tours as a naval officer in Vietnam, has been listed in Who’s Who in America since 1974, and was recently cited by the International Metro Magazine as one of the 50 who most influenced mass transit in North America in the past century. He has received top awards from APTA, the national High Speed Ground Transportation Association, and others. The area’s main train station was renamed the “San Jose Diridon Station” upon his retirement in 1994 from elected office.



Leslee Hamilton
Communications Director

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A former Peace Corps Volunteer, Leslee Hamilton has extensive administrative and communications experience from her work with environmental organizations and on electoral campaigns. She has a BA in business economics from UC Santa Barbara. In addition to working to increase the exposure and use of MTI's research products, Ms. Hamilton manages MTI's National Transportation Security Center activities. She is active on numerous community boards and an advocate for improving the accommodation of bicycles on roads and transit.



Brendan McCarthy
Office Manager

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Brendan McCarthy joined the MTI team as office manager in March 2005. During 4 ½ years in the San Francisco office of U.S. Senator Barbara Boxer, Mr. McCarthy acted as assistant to the state director of operations and as field representative before transitioning to become the Northern California volunteer coordinator for Sen. Boxer's 2004 re-election effort. In addition to his office managerial duties, Mr. McCarthy handles scheduling for MTI's executive director and supervises the student support staff. He received his BA in political science and law & society from UC Santa Barbara in 1998 and is currently pursuing a master's degree in public administration at San José State University.



Administration



Administrative Successes:

In January 2006, MTI submitted a semi-annual report to U.S. DOT-RITA. The report presented summaries of MTI successes from the preceding six months. Those relating to the Administration Department will be updated in the following section.

MTI's Board of Trustees annual meeting was held on June 24, 2006 and was followed that evening by the 15th Annual MTI Board of Trustees Scholarship Awards Banquet and the graduation of this year's Masters of Science in Transportation Management (MSTM) class. California Business, Transportation and Housing Secretary Sunne McPeak and House Transportation and Infrastructure Committee Ranking Member Jim Oberstar gave the commencement speeches to the graduates, elected officials, and transportation leaders in attendance. The banquet raises scholarship funds for MTI's MSTM and professional Certificate in Transportation Management students.

Facilities:

MTI is located at San José State University (SJSU), the oldest and one of the largest of the 23 California State University campuses. Located in downtown San Jose, the campus is in the heart of Silicon Valley. Six full-time staff members, two part-time employees, and five part-time student assistants work in offices provided by SJSU.

Financial Controls:

MTI's office manager administers the QuickBooks accounting system to provide real-time, project-based budget and expenditure information. MTI

uses this project-based system to track expenditures in detail and to supplement the grant-based monthly accounting statements of the SJSU Foundation, which provides state and federal fiscal reports and annual audits.

Office Administration:

Office Manager Brendan McCarthy coordinates travel and scheduling for senior staff and supervises the student employees. He maintains and updates an extensive office procedures manual that documents and streamlines practices in all program areas. The manual is an ongoing effort that the staff, under Mr. McCarthy, continues to refine as MTI evolves.

Partnerships:

California University Transportation Centers

In 1999, encouraged by the MTI executive director, Caltrans created the UTC Cal group consisting of the directors of the California UTCs and Caltrans staff. The group meets three times a year and is hosted by the centers on a rotating basis. Its objective is to avoid unplanned redundancy and to share the best research and education practices.

Council of University Transportation Centers (CUTC)

After serving as secretary, MTI Executive Director Rod Diridon was elected vice chair/chair-elect of CUTC at the June 2006 meeting. He has chaired several CUTC committees.

Jointly Sponsored Symposia, Forums, and Projects

During the past fiscal year, MTI has co-sponsored or is in the process of co-sponsoring projects with the following organizations: AAR, AASHTO, APTA, ARTBA, Caltrans, DHS/TSA, FHWA, FTA, FRA, Transit Cooperative Research Program of TRB, Transportation Trades Department of AFL/CIO, California State Automobile Association, San Francisco Bay Area MTC, Commonwealth Club of California, National Public Radio, Bay Area Rapid Transit District, Silicon Valley Leadership Group, San Jose Downtown Association, and Silicon Valley Chamber of Commerce, as well as others. These partnerships generated attendance and/or financial support for MTI programs and also resulted in substantial outreach and media attention for MTI and UTC efforts. More importantly, MTI research is transferred to the user community.

Community Involvement

MTI Executive Director Rod Diridon, Research Director Trixie Johnson, and Education Director Dr. Peter Haas are recognized transportation experts and have extensive contacts in the local, national, and international transportation community. For example, Mr. Diridon is chair emeritus of the California High Speed Rail Authority and a member of several other transportation boards

and committees. Ms. Johnson is active in Rotary, is sought after as a speaker on transportation and environmental issues, and serves on several related boards and committees. Dr. Haas, a Fulbright Scholar, is frequently asked to provide expert testimony on both education and transportation topics.

These activities are encouraged by SJSU and the MTI Board of Trustees with the understanding that MTI responsibilities come first and that no MTI funding is used to discharge these duties. MTI and the national UTC programs are always mentioned during their presentations. The benefit conferred to the community is obvious, but these efforts also promote a support network for MTI and the UTC program that has proven to be extremely valuable in terms of program effectiveness, development of jointly-sponsored projects, general outreach, and fiscal support of scholarships for MTI students.

Challenges:

The Mineta Transportation Institute is committed to continuing to deliver an excellent graduate education program and to producing currently applicable, top quality, and timely research while dealing with the uncertainty of the SAFETEA-LU competition.





Administration



Research

The Research Program manages selection and completion of research projects and sponsors symposia and fora. The Research Director coordinates the selection and efforts of MTI's research associates, who now number 154 professionals and educators. The research staff works closely with the Information and Technology Transfer area to publish the final research reports and event proceedings.





Trixie Johnson
Research Director

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Ms. Johnson was appointed as research director for the Mineta Transportation Institute in 1999, a responsibility that also includes overseeing the Institute's forums and symposia. She conducts an annual research needs assessment and request for proposals, and manages projects from the approval process through peer review and final publication. During her tenure she has managed sixty-six projects, including 9 new research projects just starting, three seed projects, 16 events, and three non-grant special research projects. Before joining MTI, Ms. Johnson served the full limit of two terms on the San José City Council (1991 through 1998). Recognized as a specialist in land use and the environment, her council service included two years as vice mayor and several years as the chair of the city's Transportation, Development, and Environment Committee. Her other public service included chair of the Environmental Quality Committee; member of the board of directors for the League of California Cities; vice-chair of the Energy, Environment, and Natural Resources Committee of the National League of Cities; and member of the Bay Area Air Quality Management District Board. Specifically in transportation, she was a founding board member of the Santa Clara Valley Transportation Authority (VTA), chair of its Congestion Management Committee, and vice-chair of the Caltrain board. She also served on the Legislative Committee of the American Public Transit Association (APTA). Ms. Johnson was Phi Beta Kappa with honors at the University of Utah, earning a BA in history, and she received her MA in English from the University of Washington.

Research Program Goals

The Mineta Transportation Institute Research Program seeks to involve a diverse and growing number of certified Research Associates and student research assistants in a wide spectrum of research projects judged by peers and other experts to advance the body of knowledge in transportation policy and management from an intermodal perspective. MTI does only directly applicable, not theoretical, research projects, which are selected via a thorough needs assessment process involving the U.S. DOT and Caltrans.

The People

MTI actively recruits academic involvement from many departments at San José State University (SJSU). However, the program is different from most other transportation centers because research teams may also include faculty from other colleges and universities and private sector consultants. The experience and knowledge of individuals from public and private organizations outside academia can bring a “real world” and very practical perspective to MTI research and to the classroom when research is shared with students. Each team includes at least one SJSU academic member and one SJSU student, and projects are conducted in an academic format, including research methodology, report writing, and rigorous peer review of work prior to publication.

MTI certifies all Research Associates prior to their involvement in any project. Certification requires a completed application with references, a résumé, and a sample of published research. The Research Associates Policy Oversight Committee (RAPOC), composed of the seven department heads or representatives of the SJSU academic departments with which MTI works, reviews the applications and recommends certification where appropriate. Non-SJSU RAs will hold simultaneous status as SJSU adjunct professors during the term of their certification.

Research Projects

The annual project selection begins with an extensive and structured needs assessment process by staff, Caltrans, the U.S. DOT Western Resource Center, and MTI's Board of Trustees (BOT). On completion of the needs assessment, MTI issues a formal Request for Proposals (RFP) to the MTI RAs. RAPOC, Caltrans, and a representative from the U.S. DOT subject all proposals to peer review. The reviews are then discussed in detail at a selection meeting. Few proposals are recommended for funding as submitted; many are tentatively selected subject to revision by the principal investigator, and others are rejected. The selections are also referred to the BOT for comment.

Following selection, research proposals and budgets are refined and revised according to RAPOC's direction. In some cases additional review by the committee occurs before the final prospectus and budget are written and approved by Caltrans and the SJSU Foundation. That approval marks the real beginning of the research project, which is then entered into the TRIS Research in Progress system and posted on the MTI website as a Project Description.

This research needs assessment, project identification, RFP, proposal review, research method refinement, and project selection process takes about six months but guarantees the identification of needed research projects and selection of an optimal research team and methodology.

MTI emphasizes policy and management research, rather than technical research, and seeks projects that improve the development and operation of the nation's surface transportation systems, improve transportation decision making, and ensure the global competitiveness of the United States. MTI selects only research products with immediate and practical value for transportation officials and practitioners. To that end, MTI, at the direction of the BOT, has adopted in



priority order the following areas of emphasis:

- Safety and security of transportation systems
- Financing of both public and private sector transportation improvements
- Transportation, land use, the environment, and the economy interrelationships
- Transportation planning and policy development
- Intermodal connectivity and integration
- Sustainability of transportation systems
- Collaborative labor-management issues and strategies
- Transportation decision making and consensus building

Transfer of Research Information

All research is professionally published and printed following successful peer review, author revisions, and editing. Additionally, every new report is available on MTI's website, <http://transweb.sjsu.edu> under Research/Publications. MTI has developed a number of other approaches to information transfer, including sponsoring symposia, funding post-research travel for researchers to address professional conferences such as TRB, providing financial incentives for publishing in peer-reviewed journals, and developing cost-effective formats to present research summaries for distribution to practitioners.

Research Program Accomplishments

A Full and Varied Program

The federal reauthorization process and a protracted contracting process for matching state funds in 2004-2005 played havoc with the normal research

calendar, but this year returned to the more robust and active schedule of past years. All the projects contracted at the very end of last year are underway. The deferred projects are making their way through revisions and approval.

A new RFP was issued in February, and sixteen qualified proposals were submitted for peer review by the RAPOC committee, Caltrans, and representatives of the U.S. DOT in the Western Resource Center. After a rigorous discussion, the group selected ten proposals to pursue for the coming year. Two projects will proceed with little or no change, seven with minor revisions, and one with major revisions. Two other proposals were returned with a request to resubmit their proposals after major revision. The remaining four were denied. Depending on their status at the time of this report, some of these selected projects will be covered in the New Projects portion of the report. Others may start later in the summer or early fall and be considered New Projects in the next annual report.

MTI Responds to Special Requests for Research

MTI is pleased that both its federal and state sponsors look to the Institute to help them address special research needs. Sometimes MTI is able to do the research as part of the UTC grant, but other requests are managed under separate contracts, such as the Transit Ridership Quick Study for FTA and the California Funding Opportunities study recently completed for Caltrans. Either way, the requests demonstrate an appreciation for the quality of MTI's work and ability to undertake specific projects. Four such projects started development in the late spring of 2006, joining

the list of cooperative research with both the state and the federal government.

In cooperation with Caltrans, MTI will be conducting two studies as part of the UTC research program that were originally part of Caltrans' research program. These were selected from a list of research problem statements provided by Caltrans that reflected their extensive internal needs assessment. These will be handled as standard MTI research and not as separate Caltrans contracts under their direction. MTI has selected two projects that fit both our current strategic plan and the areas selected for emphasis in the coming years and thus were qualified to use UTC grant funds. The objective is to use UTC funding to cover Caltrans research needs that cannot be covered because of SAFETEA-LU funding shortfalls.

After successful completion of the Transit Ridership Quick Study covered in the last annual report, MTI will be working with the FTA to examine the serious problem of pedestrian deaths associated with commuter rail systems (and also, potentially, with light rail systems). While it is not ready to be listed as a new project for this report, MTI anticipates beginning work on the project by the fall of 2006. This project will use a combination of UTC grant funds, additional FTA funds, and funds provided by a number of commuter rail system owners.

Another request from TRB to contract for NCHRP Project 20-59(25) is expected to result in an assessment of the five-year security research program funded by NCHRP, including identification of the gaps remaining and a prioritized program for the next three years of transportation security and emergency response research. Designed to provide guidance to the American Association of State Highway and Transportation Officials (AASHTO) Standing Committee on Research (SCOR) and other AASHTO committees, this non-grant project is expected to be under contract in September.

MTI is also working with the Caltrans Aeronautics Division to explore potential research, building on the two projects already in the portfolio. A small seed project by Dr. Wenbin Wei, in final draft stage, reviewed the availability of data for potential research on the economic value of California-generated air cargo. The second, in cooperation with the Western Transportation Institute at Montana State University, seeks to create a better weather reporting system for pilots using small airports or flying in remote areas. The weather information would combine the normal air weather systems with those used by the highway division of Caltrans, modifying the reports for use by pilots. These and other research possibilities are just the beginning stages of a fruitful partnership with the Caltrans Aeronautics Division.

Research is now complete on the special financing study undertaken for Caltrans with non-grant funding. Following review, this extensive look at funding opportunities for meeting the huge challenge of addressing California's future transportation needs will be available to assist both Caltrans and policy makers.

MTI Counterterrorism Research Continues to Pay Dividends

MTI's National Transportation Security Center's (NTSC) latest major counterterrorism research project, *Designing and Operating Safe and Secure Transit Systems: Assessing Current Practices in the U.S. and Abroad*, authored by Dr. Brian Taylor and a large team of professors from UCLA, UC Berkeley, and SJSU and a full complement of graduate students, was on full public display even as it was completing the editing and publishing process. In addition to participation last year in TRB workshops and the American Planning Association annual meeting, the work was widely promoted by UCLA through its International Institute, the co-sponsor of the study, and Dr. Taylor was featured in a session sponsored by the Center for American Progress that was also aired



on C-SPAN. The exposure, which always credited MTI for funding the work, resulted in this study receiving high usage on the MTI website for several months and in a number of requests for copies of the study from the media, consultants, and transportation agency professionals. Several journal articles were also published based on facets of the research work, with more still in the approval process.

The MTI NTSC counterterrorism team, headed by Brian Michael Jenkins, provided frequent media contacts following the London bombings in September 2005. MTI staff members Rod Diridon and Trixie Johnson provided several radio and television interviews about the nature of the threats to public transit. An article in the New York Times used data from the MTI attack chronology to create an interactive graphic as part of their coverage of the London incidents. There were generous credits to MTI as the source of the information.

Dr. Frances Edwards, the team's emergency response and preparedness specialist, is now the director of the Master of Public Administration program at SJSU. She has been particularly active with international programs dealing with response capabilities and exercises. She served as chair of a NATO STS-CNAD Conference in Portugal (North Atlantic Treaty Organization, Science Technology and Society-Conference of National Armaments Directors), a meeting of twenty-five international terrorism experts on current response capabilities and strengthening the abilities of nations to respond to weapons of mass disruption, killing, and destruction. Together with Professor Fredereich Stenhausler of the University of Salzburg, she co-authored a book in the NATO Science Series based on the conference. She and Dan Goodrich, a new MTI Research Associate, were selected as 2006-2007 Academic Fellows with the Foundation for the Defense of Democracies in Washington, D.C., and

participated in an Israel-based educational program in the late spring. She and two other SJSU professors organized the San José Metropolitan Medical Task Force's recent annual exercise at the College of Engineering – an event for over two-hundred first responders with training on search and rescue, chemical release hazards, and critical incident stress management. The San José Mercury News has added her to their Q&A Forum as a regular contact for reader questions about counterterrorism and related topics. One column featured information from her MTI report with Jenkins, *Saving City Lifelines: Lessons Learned in the 9-11 Terrorist Attacks*.

Finally, the full core team (Jenkins, Edwards, and Dr. Larry Gerston of SJSU) assisted the General Accounting Office in their research for the published report *Examination of Passenger Rail Security: Enhanced Federal Leadership Needed to Prioritize and Guide Security Efforts* (<http://www.gao.gov/new.items/d05851.pdf>). MTI's assistance is noted on page nine of the report.

Even Hurricane Katrina brought MTI's expertise into play. The potential for mass evacuation – a possibility following a natural disaster or in connection with a threatened terrorist activity – became an issue for several California legislators, who asked for a Caltrans response on the potential for contraflow service in the state. Caltrans turned to MTI, which set up extensive briefings with Dr. Edwards, Rod Diridon, and representatives from the Texas Transportation Institute and the Texas Department of Transportation.

Assorted Successes

Not often does academic research make the wire news, but Dr. Daniel Hess's current study of barriers to senior use of scheduled transit service did just that, thanks to a catchy title created by a writer at the University of Buffalo. "Who Will Drive Miss Daisy?" in the

UB News caught the attention of UPI, and the story spread. Dr. Hess is working with Dr. Michael Peck of SJSU on this MTI study. MTI encourages researchers to discuss their work in progress and promote it on their campuses, as long as it is clear that it has not yet been peer reviewed. Like the publicity at UCLA for the Taylor security study, this article also featured the role of MTI in sponsoring the research.

The multiple MTI projects by Robert Johnston and a succession of graduate students to develop a robust, integrated transportation/land use model have led to real life tests in the Sacramento region, where MEPLAN was used to run comparisons with the traditional model, sparking considerable community discussion. The work has been observed over time by Caltrans, which this past year sponsored a project to demonstrate the model to four major Metropolitan Planning Organizations and the larger Regional Transportation Planning Agencies in the state. The next step will look at the potential for a state level model similar to the one (PECAS) that members of Johnston's research group developed for the Oregon Department of Transportation. Deployment of academic research products is always an issue, and MTI is proud that this string of research shows such practical promise.

Presentations based on MTI research reached a record high number at the 2006 TRB annual meeting. Dr. Allison de Cerreño, Dr. Marc Schlossberg, Dr. Asha Weinstein, Dr. Geoffrey Gosling, and Dr. Richard Lee presented in a variety of settings – committee meetings and workshops. Following her presentation, Dr. de Cerreño joined the TRB Intercity Rail Passenger Systems Committee and is now serving as committee secretary.

Dr. James Brent, an MTI Research Associate whose last MTI project was a special report on Ridership Enhancement for the Federal Transit Administration with Dr. Peter Haas, was recently awarded the College of Social Science's 2006 Meritorious Award for contributions to his department, college, and the

university. Dr. Brent is the incoming chair of the SJSU Political Science Department.

Finally, one goal of the research program is to provide experience for students; that is the reason behind the requirement that every study employ at least one SJSU student. One Urban and Regional Planning graduate student, Katja Irvin, has participated in three projects, providing major assistance on one. She recently commented that her relationship with MTI "has definitely made a huge difference in the quality of my experience as a student." That is the hope we have for all the students we employ, several of whom, after receiving their graduate degrees, are now certified as Research Associates in their own right.

MTI Research Director Activities

Research Director Trixie Johnson represents the Institute in many settings. In December she appeared on a panel in Los Angeles assessing ITS and alternative fuel solutions that had been presented during the December 1 CALSTART conference, "2020: California's Transportation Energy Future." Demonstrating flexibility, she adapted to the new charge for her panel, which was originally scheduled to discuss the policy implications of changing fuels.

In mid-June she joined representatives of eight other California universities, colleges, and research institutes at the invitation of RAND Director for Transportation, Space and Technology Dr. Martin Wachs in Santa Monica to meet with Senator Alan Lowenthal, chairman of the California Senate Transportation Committee, and two of his committee staff members. The lively discussion covered current and potential research that would assist the legislature in addressing problems related to the growing congestion and pollution caused by increased goods movement through heavily populated areas. The group will continue the discussion, including how best to convey the research and recommendations to inform elected officials as they craft, discuss, and vote on legislative measures.



SJSU Environmental Science professor and MTI Research Associate Terry Trumbull invited Ms. Johnson to return a second year for a session with his Environment and Politics class in June. The wide ranging discussion focused on the connection between transportation and environmental issues, MTI research related to environmental concerns, and potential transportation career choices that would take advantage of their degrees.

In keeping with her long-time association with the League of Women Voters (LWV) and with the Institute's history of counterterrorism, emergency preparedness, and response, Ms. Johnson moderated a City of San José and LWV forum in late June titled, "Threats to the Valley: What's Really at Risk: Setting Priorities and Preparing Responses to Natural and Man-made Disasters." The panel included MTI counterterrorism team member Dr. Frances Edwards, the city's police chief, Dr. Edwards' replacement as director of the City of San José's Office of Emergency Services, and the county's public health officer. In addition to panel presentations, the session offered an opportunity for community questions and discussion and for distributing a number of helpful publications to assist individual preparedness.

Completed Research Projects

The following projects were described in more detail in prior Annual Reports. They are listed here in chronological order to assure that all projects completed during the current grant period are acknowledged.

Impacts of the North American Free Trade Agreement on Transportation in the Border Areas of the United States: With Emphasis on the California Border with Mexico

Project #9700

Publication #99-2

Principal Investigator: George Gray

Analysis of Policy Issues Relating to Public Investment in Private Freight Infrastructure

Project #9701

Publication #99-3

Principal Investigator: Dan Evans, J.D.

Why Campaigns for Local Transportation Funding Initiatives Succeed or Fail: An Analysis of Four Communities and National Data

Project #9702

Publication #00-1

Principal Investigator: Peter Haas, Ph.D.

NAFTA II: California Border Zone Land Transportation Issues

Project #9802

Publication #01-06

Principal Investigator: George Gray

Land Use and Transportation Alternatives: Constraint or Expansion of Household Choice?

Project #9803

Publication #01-19

Principal Investigator: Jonathan Levine, Ph.D.

Applying an Integrated Urban Model to the Evaluation of Travel Demand Management Policies in the Sacramento Region

Project #9804

Publication #01-03

Principal Investigator: Robert Johnston

Protecting Public Surface Transportation Against Terrorism and Serious Crime: Continuing Research on Best Security Practices

Project #9805

Publication #01-07

Publication #01-14 *Protecting Public Surface Transportation Against Terrorism and Serious Crime: An Executive Overview*

Principal Investigator: Brian Michael Jenkins

GIS for Livable Communities: Using GIS to Improve Transportation Planning and Community Livability

Project #9806

Publication #01-09

Principal Investigator: Tom Horan, Ph.D.

A New Planning Template for Transit-Oriented Development

Project #9807

Publication #01-12

Principal Investigator: Dick Nelson

The Travel Behavior and Needs of the Poor: A Study of Welfare Recipients in Fresno County, California

Project #9808

Publication #01-23

Principal Investigator: Evelyn Blumenberg, Ph.D.

Implementation of Zurich's Transit Preferential Program

Project #9809

Publication #01-13

Principal Investigator: Andrew Nash

Envisioning Neighborhoods with Transit-Oriented Development Potential

Project #9810

Publication #01-15

Principal Investigator: Earl G. Bossard, Ph.D.

Best Practices in Developing Regional Transportation Plans

Project #9811

Publication #01-10

Principal Investigator: Donald R. Rothblatt, Ph.D.

Construction of Transit-Based Developments: New Policy Initiatives for Governments

Project #9901

Publication #01-05

Principal Investigator: Scott Lefaver, DPA, AICP

How to Best Serve Seniors on Existing Transit Services

Project #9902

Publication #01-04

Principal Investigator: David Koffman

Effects of Online Shopping on Vehicular Traffic Patterns

Project #9903

Publication #01-20

Principal Investigator: Joseph J. Giglierano, Ph.D.

Factors Influencing Voting Results of Local Transportation Funding Initiatives with a Substantial Rail Transit Component: Case Studies of Ballot Measures in Eleven Communities

Project #9904

Publication #01-17

Principal Investigator: Richard A. Werbel, Ph.D.

Developer-Planner Interaction in Transportation and Land Use Sustainability

Project #9905

Publication #01-21

Principal Investigator: Aseem Inam, Ph.D.

Transit Labor Relations Guide

Project #9906

Publication #01-02

Principal Investigator: Herb Oestreich, Ph.D.

Research



Non-Pricing Methods to Optimize High Occupancy Vehicle Lane Usage

Project #9908

Publication #01-11

Principal Investigator: George Gray

A Statewide Study for Bicyclists and Pedestrians on Freeways, Expressways, Tunnels and Toll Bridges

Project #9909

Publication #01-01

Principal Investigator: Thomas C. Ferrara, Ph.D.

Using the Internet to Envision Neighborhoods with TOD Potential

Project #2001

Publication #01-24

Principal Investigator: Earl G. Bossard, Ph.D.

Applying an Integrated Urban Model in the Evaluation of Travel Demand Management Policies in the Sacramento Region: Year Two

Project #2002

Publication #01-08

Principal Investigator: Robert Johnston

The California General Plan Process and Sustainable Transportation Planning

Project #2003

Publication #01-18

Principal Investigator: Richard Lee, Ph.D., AICP

Trucks, Traffic, and Timely Transport: A Regional Freight Logistics Profile

Project #2004

Publication #02-04

Principal Investigator: John S. Niles

Increasing Transit Ridership: Lessons from the Most Successful Transit Systems in the 1990s

Project #2005

Publication #01-22

Principal Investigator: Brian D. Taylor, Ph.D.

Using Fiber Networks to Stimulate Transit Oriented Development: Prospects, Barriers and Best Practices

Project #2007

Publication #01-16

Principal Investigator: Walter Siembab

Bridging the Gap: Planning Interjurisdictional Transit Services

Project #2102

Project Cancelled

Principal Investigator: Patrick McGovern, Ph.D., J.D.

Sustainable Transportation Indicators for California

Project #2106

Publication #02-05

Principal Investigator: Richard Lee, Ph.D., AICP

Modeling Long-Range Transportation and Land Use Scenarios for the Sacramento Region, Using Citizen-Generated Policies

Project #2107

Publication #04-02

Principal Investigator: Robert Johnston

Verifying the Accuracy of Regional Models Used in Transportation and Air Quality

Project #2108

Publication #02-03

Principal Investigator: Caroline Rodier, Ph.D.

Impact of Ethnic Diversity on Transit: How Do Various Population Groups View and Utilize Various Transit Modes?

Project #2109

There is no publication for this phase of the project.

Principal Investigator: Richard A. Werbel, Ph.D.

Making Growth Work for California's Communities

Project #2111

Publication #02-01

Principal Investigator: Kenneth R. Schreiber, AICP

Best Practices in Shared Use of High Speed Rail Systems

Project #2113

Publication #02-02

Principal Investigator: Andrew Nash

(Former Title: *Shared Use of Rail Infrastructure by High-Speed Rail: Best Practices in Design and Operations*)

Saving City Lifelines: Lessons Learned in the 9-11 Terrorist Attacks

Project #2114

Publication #02-06

Principal Investigator: Brian Jenkins

The Future of Transportation Education: A Needs Assessment for the Transportation Management Program at San José State University

Project #2201

Publication #03-01

Principal Investigator: Linda Valenty, Ph.D.

(Former Title: *Needs Assessment: Transportation Management Program at San José State University*)

Using Spatial Indicators for Pre- and Post-Development Analysis of TOD Areas: A Case Study of Portland and the Silicon Valley

Project #2203

Publication #03-03

Principal Investigator: Marc Schlossberg, Ph.D.

(Former Title: *A Pre- and Post-Construction Analysis of Transit-Oriented Developments Using Spatial Indicators: A Case Study of Portland and Silicon Valley*)

Higher Density Plans: Tools for Community Engagement

Project #2204

Publication #03-02

Principal Investigator: Kenneth Schreiber, AICP

(Former Title: *Assessing the Effectiveness of Tools and Information that Respond to Community Fears and Resistance about the Densification of Communities*)

The Impact of Telecommuter Rail Cars on Modal Choice

Project #2205

Publication #04-01

Principal Investigator: James Hayton, Ph.D.

The Pasadena Gold Line: Development Strategies, Location Decisions, and Travel Characteristics along a New Rail Line in the Los Angeles Region

Project #2305

Publication #04-03

Principal Investigator: Hollie Lund, Ph.D.





The following projects were completed in the past year:



Can Consumer Information Tighten the Transportation/Land Use Link? A Simulation Experiment

Project #2202

Publication # 05-03

Principal Investigator: Daniel Rodriguez, Ph.D. (a change from Dr. Jonathan Levine)

(Former title: Decision Making Influences in Land Use and Transportation: An Experiment on the Impact of Transportation and Housing Information)

This study sought to build knowledge in both location and mode choice behavior by implementing an information experiment in a university setting. The project was modified, though the original intent of the experiment remained the same. The research was designed to test how strongly a policy of disseminating integrated transit and housing information over the Internet could influence individuals' residential location and commute choices. The basic question was whether transportation information could be used to influence travel behavior through the intermediate step of affecting residential location decisions.

Rather than providing the information to the experimental group prior to their housing selection by means of a website – a procedure not implemented by the University of Michigan housing office as planned – the 236 graduate students participating in the experiment worked with similar information in a controlled survey, using similar graphic presentations to those originally planned for the website.

There were two main findings. First, providing bundled accessibility and housing information resulted in the selection of preferred locations that were closer to major destinations, as compared to the selections of individuals without access to that information. Second, experimental group members selected properties closer to transit lines serving their destinations than did members of the control group. The results suggest the relationship between transportation and land use is neither inherently weak nor inherently strong: it can be either nurtured or thwarted by policy. Appropriate interventions can increase the capacity of transportation accessibility to guide location decisions, thus strengthening the transportation/land use relationship. As this research suggests, integrated transportation and housing information offered to people at the time they are choosing a new home may constitute one of those interventions.



*Designing and Operating Safe and Secure Transit Systems:
Assessing Current Practices in the U.S. and Abroad*

Project #2301

Publication # 05-03

Principal Investigator: Brian D. Taylor, Ph.D.

(Former title: *System Design for Transit Security*)

Concerns about transit security rank very high among transportation officials and transit riders. Deterring and minimizing terrorist attacks involves assessments of vulnerabilities, mitigation of weaknesses in the system, and the development of effective response and emergency plans.

This research looked at responses to terrorist incidents as a process over an extensive time frame, approximating the life of the transit system. Further, the research used a multi-pronged approach including both domestic and international sources with an expansive literature search, interviews, case studies, and a large survey to increase the reliability of the findings on this complex issue. Because the research team included scholars of architecture and urban design, civil and transportation engineering, and transportation and urban planning, and not intelligence, policing, or security, they approached this research from the perspective of the people who finance, design, build, operate, and use public transit systems, rather than from the perspective of those who police them. A specific focus of this work is on system design. They conducted inspections of transit stations in each of the systems studied, and collected detailed information on attitudes toward and applications of crime prevention through environmental design (CPTED) strategies in the survey of U.S. transit operators.

Among the findings detailed in the study were these:

- Public transit systems are open, dynamic, and inherently vulnerable to terrorist attacks; they simply cannot be closed and secured like other parts of the transportation system.
- The asymmetry of transit terrorism risk is at odds with a political system of public finance that favors distributing funding somewhat equally across jurisdictions.
- Transit managers are struggling to balance the costs and (uncertain) benefits of increased security against the costs and (certain) benefits of attracting passengers.
- An important benefit of improved coordination is standardization of emergency training, security audits, and disaster preparedness procedures, and the issuance of common guidelines about security.
- Passenger education and outreach is a challenge; informed passengers can increase surveillance and safety, but fearful passengers may stop using public transit.
- The role of crime prevention through environmental design in security planning is waxing.
- Given the uncertain effectiveness of antitransit terrorism efforts, the most tangible benefits of increased attention to and spending on transit security may be a reduction in transit-related personal and property crimes.



Verifying the Accuracy of Land Use Models Used in Transportation and Air Quality Planning: A Year-Two Validation Study

Project #2302

Publication #05-02

Principal Investigator: Caroline Rodier, Ph.D.

Communities with air quality problems in California and across the nation are proposing major beltway and highway projects to address roadway congestion problems. However, the travel and emissions models used in conformity analyses and environmental impact statements have low accuracy. Travel demand models are typically estimated on and calibrated to observed data but are rarely validated against observed data not used in their estimation and calibration. Validation of a model is critical to determining the degree of precision to which it can be reasonably applied. In this historic regional forecasting case study in Sacramento, California, the original version of the Sacramento regional travel demand model (estimated with 1991 data) is used with Year 2000 observed data to validate the model over a nine-year period. Three simulations were performed to test, respectively, model accuracy, the effect of errors in socioeconomic/land use projections, and induced travel.

The results of the study suggest that the travel demand model — its functional forms and parameters — overestimates vehicle miles traveled, vehicle hours traveled, and vehicle hours of delay (by 5.7, 4.2, and 17.1 percent, respectively). The errors in the socioeconomic/land use projections made in 1991 and used in the model approximately double the errors in vehicle travel. The model also underestimates induced travel (elasticity of 0.14) compared to the estimate of actual induced travel (elasticity of 0.22) in this study, but the upward bias in the model error swamps this underestimation. If the model were used for conformity analyses in this region, its overestimation of daily vehicle travel should provide a relatively generous margin of error with respect to meeting air quality emissions budgets. (The version of the model used in this study is no longer used by the region.) On the other hand, in the analysis of travel effects of proposed highway investment projections in environmental impact statements, the overestimation of the daily travel results would tend to overestimate no-build travel demand and congestion and thus the need for new highway projects in the region. Compared to that in the no-build alternative, the magnitude of change for the highway alternative would have to be greater than the model error to be considered significantly different. This may be a difficult standard for the typical new highway project to meet.



High-Speed Rail Projects in the United States: Identifying the Elements for Success

Project #2304

Publication #05-01

Principal Investigator: Allison de Cerreño, Ph.D.

The goal of this study was to identify lessons learned for successfully developing and implementing high-speed rail (HSR) in the United States. Few broad statements can be made about high-speed ground transportation in the United States, but two points are clear. First, with the exception of the Northeast Corridor, there has been relatively little forward movement if one looks at the number of years spent on many of these projects. Second, the federal government has played and continues to play a minimal role, generally restricting its efforts to funding pilot studies and technological research. Given the early stages of these projects, “success” cannot be based on implementation, but is defined in terms of whether a given HSR project is still actively pursuing development and/or funding.

This study proceeded in two phases. Phase 1 was a literature review following two parallel tracks: an assessment of federal and, where warranted, state legislation to determine what was intended in terms of objectives and criteria identified in the legislation, and a broader literature review that briefly assessed all HSR efforts in the United States since 1980 to determine their history and current status. The result was an interim report by Dr. de Cerreño. Recommendations were made after Phase 1 to examine in more depth three case studies: California, Florida, and the Pacific Northwest. Phase 2 consisted of additional literature review and interviews with key individuals related to those three case studies. The final report includes the results of both Phase 1 and Phase 2. Several specific findings and lessons were learned from each of the three case studies.

First, and foremost, is the need for leadership by the federal government, both in vision and funding. Without guidance and standards for successful models, states will continue to fill the void with a multitude of models — constitutional amendments and legislation (Florida and California), multi-state compacts (Pacific Northwest), public-private partnerships — without a sense of what is most likely to succeed. More important, there is an overarching need for a national network strategy for rail — one that combines passenger, freight, and high-speed rail — plus a vision for how rail connects to and interrelates with the other transportation modes and how it all might be funded. Otherwise, the nation will continue to miss critical opportunities for key linkages and enhancing efficiency, not just for high-speed rail, but also for regular passenger rail and freight transport.



Bus Rapid Transit: A Handbook for Partners

Project #2426

Publication # pending (see below)

Co-Principal Investigators: Tom Larwin and George Gray

(Former title: *Bus Rapid Transit Guidebook*)



In April 2005, the Caltrans Division of Research and Innovation (DRI) asked MTI to assist with the research for and publication of a guidebook for use by Caltrans employees who work with local transit agencies and jurisdictions in planning, designing, and operating Bus Rapid Transit (BRT) systems that involve state facilities. The guidebook should also be of assistance to transit operators, local governments, community residents, and other stakeholders dealing with the development of BRT systems. Several areas in the state have experienced such projects (San Diego, Los Angeles, San Francisco, and Alameda County) and DRI wished to use that experience to guide future efforts and identify needed changes in statutes, policies, and other state concerns.

Caltrans convened a working group from the Divisions of Research and Innovation, Mass Transportation, and Operations, together with stakeholders representing many of those involved with BRT activities around the state. Prior to MTI's involvement, this group produced a white paper on the topic, a series of questions, and an outline of the guidebook that MTI was to write.

The MTI team conducted case studies of the major efforts in California, along with less developed studies of some of the other BRT programs under development or in early implementation phases around the state. The purpose was to clarify those issues that need to be addressed in the guidebook, as well as to compile information that will identify items needing legislative or regulatory action and items that Caltrans will need to address through district directives or other internal measures. The MTI team also developed a draft Caltrans director's policy document, which provides the basis for Caltrans' actions.

MTI submitted a draft document to Caltrans as a final product. The MTI team then produced a "wrap-around" report discussing in more detail the process that was followed to come up with the draft report. The process was in many ways as much a project as the report itself. The MTI report will remain a draft until final approval of the Caltrans document to avoid having two versions of the policy and to allow the MTI version to contain linkages to the full color and graphics version on the Caltrans website. Caltrans, after internal review and approval, will publish the final handbook. MTI received permission to post the Institute's report online until final approval is received and the report can be printed.

Ongoing Research Projects



A Consumer Logistics Framework for Understanding Preferences for High-Speed Rail Transportation

Project #2206

Principal Investigator: Kenneth Gehrt, Ph.D.

The purpose of this study was to reach a fuller understanding of the potential for high-speed rail (HSR) usage in the United States. The theoretical framework of Consumer Logistics (CL) theory was used for a survey that will inform efforts to develop and market HSR service in the San Francisco-Los Angeles (SF-LA) corridor. The team members have successfully used CL to better understand the choice between traditional, ATM, and online banking. The theory lends itself equally well to an examination of the choice between competing transportation modes.

This study incorporates CL theory in the context of channels research that hypothesizes relationships between:

- Performance of CL functions;
- Development of consumer value (efficiency and effectiveness); and
- Satisfaction/usage intention.

Research methodologies include literature review, focus group interviews, and pretests and administration of a survey of SF-LA business air commuters, as they present a likely source of HSR passengers. The survey will also compare CL sensitivity profiles of transportation mode preference categories (HSR, conventional rail, air, and auto commuters). The resulting data will be analyzed using exploratory factor analysis, structural equation modeling/LISREL, and regression analysis. The findings will suggest how CL strategies and tactics can be deployed to maximize HSR usage. The authors are responding to the peer reviews.





Impact of Ethnic Diversity on Transit: How Do Various Population Groups View and Utilize Various Transit Modes? – Phase II

Project #2207

Principal Investigator: Richard Werbel, Ph.D.

MTI Project #2109 was the first phase of this project. This second phase includes a full survey and analysis of three main ethnic groups (Asian, African-American, and Hispanic), in addition to a control group of Caucasians. This phase will include on-board interviews to identify survey participants, administration of a telephone survey, analysis of the data, and a final report. Translators and interviewers with facility in the required languages will be employed when necessary. (Early on the project dropped the Asian component because the large number of different Asian languages complicated the interview process, and not enough participants from the same ethnic group were identified to provide useful data for analysis.)

By increasing understanding of the behaviors and attitudes of these groups, including generational differences within groups, transit providers may be able to tailor marketing and service provision and, thereby, increase transit usage and satisfaction.

This project has been suspended, though not cancelled. Follow-up telephone interviews for the Hispanic group proved difficult when many of those identified gave non-working numbers. This could be a result of poor work by the contract on-board interviewers or fear of immigration consequences. Subsequently, the principal investigator asked for a suspension for personal reasons. The Institute will complete the analysis of the data collected and document the research difficulties in pursuing this ambitious project.



Applying Smart Growth Principles and Strategies to Resolving Land Use Conflicts Around Airports

Project #2303

Principal Investigator: Richard Lee, Ph.D.

The research will address the potential role of smart growth principles to enhance airport land use compatibility planning and the implementation of regional airport development strategies, as well as how the existing airport-compatible land use planning process can be strengthened to better achieve well-suited land uses near airports.

In many large metropolitan areas, there are significant constraints on the ability to continue to expand existing commercial airports. Renewed consideration will have to be given to developing new airports on greenfield sites or providing commercial service at former military airfields or general aviation airports. Since feasible sites are likely to be in relatively undeveloped areas some distance from existing urban development, such a strategy is likely to have important implications for land use planning in the vicinity of new airports and a significant impact on urban growth patterns.

Thus, alternative development strategies that could be pursued as part of the regional airport system planning process will need to balance trade-offs between the continued expansion of existing airports and the development of new ones. There has been relatively little effort to understand the nature of these trade-offs within the context of smart growth and associated regional development policies.

Multiple responsibilities of the research team and the difficulty of gathering case study information from a number of the smaller airport and airport land use commissions slowed the completion of the project, though the draft report is now nearly complete.



High-Speed Rail Projects in the United States: Identifying the Elements for Success – Part 2

Project #2401

Principal Investigator: Allison de Cerreño, Ph.D.

This study is the second part of the HSR study begun with publication 05-01. The goal is to identify lessons learned for successfully developing and implementing HSR in the United States.

The initial study identified 19 cases of high-speed ground transportation that are being or have been pursued in the United States since the 1980s. Within the scope of that study, the researchers further analyzed three of those cases. This part of the study will assess the Chicago Hub Network, the Northeast Corridor, and the Texas Triangle. The Chicago Hub Network is one of the most extensive of the American HSR efforts, crossing a number of states and running parallel to freight rail efforts. The Northeast Corridor is the only case in which HSR is currently running. It offers perhaps an anomaly compared to the other cases, but bears further exploration. The Texas Triangle provides another example of a failed project and would help highlight the interplay between rail and aviation. Detailed analysis of these three cases, along with the cases explored in the current study, will provide a good basis for strengthening any recommendations. The report is undergoing peer review.

Research



Barriers to Using Fixed-Route Transit for Older Adults

Project #2402

Principal Investigator: Michael Peck, Ph.D., MSW

This research is intended to enhance public transit utilization by older adults by identifying perceived and actual barriers and presenting public transit policy and design solutions to meet the needs of older adults.

The team will use focus groups and surveys in two communities (Rochester/Erie County, New York and San Jose/Santa Clara County, California) and several data sources to assess older adults' perceptions of 1) safety on public transit, 2) safety traveling from home to public transit stops and stations, 3) the ease of using public transit facilities and vehicles, 4) the ease of traveling between home and public transit stops and stations, and 5) the availability and accessibility of public transit information. The research will also assess factors that inform older adults' decision to use public transit.

The survey process, which included an advance mailing, a cash "thank-you" included with the survey, and a reminder card produced a very high rate of return in both communities and a wealth of data for analysis. The research team is currently writing the draft report.



Welfare to Work: A Simulation of Land Use and Transportation Policies

Project #2403

Principal Investigator: Robert Johnston

Data suggest that there is great variation in the rate at which welfare recipients transfer to self-sufficiency across counties within California. It is possible that this wide variation in success is due in part to differences in the spatial distribution of low-income residences, low-skill jobs, and connecting transportation networks in each region.

Sacramento County has the fourth highest number of welfare cases among California counties. Although the total caseload has decreased by 34% since 1997, the rate of decrease slowed in recent years. A somewhat smaller, but more difficult, number of recipients remains, even though the actual individual recipients change over time. It is important to understand this group of recipients and its relationship with neighborhood characteristics, the location of relevant employment, land use policies affecting apartment construction, and transportation policies affecting transit service. If these relationships can be determined statistically, the team can then recommend policies to reduce unemployment for welfare recipients.

The Sacramento region travel model will be used to evaluate several policies to improve job access for welfare recipients in Sacramento County. The team will examine policies for better transit, subsidized auto purchases, and more multi-family zoning in suburban areas, and determine through analysis whether these policies would provide employment opportunities for welfare recipients.



The Elderly and Public Transit: Minimizing Barriers and Maximizing Service

Project #2404

Principal Investigator: Susan Shaheen, Ph.D.

The increasing number of seniors unable to drive has led to substantial research, including a comprehensive Transportation Research Board (TRB) report (TCRP 82 *Improving Transit Options for Older Persons*), which found that like other travelers, older travelers want public transit that is reliable (e.g., no waiting in poor weather), proximate (e.g., door-to-door service), flexible (e.g., carrying packages), and responsive (e.g., longer service hours). The TRB report recommends improvements such as methods to welcome seniors, better information, and shared-ride demand-responsive services. General strategies to implement such services include “developing mobility planning and training programs to help older persons make a transition from driving to public modes of travel.” A recent report sponsored by Caltrans on the use of public transit by non-traditional riders also recommended the development of “senior education and outreach programs.” (California Department of Transportation [April 2003]. *An Analysis of Public Transportation to Attract Non-Traditional Transit Riders in California*. Final Report.)

This study picks up where previous studies leave off by applying principles of social learning and marketing to develop specific interventions that introduce and transition the elderly to public transit use. This study will develop, implement, and evaluate interventions in the Rossmoor retirement community in Walnut Creek (East San Francisco Bay Area). The study originally planned a training video that could be adapted for use in other contexts, as well as a list of marketing interventions that could be used by transit agencies to encourage transit use among the elderly. However, the initial work with focus groups led to a more specific training video featuring one chosen trip. Seniors felt that a successful experience with more guidance up front would be preferable to general training. The team also expects to propose a subsequent pilot study to test the effectiveness of the interventions.

Research



Neighborhood Crime and Travel Behavior

Project #2405

Principal Investigator: Christopher Ferrell

This study hypothesizes that urban density and neighborhood crime have been confused in the minds of the public, as well as in the conceptual and statistical models of transportation researchers, and proposes to study the effects of neighborhood crime on mode choice.

This study will be of interest to urban transportation demand modelers, urban transportation planning researchers, and transit agency professionals. By providing a clearer empirical picture of the effects of urban form and crime on travel decision making, policy level efforts to jointly plan transportation and land use to increase the use of transit and non-motorized modes may also be improved. If researchers and policy makers can be shown a clearer picture of the effects of urban density on travel behavior while controlling for the effects of crime, a clearer and more substantial case can be made by backers of smart growth and transit-oriented development. Transit agency planners who are seeking to enhance transit ridership may also benefit from this research. While it may be assumed that increasing transit services to a neighborhood is the most effective way of increasing ridership, these efforts may be thwarted by high levels of neighborhood crime. In some cases, a more intensive and community-based policing program for a neighborhood might be the most cost effective means to increase ridership and neighborhood residents' mobility using existing transit routes.

By combining datasets from San Francisco Bay Area law enforcement agencies, census data, and the Bay Area Transportation Survey (BATS) 2000 data using computer database and GIS applications, the relationships between urban form, travel behavior, and crime can be measured. Models developed in this study will likely focus on home-based trips so that crime rates and the demographic and land use characteristics of the traveler can be studied. Categories of potential trip types to be studied include home-based work, school, and shopping trips.





How Far, by Which Route, and Why? A Spatial Analysis of Pedestrian Preference

Project #2406

Principal Investigator: Marc Schlossberg, Ph.D.

This research will complement and extend the existing literature on pedestrian behavior and walkable environments, as well as the existing methods used to graphically display highly localized environmental data.

This study will develop new, highly localized techniques that capture the pedestrian environment on individual blocks and at intersections, with the resulting maps showing information such as the conceptualized and hypothesized characterizations of TODs in terms of likely walkability and spatial analyses of actual paths chosen by transit users who access transit stops by foot.

The study results will provide three distinct outcomes: 1) highly specific information about how far people walk to access TODs, 2) an understanding of what environmental features attract or discourage pedestrians, and 3) a set of visual, map-based tools that can be used to educate policy makers, practitioners, and the general public. All three of these results have direct application for planners, policy makers, and community leaders interested in making their communities more walkable. It is important to note as well that both the methods used and the anticipated results are applicable not only to pedestrians walking to transit stations, but for communities trying to encourage walking to schools, parks, retail areas, or many other local destinations.



Beyond Uncertainty: Urban Models in Transportation and Air Quality Planning

Project #2407

Principal Investigator: Caroline Rodier, Ph.D.

Due to the limitations of travel demand models and recent changes to regulatory requirements, state and regional governments across the U.S. are beginning to implement more advanced land use and travel demand models (e.g., Sacramento, CA; Springfield-Eugene and Portland, OR; and Salt Lake City, UT). Land use models, however, are subject to many of the same sources of inaccuracy as travel demand models. Given the complexity and data requirements of these models, it may not be unreasonable to expect that their uncertainty might be equal to or greater than that of travel demand models. Moreover, it is possible that theoretical improvements

Research



with respect to the representation of the land use and transportation interaction in the simulation methods could be swamped by the errors of a more complex model set.

Until recently, however, very few studies had been conducted to quantify errors and their sources in travel and land use models, the policy implications of these errors, and/or the respective advantages and disadvantages of the different model capabilities. Indeed, uncertainty in models has traditionally been ignored not only by the transportation profession, but in policy analysis in general. The Mineta Transportation Institute has contributed funding to a multi-year case study of uncertainty in a state-of-the-practice travel demand model (SACMET) and an advanced integrated land use and transportation model (MEPLAN) in the Sacramento region.

This will be a three-part study that expands on and synthesizes the findings of the Sacramento case study by addressing key planning and policy questions surrounding uncertainty in travel and land use models. The study will employ three key methods: 1) expert interviews, 2) literature synthesis, and 3) modeling to illustrate an innovative approach to policy analysis under uncertainty. The modeling will address the twin goals of acknowledging uncertainty and identifying stakeholders' values and objectives. The anticipated result should be relevant policy analysis that accommodates values, goals, and strategies without being distracted by technical debates on the adequacy of the available tools.

New Projects



Paving the Way: Recruiting Students into the Transportation Professions

Project #2408

Principal Investigator: Asha Weinstein, Ph.D.

Public agencies and private firms face increasing challenges finding transportation engineers and planners to fill their job openings. The problem is particularly acute for public agencies. Existing research on the issue has focused on examining why current transportation employees chose the field. However, a comprehensive approach to attracting engineers and planners to the transportation profession must also look further back to examine the process of attracting students to transportation disciplines and what affects the decision to complete a degree in a field relevant to transportation agencies and firms. Without knowing more about

students' decision processes, transportation educators and employers have no way of knowing which recruitment programs are likely to be the most effective.

The research team will survey university transportation programs and current students to determine practical short- and long-term strategies that state DOTs, universities, and others in the transportation field can use to attract a larger pool of students focusing on transportation. The findings from the interviews and student surveys will be used to recommend specific programs and practices with good potential to enlarge the pool of potential transportation employees by increasing the number of excellent students completing civil engineering and planning degree programs who have coursework experience and interest in transportation. The recommendations will include short-term strategies for immediate implementation, as well as longer term ones.

The start of this project has been delayed to allow the primary team members to complete a special study for Caltrans, *Transportation Financing Opportunities for the State of California*, a project funded outside the UTC program. This study, while a major undertaking and success for MTI, is not discussed in detail since it was not funded by the grant covered by this report.



The Evolving Nature of Terrorist Acts Against Surface Transportation: Capturing Lessons Learned

Project #2501

Principal Investigator: Brian Michael Jenkins

MTI is committed to conducting ongoing, top-quality research of terrorist strikes against transportation targets to distill lessons learned and determine the best practices for deterrence, response, and recovery. Those best practices are taught to transportation and security professionals to provide secure surface transportation for the nation.

Using the case study approach developed during MTI's previous 16 investigations into terrorist attacks on public transportation, the counterterrorism team will identify lessons – from preventing attacks to response/recovery and business continuity – learned from the attacks in Madrid (2004) and London (2005).

In addition to the original concept of this study, Mr. Jenkins will review recent work on random and selective search possibilities for rail transit. Passenger screening concepts used for air travel cannot easily be applied to rail or subway systems without enormous and unacceptable delays and costs. The findings of this review would help a transit agency design a screening plan that would be effective and legal.



Caltrans Statewide Cultural Properties Information System

Project #2502

Principal Investigator: Eric Ingbar

Caltrans has not developed an information-management model and tool that can be utilized statewide. This hampers environmental management in several significant ways. First, no global view of Caltrans performance on environmental commitments or stewardship is possible. Second, each district that contemplates automating cultural resource information is tempted to build its own system, further hampering effective oversight. Third, the proliferation of independent systems makes it difficult to come up with management processes that are consistent, because such processes typically rely upon uniform, timely data information (about cultural resources, impacts, other resources, etc.). Fourth, training agency staff in using electronic tools is very difficult when each office has its own interfaces, applications, and conventions.

This project will address the lack of a statewide data-management model for cultural resources in surface transportation settings. It does so in a series of steps:

- Needs assessment definition (redefinition and confirmation)
- Logical data model revisit, re-formulation and formalization, review
- Application revisit, re-formulation, specification, and review
- Prototype (draft) data system roll-out
- Rapid evaluation of prototype and elaboration of it into final system by rapid iterative testing with Caltrans staff
- Training of staff trainers and system managers
- Oversight of staff training session conducted by Caltrans staff trainers
- Presentation of system design and results to multiple DOTs through online project report

Anticipated outcomes include technical products, policy and guidance for their utilization, and an enhanced stewardship by Caltrans of cultural resources near surface transportation projects. Policy and planning products and outcomes include the ability to better forecast where cultural resources will be problematic in surface transportation projects, the ability to see planning as a continuous process within the 10-, 5-, and 3-year planning cycles of the agency, and more opportunities for pre-project planning in advance of NEPA, facilitating project evaluation and completion by minimizing and predicting likely impacts.

Anticipated technical products include a functional enterprise-data system for entering, querying, and

displaying cultural resources information and a spatial analysis tool for exploring different areas of potential effect on cultural resource values.

This project empowers decision making within the agency by making available the millions of dollars of cultural resources fieldwork the agency has undertaken. This project will be a first for MTI by including the testing of the products developed and training Caltrans staff in their use. It will be more than practical – it will be in practice by its completion.



Collaborative Funding to Facilitate Airport Ground Access

Project #2503

Principal Investigator: Geoffrey Gosling, Ph.D.

Airports are the principal interchange nodes in the passenger transportation system where local and regional transportation systems interface with those for national and international travel. Airports also play a vital role in facilitating the transfer of air cargo between the surface transportation system and the air transportation system, as well as sometimes serving as major sorting and distribution centers for freight that may be moved entirely by surface transportation.

However, all too often projects to improve the connectivity between the surface transportation system (including private vehicles, buses, and light and heavy rail systems) and the airport circulation and terminal facilities are hampered by project funding regulations that limit the type and location of projects eligible for funding from the various programs administered by the Federal Aviation Administration (FAA), Federal Highway Administration (FHWA), and the Federal Transit Administration (FTA). Policies regarding the use and allocation of these funds are often so restrictive that projects are unable to be implemented or are rendered much less effective at improving intermodal connectivity. In particular, FAA rules on the use of airport funding sources generally restrict the ability to use these funds for airport access improvements off the airport property. Similarly, restrictions on other sources of surface transportation funds may have the reverse effect and prevent their use for projects on the airport.

The objectives of the research are to identify and document existing sources of funding for airport ground access projects and the associated constraints on how they can be used, together with guidance on how to develop collaborative funding arrangements for such projects within these constraints. It is anticipated that the research will result in two products:

- 1) A guide to collaborative funding of intermodal airport ground access projects that will document the various funding programs available and review their current limitations and collaborative strategies to overcome these limitations, as well as present case studies of successful efforts to develop collaborative funding strategies for airport ground access projects.
- 2) A final report that will present an analysis of the past experience with collaborative funding of airport



ground access projects and present recommendations for changes to policies and funding allocation procedures at the federal and state levels.



Exploration of Data Sources for Air Cargo Studies (A Seed Project)

Project #2525

Principal Investigator: Wenbin Wei, Ph.D.

MTI occasionally provides small seed grants to SJSU professors new to the MTI research program to help them develop proposals for further research. The projects are expected to produce a report, but not for publication, and, if justified, a research proposal for a full study. This seed project grew from discussions among Dr. Wei, Ms. Johnson, and the Caltrans Division of Aeronautics. Caltrans wanted to explore the potential case for airport access and other improvement based on the value of the cargo being exported through California airports, particularly cargo that originated from California producers (which would demonstrate an even greater support for the California economy). The first step, and the purpose of this seed project, was to determine if there is sufficient data available to support a full research project.

The project explored the available data sources and databases, and investigated what data are available in various sources, and what analysis can be made based on current data sources. Raising the profile of air cargo, especially that carried in passenger planes, could help justify investments in ground access to airports, always an issue at major ports. However, the finding of the initial research shows that separating the value of California-generated freight from the value of the whole is problematic at best.

Two important reasons account for the lack of research and understanding of the role air cargo plays: 1) compared with passenger traffic, there are less sufficient, accurate, and consistent data available in the air cargo industry, although there are multiple resources; 2) there are many agents involved in the air cargo industry, including shippers, carriers, airports, ground transportation agents, and various levels of governments; the inter-relationship between air cargo and other economic indicators is complicated.

NOTE: *The following two projects were recently selected and approved by RAPOC in May 2006 and are in the final signature process. Given the May selection, they will be considered new projects for this report, though they will carry 2006 project numbers to reflect their actual start dates.*



Evaluating the Environmental Justice Effects of Land Use Scenarios in the Sacramento Region with the PECAS Activity Allocation Model

Project #2601

Principal Investigator: Caroline Rodier, Ph.D.

In 1994, a Presidential Executive Order directed every federal agency to make environmental justice (EJ) part of its mission by identifying and addressing adverse effects of its programs, policies, and activities on minority and low-income populations. It is widely recognized, however, that modeling tools currently used by transportation agencies have a very limited ability, if any, to perform such analyses.

Concurrently, there has been increased recognition of the potentially harmful social, economic, and health effects of highway-induced sprawl on low-income and minority groups in the U.S. In response, many have advocated smart growth and/or transit-oriented development (TOD) policy strategies to redress these effects and improve access for disadvantaged groups.

In recent years, the Sacramento region has undertaken an ambitious region-wide planning process called the Blueprint Project. This participatory process included over 5,000 residents and established a long-range regional vision rooted in smart growth and TOD principles, which was named the Preferred Blueprint scenario. The process was initiated with the Base Case scenario, which projected Sacramento's future assuming the continuation of current land use and transportation plans and policies, and is equivalent to an urban sprawl scenario.

The Sacramento region's ambitious planning efforts have been accompanied by equally ambitious model development efforts, which have included the development and partial calibration of the advanced PECAS activity allocation model.

The proposed research will enhance the calibration of the PECAS activity allocation model and use the model to simulate the EJ effects of a smart growth scenario (Preferred Blueprint) and an urban sprawl scenario (Base Case). The EJ effects simulated with the PECAS activity allocation model will include a consumer surplus measure (for each of the 16 income household classes), which will represent changes in household access to jobs and payments for goods and services (including household rents and transportation costs). In addition, the employment categories will allow for some assessment of benefits and losses to low-wage and/or minority-dominated labor categories by location (e.g., service and agricultural workers). The developers of the PECAS model, Drs. Hunt and Abraham (of the University of Calgary and HBA Spectro Inc.), will lead the calibration of the model and provide the guidance necessary to simulate the scenarios and analyze the results.

This project will produce a number of practical research applications. The results will:

- 1) Further federal, state, and regional transportation agencies' understanding of the advantages of applying



- advanced, activity-based land use models to evaluate the EJ effects of transportation and land use plans.
- 2) Significantly contribute to the limited academic literature on the EJ effects of smart growth/TODs and urban sprawl.
 - 3) Assist the Sacramento Area Council of Governments' (SACOG) model development process by enhancing the calibration of the PECAS model and by providing opportunities for staff training on the operation of the model. SACOG submitted a letter of support for this project.



Walking and Biking to School: An Assessment of Modal Choice and Urban Form

Project #2602

Principal Investigator: Marc Schlossberg, Ph.D.

SAFETEA-LU has just established a national Safe Routes to School program, meaning that communities throughout the country will need to know what policy and infrastructure interventions are most appropriate in facilitating safe walking and biking to and from school. This research is designed to assist communities make good transportation infrastructure decisions that help maximize the impact of this new program.

Of this federal funding, 70-90% is to be directed to engineering/infrastructure projects, so understanding what types of environments yield the best results for walking and biking will help transportation departments target resources effectively.

On the research side, this project continues to add to a growing body of literature on the relationship between urban form and transportation, but focuses on youth and the journey to/from school. The research will also feature the continued development and evolution of a field- and GIS-based data collection tool that can easily gather variables about the walking and biking environment on a very local level. There are several efforts around the country to identify the “right” variables to collect when assessing local walking and biking conditions. The approach proposed here continues that line of inquiry and it does it within a mobile GIS environment, which is unique among all the other efforts. Moreover, the tool will be designed with the community in mind and devised in such a way that community participation in data gathering and analysis may be possible. In this way, data can be combined with local activism so that there will be a structure in place to translate study results into meaningful change.

NOTE: The following two projects were selected from the Caltrans research program following a request to help accommodate research needs they had hoped to put under contract in the coming year but that exceeded their internal capacity. These are approved projects, but the teams, budgets, and final project designs are still in development. MTI is working with the Caltrans sponsors of these projects to assure that they meet their needs; they will be UTC projects, managed by MTI and meeting all the requirements of academic research.

The Business Case Potential for Public/Private Partnerships (PPPs) for Various Caltrans Intelligent Transportation System (ITS) Assets

Project #2603

Principal Investigator: To Be Determined

California owns substantial ITS inventory, including closed-circuit television (CCTV), travel time systems, and high occupancy toll (HOT) lanes, that could present an opportunity for PPP. Possible partners could use CCTV or travel time to attract website customers; cable TV and broadcast stations could enhance their offerings by using these systems to inform viewers. These assets might have a value for which private businesses would want to pay a premium. However, the state has no business plan for tapping this opportunity.

This study will investigate strengths and weaknesses in current government and private business structures and seek to identify the possibility of PPP contracts within the bounds of existing law. Further, the opportunities and challenges for both the government and the private companies to accommodate PPP agreements will need to be identified.

Past research by the state explored these issues for the Cooperative Vehicle Systems (CVS) technologies in urban areas. That past research will be augmented by this project.

PPP can leverage the increased deployment of these tools and speed up project delivery. This study will explore whether or not there is a need for PPP in these areas and is viewed by Caltrans as the first stage of what could be extended research.





Tribal Corridor Management Plan

Project #2604

Principal Investigator: To Be Determined

This project was requested by Caltrans District 1, located in the northwest part of the state. State Highway 96 in Humboldt County runs through the Hoopa Indian Reservation. A corridor management plan for this portion of the highway could serve as a foundation for the consistent application of non-standard design features relating to Native American tribes (symbols, information kiosks, fencing, native planting, etc.) to help guide future transportation plans, construction projects, and maintenance activities. As a pilot project it might lead to further Tribal Corridor Management Plans throughout District 1 and the rest of California.

The plan will further support the concepts identified in the Hoopa's Transportation Plan and their Traffic Calming and Safety Enhancement Plan for the downtown area. Together the two plans will create a coordinated design theme throughout the State Highway 96 corridor on the Hoopa Reservation.

This is a specialized context sensitive design project that could give a sense of place when entering tribal lands and an awareness of the cultural history in the area. By reflecting the tribe's strong sense of pride, it can help deter vandalism and help reduce maintenance and repair costs. Additionally, it may enhance the experience of the traveling motorist and contribute to cross-cultural understanding and appreciation, as well as community pride and economic growth.

This is conceived as a very small budget project, but it has large potential for application to facilities on any number of tribal corridors.



Information and Technology Transfer

The area of Information and Technology Transfer manages hardcopy and online dissemination of surface transportation policy information, including information resulting from MTI research, education, forums, and symposia programs. Among other projects, this area includes *TransWeb*, the library program, and all publications.



Information and Technology Transfer



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With a career as varied as a buyer and a program director for a NASA program, lifelong Bay Area resident Sonya Carter brings a fresh approach to one of MTI's most important assignments, that of publishing transportation studies for use by both the public and private sectors.



Barney Murray
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Web Administrator Barney Murray brings over 25 years of computer expertise and creativity to the Mineta Transportation Institute as the mastermind and creative force for *TransWeb*, the Institute's website. Mr. Murray took charge of the site in October 2000. The number of hits and visitors to the site continues to increase under his management.



James Swofford
Project Manager

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James Swofford joined MTI in July 2005 as project manager and is primarily responsible for information transfer activities. Mr. Swofford has considerable experience in creating and implementing communications strategies and programs for non-profit organizations, public agencies, and commercial clients.

Information Transfer

Goals

The goals of the Information and Technology Transfer Program are to provide transportation professionals around the world with:

- Research results published both in high quality printed and online documents,
- Discussion summaries on significant transportation issues, and
- Library and Internet-based resources for a wide range of transportation interests.

Library

SJSU's King Library has assigned Research Librarian Diana Wu to the transportation area. In addition to functioning as the librarian for the MTI collection and all other transportation issues, Ms. Wu is also a member of the MTI academic advisory committee, the Research Associates Policy Oversight Committee (RAPOC). Through contacts with other transportation librarians, including Rita Evans at the Institute for Transportation Studies at UC Berkeley, Ms. Wu provides an expansive network of resources for students and researchers working on MTI projects.

Ms. Wu supervised Library Sciences graduate student Daniel Blackaby in a research project to create a database of juried journals that might be interested in articles based on MTI research. The resulting database is now posted on the website at http://transweb.sjsu.edu/mtiportal/research/rfp_forms.html to assist MTI Research Associates and others in pursuing publication opportunities. Ms. Wu is currently the president of the California Library Association. Her predecessor on RAPOC, Susana Liu, received the American Library Association's Distinguished Service Award. MTI and our researchers and students are truly fortunate to work with these dedicated and respected research librarians.

Forums and Symposia

Each year MTI sponsors both regional forums and state or national symposia. These events accomplish multiple purposes – sharing recent research with practicing professionals, other academics, and the larger community; exploring issues needing further research (part of needs assessment); providing opportunities for networking, and creating a record of proceedings that can be shared with a wider audience online and/or in print.

Third National Transportation Security Summit: Rail Security – A Symposium on Terrorism and Business Continuity

Project # 2353

Publication #S-05-02

Project Manager: James Swofford, MTI

Operational security and business continuity for rail transportation systems in the event of terrorist act or cataclysmic natural disaster was the focus of this one-day symposium, which featured presentations and a roundtable discussion by experts in transportation, security, and emergency preparedness.

This event was one in a series of research and information transfer symposia on transportation security best



Information and Technology Transfer

practices presented by the National Transportation Security Center (NTSC) at MTI. The symposium was held in conjunction with the American Public Transportation Association (APTA) Annual Meeting in Dallas on September 29, 2005. The whole session had an air of urgency, coming as it did just days after Hurricane Rita hit Texas and just weeks after Hurricane Katrina. Whether following natural or manmade disaster, the problems of returning to normal business are always topics of interest.

AASHTO Executive Director and Chair of the MTI Board of Trustees John Horsley opened the symposium. Speaking of lessons learned through past experiences – from the September 11, 2001 terrorist attacks to Hurricane Rita – he observed that the needed response to either scenario is virtually the same.

Making white paper presentations were leading experts on transportation, safety, and security:

- NTSC Director Brian Michael Jenkins presented case studies on recent terrorist acts against rail transportation systems in London, Madrid, and elsewhere.
- Department of Homeland Security's Director of the Border and Transportation Security Portfolio Jeanne Lin provided an overview of DHS organizations, programs, resources, and strategies for rail transportation security.
- City of San Jose's Director of Emergency Preparedness Dr. Frances Edwards discussed federal requirements for transportation and emergency-response managers responsible for implementing the National Incident Management System (NIMS), and described resources available from MTI and others that will help them achieve compliance.
- PB Consult, Inc. President and MTI Trustee Mortimer Downey, III described business continuity issues that rail transportation and emergency preparedness managers must consider when confronted with terrorism or severe natural disasters.

Mr. Downey moderated a panel discussion and a question-and-answer session with the audience followed. The discussion covered crisis management, security practices, and policies and recommendations for making rail transportation more robust and secure. The expert panel included participants representing varied points of view.

- George Chilson, President of the National Association of Railroad Passengers (NARP)
- Greg Hull, Director of Operations, Safety and Security Programs for APTA
- Ron Hynes, Deputy Associate Administrator, Office of Research, Demonstration and Innovation, FTA
- Jo Strang, Deputy Associate Administrator for Railroad Development, Federal Railroad Administration (FRA)

Co-sponsors for this event were the American Association of Railroads (AAR), AASHTO, APTA, FRA, FTA, NARP, National Railroad Passenger Corporation (Amtrak), and the Department of Homeland Security's Transportation Security Administration.

The published proceedings are available in hardcopy and online in the Security Symposia and Forum Reports section at <http://transweb.sjsu.edu/mtiportal/research/publications.html>.

*Sixth National Garrett Morgan
Symposium on Sustainable
Transportation*

Project #2552

Publication #S-06-01

Project Manager: James Swofford, MTI

The 2006 Garrett Morgan national videoconference was conducted on March 28th. MTI Trustees sponsored seven classes from six schools for this year's event, providing staff assistance and technical facilities.

AASHTO Executive Director John Horsley sponsored Leonardtown High School from Leonardtown, Maryland; Caltrans Director Will Kempton sponsored Wells Middle School from Dublin, and two classes from Big Pine School in Bishop, all in California; APTA President Bill Millar sponsored the Transportation Technology Academy at Francis L. Cardozo Senior High School in Washington, D.C., and Michael Townes, General Manager, Hampton Roads Transit, sponsored Kemps Landing Magnet School from Virginia Beach and Churchland Middle School from Portsmouth, both in Virginia. Local television station WAVY-TV covered their participation in a story that lasted several minutes, including part of their presentation and interviews and glowing comments from the reporter and the anchors.

Secretary of Transportation Norman Y. Mineta greeted the participants saying, "We need educated and skilled people with fresh ideas and new solutions to conquer the challenges that we face."

Each class made a project presentation that addressed one or more elements of sustainable transportation. The six broadcast sites were interconnected through the Caltrans network operations center in Sacramento.

Wells Middle School won in the middle school category for the *TEAPOT* project, a garbage truck that uses the trash it collects to make its own fuel – methane gas. The Cardozo High School team was honored for their advanced studies in developing *Senior High Rail*, which covered the steps necessary to plan, design, and construct an environmentally friendly streetcar system to transport students to and from their school. Their project included role-play scenarios, original research, and comprehensive documentation of their efforts.

The teachers and student representatives from the two winning schools were honored at the MTI Board of Trustees Scholarship Awards Banquet in San José, California, at which each school received a plaque and a check for \$500.

This was the sixth national videoconference symposium on sustainable transportation, conducted by MTI in support of the U.S. Department of Transportation's Garrett A. Morgan Technology and Transportation Futures Program. The program is designed to stimulate the minds of young people and encourage them to excel in mathematics and sciences, which could lead to careers in transportation. One mother of a Wells Middle School student put it best when she said, "My son used to think about what he would do next weekend. This really made him think about what he wanted to do with his life."

The published proceedings are available in hardcopy and online in the Garrett Morgan section at <http://transweb.sjsu.edu/mtiportal/research/publications.html>.





Information and Technology Transfer

Coming Events

Projects #2651 and #2652

Project Manager: James Swofford, MTI

Planning has begun for two events that will occur in FY 06/07.

The Norman Y. Mineta National Summit on Transportation Finance will take place on October 12, 2006, in conjunction with the APTA Annual Meeting in San José, California. Top academic, government, and industry leaders will review recent research on the latest developments in transportation finance at the local, state, and national levels. The all-day session includes presentations, a keynote speaker, and panel discussions on the financial challenges now facing policy makers and transportation managers.

A regional forum on urban congestion and its impacts on rural corridors is in development. Potential areas being considered for further discussion include southern Santa Clara County and its interface with San Benito County, and eastern Alameda and Contra Costa Counties and their impacts on San Joaquin County. Determining the responsible agencies for safety, congestion management, and funding solutions are examples of issues of statewide concern to be addressed.

TransWeb

The Information and Technology Transfer area includes MTI's website, *TransWeb* (<http://transweb.sjsu.edu>) – a transportation information hub widely used by individuals and organizations outside of the Institute. In addition to being the home for all things MTI, *TransWeb* provides links to national and international sites related to all modes of surface transportation and surface transportation policy.

New to the site this summer is an updated architecture that allows easier access to content. The site was originally designed in the mid-1990s, and the “new” *TransWeb* moves the site technically into this century. An example of both the new architecture and the new look can be found in the Research/Publications section where the reports are now arranged by topic areas (Security, Finance, Transportation/Land Use/Environment, Transit Issues, Passenger Rail, International Issues, Workforce and Labor Issues, Miscellaneous, and Garrett Morgan). Each of the topic areas also has a separate section for reports of related events. Prior to the revision they were in either the research report or the event report group and were listed in alphabetical order by title. Many of the research reports now open to a more graphically interesting page that might include the principal investigator's picture and/or a graphic of the report cover, a short abstract, short bios of the research team, and finally the only information that was provided in the old format – the links to the PDF and HTML versions of the report, the keywords, the disclaimer, and a link to the publication order form. The conversion to the new format is occurring in chronological order, beginning with the most recent publications.

TransWeb continues to achieve an impressive number of visitors and users and a considerable number of contact inquiries. The strong growth in *TransWeb* usage is a testament to the continuing efforts of Web Administrator Barney Murray.

TransWeb Usage

	FY 2002-03	FY 2003-04	FY 2004-05	FY 2005-06
Number of Hits	1,318,247	1,489,034	2,087,829	2,309,003
All Visitors	202,267	236,785	316,831	436,961
Unique Visitors	85,451	101,065	130,033	106,330

The MTI Research pages provide research proposal information, standard forms used by Research Associates, research project descriptions of all active research, and links to full-text files of all MTI final research reports, including those completed before online posting was a requirement of the UTC grant program.

Graduate Transportation Management Program (GTMP) students are beneficiaries of additional *TransWeb* content and functions. The GTMP pages are first and foremost designed for current students, who are able to view upcoming class schedules, register for classes on an interactive form, and request information about the program. Videostreaming of all classes allows busy professionals to keep up with their classes, repeat important sessions, and take advantage of guest speakers from past sessions. Course instructors utilize *TransWeb* by posting course syllabi and assignments, conducting exams, and providing links to bulletin boards, white boards, and chat areas. Students and instructors alike supplement the videoconference class sessions with these other aspects of distance learning for a rich, interactive graduate education experience.

World in Motion

The *World in Motion* quarterly newsletter is an effective medium for informing the transportation community about ongoing MTI surface transportation policy research and education programs. Printed circulation is 1,985 with additional readership through the Internet on *TransWeb*. Each issue includes an update from Executive Director Rod Diridon, columns from Education Director Peter Haas and Research Director Trixie Johnson, as well as information transfer reports and statistics.

Front page feature articles this past year profiled the following MTI Board of Trustee members: SJSU College of Business Dean Bruce R. Magid, Ph.D.; MTI Executive Director Rod Diridon; Acting President/CEO of Amtrak David Hughes; and MTI Honorary Research Fellow Awardees Dr. Tom Larson and Louis J. Gambaccini.

The Research column includes information about new and ongoing projects, awards and presentations, program development, research associates, and student assistants. The Education column features awards and accolades received by students in the graduate programs, as well as changes and course enhancements in the program. The Information Transfer section covers new publications, events presented or co-hosted by MTI, and updates on the *TransWeb* website.

Information and Technology Transfer

Summer 2005

Fall 2005

Winter 2005

Spring 2006



2005 – 2006 Research and Information Transfer* Projects (SAFETEA-LU)

Project Title	Project/ Publication Title	Principal Investigator
The Business Case Potential for Public/Private Partnerships (PPPs) for Various Caltrans Intelligent Transportation System (ITS) Assets	2603	TBD
Caltrans Statewide Cultural Properties Information System	2502	Eric Ingbar
Collaborative Funding to Facilitate Airport Ground Access	2503	Dr. Geoffrey Gosling
Evaluating the Environmental Justice Effects of Land Use Scenarios in the Sacramento Region with the PECAS Activity Allocation Model	2601	Dr. Carolyn Rodier
The Evolving Nature of Terrorist Acts Against Surface Transportation: Capturing Lessons Learned	2501	Brian Jenkins
Exploration of Data Sources for Air Cargo Studies (Seed Grant that does not produce a publication)	2525	Dr. Wenbin Wei
*National Transportation Finance Summit	2651	MTI Staff
Tribal Corridor Management Plan	2604	TBD
*Urban Congestion on Rural Corridors: a Regional Forum	2652	MTI Staff
Walking and Biking to School: An Assessment of Modal Choice and Urban Form	2602	Dr. Marc Schlossberg

1998-2005 Research and Information Transfer* Projects/ Publications (TEA-21)

*3rd National Transportation Security Summit: Rail Security: A Symposium on Terrorism and Business Continuity (Changed from 2nd Summit to account for 96-1, below)	2353 S-05-02	MTI Staff
*Advanced Technologies in Smart Growth (White paper written but not published. Event cancelled in response to change in Caltrans research process.)	2119	Dr. Tom Horan
Applying an Integrated Urban Model to the Evaluation of Travel Demand Management Policies in the Sacramento Region	9804 01-03	Robert A. Johnston
Applying an Integrated Urban Model in the Evaluation of Travel Demand Management Policies in the Sacramento Region: Year Two	2002 01-08	Robert A. Johnston
Applying Smart Growth Principles and Strategies to Resolving Land Use Conflicts Around Airports	2303	Dr. Richard Lee
Barriers to Using Fixed-Route Transit for Older Adults	2402	Dr. Michael Peck
*BART to Silicon Valley: How Now? (Regional Forum)	9913 F-01-01	MTI staff
*BART to Silicon Valley – What's Next? (Regional Forum)	2454 F-05-01	MTI Staff James Swofford
Best Practices in Developing Regional Transportation Plans	9811 01-10	Dr. Donald N. Rothblatt
Best Practices Shared Use of High Speed Rail Systems (Formerly Shared Use of Rail Infrastructure by High Speed Rail: Best Practices in Design and Operations)	2113 02-02	Andrew Nash
Beyond Uncertainty: Urban Models in Transportation and Air Quality Planning	2407	Dr. Caroline Rodier
Bridging the Gap: Planning Interjurisdictional Transit Services (Project Cancelled)	2102	Dr. Patrick McGovern, J.D.
Bus Rapid Transit Guidebook	2426	George Gray/ Tom Larwin
*Bus in the Fast Lane: A Forum on Bus Rapid Transit in the Bay Area	2451 F-04-01	MTI Staff James Swofford
The California General Plan Process and Sustainable Transportation Planning	2003 01-18	Dr. Richard Lee
*California Security Summits (National Symposium)	2118 S 01-04	MTI Staff
Can Consumer Information Tighten the Transportation/Land-use Link? A Simulation Experiment (Formerly Decision Making Influences in Land Use and Transportation: An Experiment on the Impact of Transportation and Housing Information)	2202 05-03	Dr. Daniel Rodriguez (formerly Dr. Jonathan Levine)



Information and Technology Transfer

Construction of Transit-Based Developments: New Policy Initiatives for Governments	9901 01-05	Dr. Scott Lefaver
A Consumer Logistics Framework for Understanding Preferences for High-Speed Rail Transportation	2206	Dr. Kenneth Gehrt
*Crossing the Bay: Water Transit Initiative Forum (Regional Forum)	9814 F-00-1	MTI Staff
Designing and Operating Safe and Secure Transit Systems: Assessing Current Practices in the U.S. and Abroad (Formerly System Design for Transit Security)	2301 05-03	Dr. Brian Taylor
Developer-Planner Interaction in Transportation and Land Use Sustainability	9905 01-21	Dr. Aseem Inam
Effects of Online Shopping on Vehicular Traffic Patterns	9903 01-20	Dr. Joe Giglierano
The Elderly and Public Transit: Minimizing Barriers and Maximizing Service	2404	Dr. Susan Shaheen
Envisioning Neighborhoods with TOD Potential (Includes Demonstration CD)	9810 01-15	Dr. Earl G. Bossard
Exploration of Data Sources for Air Cargo Studies (A Seed Grant Project that does not produce a publication)	2525	Dr. Wenbin Wei
Factors Influencing Voting Results of Local Transportation Funding Initiatives with a Substantial Transit Component (Formerly Passing Local Transportation Tax Measures: A Follow-up Study)	9904 01-17	Dr. Richard Werbel
*Fast Tracks in the Golden State: Symposia on California High-Speed Rail	2253 S-02-02	MTI Staff James Swofford
Forecasting the Impact of Telecommuter Rail-Cars on Modal Choice: A Behavioral Disaggregate Demand Model	2205 04-01	Dr. James Hayton
* Garrett Morgan Youth Videoconference Symposium on Sustainable Transportation	2351 S-03-01	MTI Staff
The Future of Transportation Education: A Needs Assessment for the Transportation Management Program at San José State University (Formerly Needs Assessment for the Transportation Management Program at San José State University)	2201 03-01	Dr. Linda Valenty
*(Garrett Morgan) Youth Videoconference and Symposium on Sustainable Transportation (National Symposium)	9911 S-01-01	Dr. Dongsung Kong
*2005 Garrett Morgan National Symposium and Videoconference	2353 S-05-01	MTI Staff James Swofford
GIS for Livable Communities: Using GIS to Improve Transportation Planning and Community Livability	9806 01-09	Dr. Tom Horan

Higher Density Plans: Tools for Community Engagement (Formerly Assessing the Effectiveness of Tools and Information that Respond to Community Fears and Resistance about the Densification of Communities)	2204 03-02	Ken Schreiber
High-Speed Rail Projects in the United States: Identifying the Elements for Success	2304 05-01	Dr. Allison de Cerreño
High-Speed Rail Projects in the United States: Identifying the Elements for Success – Part 2	2401	Dr. Allison de Cerreño
How to Best Serve Seniors in Existing Transit Services	9902 01-04	David Koffman
How Far, by Which Route, and Why? A Spatial Analysis of Pedestrian Preference	2406	Dr. Marc Schlossberg
Impact of Ethnic Diversity on Transit: How Do Various Population Groups View and Utilize Various Transit Modes? (Phase I has no published report)	2109	Dr. Richard Werbel
Impact of Ethnic Diversity on Transit: How Do Various Population Groups View and Utilize Various Transit Modes? – Phase II	2207	Dr. Richard Werbel
The Impact of Telecommuter Rail Cars on Modal Choice (Seed Grant that does not produce a publication)	2116 NA	Dr. James Hayton
Implementation of Zurich's Transit Preferential Program	9809 01-13	Andrew Nash
Increasing Transit Ridership: Lessons from the Most Successful Transit Systems in the 1990s	2005 01-22	Dr. Brian D. Taylor
Land Use and Transportation Alternatives: Constraint or Expansion of Household Choice (Formerly Transportation and Land Use Innovation: Impacts on Household Residential Choice)	9803 01-19	Dr. Jonathan Levine
*Lessons Learned: Tax Referenda and Why They Succeed or Fail (National Symposium)	2101 S-01-03	MTI Staff
Making Growth Work for California's Communities (Formerly An Assessment of the Receptivity of Smart Growth Land Use and Transportation Planning Concepts at the Local Level in California)	2111 02-01	Ken Schreiber
A Model for Assessing Demand-response vs. Prescheduled Paratransit Systems (Seed Grant that does not produce a publication)	2115 NA	Dr. J. Michael Pogodzinski
Modeling Long-Range Transportation and Land Use Scenarios for the Sacramento Region, Using Citizen-Generated Policies (Formerly Regional Transportation Planning for Smart Growth)	2107 04-02	Robert A. Johnston
NAFTA II: California Border Zone Land Transportation Issues	9802 01-06	George Gray
*National Garrett Morgan Sustainable Transportation Symposium — 2003	2103 S-02-01	Dr. Dongsung Kong
Neighborhood Crime and Travel Behavior	2405	Christopher Ferrell



Information and Technology Transfer

A New Planning Template for Transit-Oriented Development	9807 01-12	Dr. Dick Nelson
Non-Pricing Methods to Optimize High Occupancy Vehicle Lane Usage	9908 01-11	George Gray
*No Road, No Rage (Water Transit Forum, November 21, 2002)	2251 F-01-02	MTI Staff
The Pasadena Gold Line: Development Strategies, Location Decisions and Travel Characteristics Along a New Rail Line in the Los Angeles Region	2305 04-03	Dr. Hollie Lund
Paving the Way: Recruiting Students into the Transportation Professions	2408	Dr. Asha Weinstein
Protecting Public Surface Transportation Against Terrorism and Serious Crime: Continuing Research on Best Security Practices	9805 01-07	Brian Jenkins
Protecting Public Surface Transportation Against Terrorism and Serious Crime: An Executive Overview	9805 01-14	Brian Jenkins
*Protecting Public Surface Transportation Against Terrorism and Serious Crime: A National Summit (National Symposium)	2110 S-01-02	MTI Staff, Brian Jenkins
Saving City Lifelines: Lessons Learned in the 9-11 Attacks (Formerly Public Surface Transportation: Lessons Learned in the 9-11 Terrorist Attacks)	2114 02-06	Brian Jenkins
Statewide Safety Study of Bicyclist and Pedestrian Accommodation and Safety on Freeways, Expressways, Toll Bridges, and Tunnels	9909 01-01	Dr. Thomas C. Ferrara
Toward Sustainable Transportation Indicators for California	2106 02-05	Dr. Richard Lee
Transit Labor Relations Guide	9906 01-02	Dr. Herb Oestreich
* A Transportation Hot Spot Forum on the Marin/Sonoma/101 Corridor (Regional Forum)	2112 F-01-02	MTI Staff
*A Transportation Hot Spot Forum on the Highway 152-156 dilemma. Tentative title: Farm Road or Freeway? (Cancelled; rescheduled as 2652 in SAFETEA-LU project list)	2252	MTI Staff James Swofford
*Transportation Safety and Security: Deploying Technology to Improve Transportation (Summary Proceedings of the California Alliance for Advanced Transportation Systems Annual Meeting)	2452 S-05-03	MTI Staff James Swofford
The Travel Behavior and Needs of the Poor: A Study of Welfare Recipients in Fresno County, California (Formerly Transportation and Welfare Reform: The Travel Behavior and Needs of Welfare Recipients)	9808 01-23	Dr. Evelyn Blumenberg

Trucks, Traffic, and Timely Transport: A Regional Freight Logistics Profile (Formerly Designing a Template for Understanding Freight Movement and Logistics at the Metropolitan Region Level)	2004 02-04	John S. Niles
Using Fiber Networks to Stimulate Transit Oriented Development: Prospects, Barriers and Best Practices	2007 01-16	Walter Siembab
Using the Internet to Envision Neighborhoods with TOD Potential	2001 01-24	Dr. Earl B. Bossard
Using Spatial Indicators for Pre-and Post-Development Analysis of TOD Areas: A Case Study of Portland and Silicon Valley (Formerly A Pre-and Post-Construction Analysis of Transit-Oriented Developments Using Spatial Indicators: A Case Study of Portland and Silicon Valley)	2203 03-03	Dr. Marc Schlossberg
Verifying the Accuracy of Regional Models Used in Transportation and Air Quality	2108 02-03	Dr. Caroline Rodier
Verifying the Accuracy of Land Use Models Used in Transportation and Air Quality Planning: A Case Study in the Sacramento, California, Region (Formerly Verifying the Accuracy of Land Use Models Used in Transportation and Air Quality Planning: A Year-Two Validation Study)	2302 05-02	Dr. Caroline Rodier
*Visioning: A Forum with US DOT Secretary Rodney Slater	F-00-2	MTI Staff
Welfare to Work: A Simulation of Land Use and Transportation Policies	2403	Robert A. Johnston

Projects Under Separate Contracts

Sustainable Communities/San Joaquin Valley Growth	Caltrans	Ken Schreiber
Ridership Enhancement: A Quick Study	2425 FTA	Dr. Peter Haas
Transportation Financing Opportunities for the State Of California	2427 Caltrans	Dr. Asha Weinstein

Research and Information Transfer* Publications (ISTEA)

Analysis of Policy Issues Relating to Public Investment in Private Freight Infrastructure	99-3	D. Evans, J.D.
Assessment of Needs for Management Training and Education in Surface Transportation in the United States and Canada	94-1	Dr. J. Giglierano R. Vitale
Planning for Surface Transportation and Land Use: A Symposium	95-1	MTI Staff



Information and Technology Transfer

Terrorism in Surface Transportation: A Symposium	96-1	MTI Staff, Brian Jenkins
Conduct of Background Research for the Establishment of an International Surface Transportation Policy Conference in California—Global Cooperation Through Transportation: Joining Forces Across Borders	96-2	G. Murray, et al.
Development of a Statewide Surface Transportation Network Utilizing the International Transportation Information System	96-3	S. Belanger, et al.
Issues Relating to the Emergence of the Information Superhighway and California Societal Changes	96-4	Dr. J. Botha, et al.
Public Land with Private Partnerships for Transit Based Development	97-1	Dr. S. Lefaver, et al.
Toward a Cooperative Future? Labor-Management Relations in Surface Transportation: A Symposium	97-2	MTI Staff
Protecting Surface Transportation Systems and Patrons from Terrorist Activities: Case Studies of Best Security Practices and a Chronology of Attacks	97-4	B. Jenkins, et al.
Capital versus Operating Grants for Transit: Economic Impacts for California	97-5	Dr. P. Haas, et al.
Sustainable Transportation in the 21st Century: A National Videoconference Symposium with Elementary School Children in Support of the Secretary of Transportation's Garrett A. Morgan Technology Futures Program	S-98-1	MTI Staff
Rail Transit: Issues and Opportunities for the Bay Area and California	F-98-1	MTI Staff
Maintenance and Continued Development of the IISTPS Transportation Information System, TRANSWEB™	99-1	S. Belanger Dr. S. Kwan
Impacts of the North American Free Trade Agreement on Transportation in the Border Areas of the United States: With Emphasis on the California Border with Mexico	99-2	G. Gray
Why Campaigns for Local Transportation Funding Initiatives Succeed or Fail: An Analysis of Four Communities and National Data	00-1	Dr. P. Haas
Publications in print are available from MTI: San José State University 210 N. 4th Street, 4th Floor San José, CA 95112		http://transweb.sjsu.edu mti@mti.sjsu.edu Tel: 408-7560 Fax: 408-924-7465

Education

The Education Department sponsors and supports the Graduate Transportation Management Program at San José State University. The program offers a Master of Science in Transportation Management degree and a graduate Certificate in Transportation Management.



Education



Dr. Peter Haas
Education Director

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A member of the faculty in MTI's Graduate Transportation Management Program (GTMP) since 1999, Dr. Peter Haas was appointed education director in 2001. He earned a Ph.D. in political science (public policy and public administration) from the University of North Carolina at Chapel Hill in 1985. A former director of the SJSU Master of Public Administration program, he also has experience consulting at every level of government and for nonprofit agencies. Dr. Haas is the author of numerous reports and other publications in the field of transportation and is the co-author of the text *Applied Policy Research: Concepts and Cases*. A Fulbright scholar, he recently served as principal investigator for a project commissioned by the Federal Transit Administration entitled "Ridership Quick Study."



Vivianne Ferea
Education Program Assistant

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email: ferea@mti.sjsu.edu

Vivianne Ferea was appointed to the position of education program assistant (EPA) in August 2000. As EPA, Ms. Ferea is the primary contact for marketing and administration of the Graduate Transportation Management Program. Among her many responsibilities are continued efforts to recruit for the certificate and master's programs, revision and maintenance of the website, and course planning and scheduling. Ms. Ferea received her BS in business marketing from UC Davis. Her studies in public relations and experience in media sales enhance her ability to promote the continued growth and success of the program.

Overview

Education Program Goal

The goal of the GTMP is to develop and administer a multidisciplinary, state-of-the-art program via videoconferencing and Internet technologies, consisting of coursework and experiential learning that provides students with the skills and knowledge to manage and lead transportation systems.

Enrollment Trends

During Academic Year 2005-2006, the graduate program recorded 103 graduate student enrollments. These enrollments were associated with 60 individual active students. Fifteen matriculated Master of Science in Transportation Management students were enrolled during the academic year, and five program graduates were recognized during the summer of 2006. These numbers are quite similar to those from the prior academic year, except for a notable increase in the number of individual students and a slight decrease in the number of graduates. Approximately 50 students are expected to register for fall classes, which would represent a nearly forty percent increase over the previous year.

Summer Transportation Institute

In the summer of 2006, the Education Program will again offer a “Summer Transportation Institute” (STI). The STI program, which originated as a pilot program on the South Carolina State University campus in 1992, is a national effort to provide career orientation and educational experiences to motivate secondary school students toward professions in the field of transportation. The transportation industry needs, and will continue to need, individuals who are prepared to provide the leadership to build the nation’s transportation system for the next century. The primary aim of the STI is to encourage high school students – particularly from traditionally underrepresented backgrounds – to seek professional careers in transportation through obtaining a college education. A total of 2,230 secondary school students have completed the national program, which is hosted by thirty-four colleges and universities in twenty-three states across the nation. The program is being funded by a contract grant of \$40,000 in Federal Highway Administration funds, supplemented by private donations to MTI. Participants will be engaged in a variety of activities including field trips to area transportation centers, guest speakers from the industry, hands-on projects, and related enrichment activities. New this year, participants will earn credit for a college-level course in environmental science with an emphasis on transportation issues, which will familiarize the students both with the environmental impacts of transportation and the collegiate learning environment.



Courses Offered

In Academic Year 2005-2006, the GTMP offered ten courses; class sites follow each course listing below:

Fall 2005

MTM 201: **Fundamentals of Transportation Management**. Students enrolled in Marysville, Oakland, Sacramento, and San José State University (SJSU).

MTM 214: **Transportation Policy and Regulation**. Students enrolled in Los Angeles, Oakland, Santa Ana, and SJSU.

MTM 236: **Contemporary Issues in Transportation**. Students enrolled in Los Angeles, Oakland, and SJSU.

MTM 203: **Transportation Markets and Business Development**. Students enrolled in Los Angeles, Oakland, and SJSU.

MTM 215: **Transportation Systems and Development**. Students enrolled in Oakland, Sacramento, and Santa Ana.

Spring 2006

MTM 202: **Introduction to Transportation Funding & Finance**. Students enrolled in Los Angeles, Oakland, Sacramento, San Diego, and SJSU.

MTM 296C: **Transportation and the Environment**. Students enrolled in Los Angeles, Marysville, Monterey, Oakland, Santa Ana, and SJSU.

MTM 217: **Leadership and Management of Transportation Organizations**. Students enrolled in Los Angeles, Monterey, Oakland, Sacramento, and SJSU.

BUS 286: **Project Management**. Students enrolled in Los Angeles, Oakland, Sacramento, San Diego, SJSU, and Stockton.

MTM 290: **Strategic Management in Transportation**. Students enrolled in Fresno, Los Angeles, and SJSU.

Graduates

The faculty and staff of MTI and the College of Business at SJSU were proud to present the graduating class of 2006 at the 15th Annual MTI Board of Trustees Scholarship Awards Banquet on June 24, 2006. Five students earned their MSTM degree. The dedication of these students, each of whom completed 30 hours of coursework while meeting the duties of full-time professional employment, is admirable.



The following MSTM graduates were hooded during MTI's banquet. Copies of their capstone research projects are available upon request.

Sepideh S. Reghabi
Amos H. Rendler
John S. Robertson

Jaime O. Rodriquez
Koko Widyatmoko

In addition to our MSTM graduates, the following students received the graduate Certificate in Transportation Management (CTM):

Steven C. Jetta
Thomas H. Little

Kristine Lowe
Chukwuma M. Umolu

The twelve-unit CTM program is rigorous and intense, consisting of four core courses from the MSTM program. These students' hard work and determination during this academic year have led to their successful completion of the CTM program. Many students earn the CTM as a meaningful step towards achieving their MSTM degree.

Continuing Student Performance (CSP) Fellowships

Twice a year, subject to funding availability, MTI awards \$1,000 MSTM Fellowships. Thanks to this generous program, students are able to continue their studies. In the 2005-2006 Academic Year, \$15,000 was awarded through this program to the following qualified MSTM students:

Walter Allen
*Roger Bazeley
*Mark Collins
Steven Ellis

Kenneth Kao
*Sharad Mulchand
Wajahat Nyaz
*Sepideh Reghabi

Jaime Rodriguez
Joseph Rouse
Christina Watson

*indicates receipt of multiple awards

Education



Additionally, subject to funding, MTI awards semi-annual \$500 CTM CSP Fellowships. Thanks to this generous program, deserving students are assisted in their efforts to continue their studies. A total of \$2,500 was awarded to the following CTM students:

Roger Bazeley
Chris Morfas
Kristine Murray

Grant Semple
Russell Taft

Success Stories

MTI Outstanding Student of the Year

The MTI education program faculty selected Wajahat Nyaz as the U.S. Department of Transportation “Student of the Year” for 2005. Wajahat was honored in a ceremony in Washington, D.C., in January 2006. He was selected on the basis of his strength in academic work, leadership, and contributions to the community. He is currently employed as a senior transportation engineer with the California Department of Transportation (Caltrans). He has worked in the transportation industry as a civil engineer for the past 15 years, and currently leads a team of engineers responsible for geotechnical design on a variety of challenging highway infrastructure projects in the San Francisco Bay Area. His current projects include the Devil’s Slide tunnel on Highway 1, I-880/Route 92 interchange reconstruction, and the Pigeon Pass realignment on Route 84.

A student with strong sense of community, Wajahat volunteers as a science and math tutor at the local community center near his home in Milpitas, California. The community center offers free tutoring services to children from less fortunate families. He is also actively involved in fundraising activities for the earthquake victims in Pakistan.

He has excelled in the MSTM program, maintaining an “A” average during his first year of coursework. His instructors praise his well-crafted written work and his verbal communication skills. Wajahat’s primary interest is in the area of transportation project delivery and funding, and he plans to focus his capstone research project on innovative project delivery methods involving public-private partnership.

Transportation Security Program Launched

MTI began outreach efforts for a new four-course Certificate in Transportation Security Management (CTSM) that will begin with the Fall 2006 semester. The certificate will require the completion of two required courses — Emergency Response and Transportation Security — along with two core courses from the current graduate-level transportation management curriculum. Students will be able to apply the credits earned from the certificate program towards MTI's 30-unit Master of Science in Transportation Management. The courses are being designed and taught by renowned disaster response expert Dr. Frances L. Edwards, who recently joined the full-time faculty at SJSU and has worked as a research associate with MTI for five years.

Alumni and Student Achievements

MSTM alumna Mary Frederick (MSTM, 2003) is the new Aeronautics Division Chief at Caltrans headquarters in Sacramento. Mary is a former U.S. DOT Student of the Year and had been serving as acting division chief since January 2006.

Current MSTM student Sharad Mulchand (Los Angeles MTA) was recently inducted into the Beta Gamma Sigma Honor Society, an international honor society.

Greg Kauch (MSTM, 2005) accepted a position as senior transportation planner with the Centre Regional Planning Agency in State College, PA.

Rudy Lemus (MSTM, 2004) has accepted a position with Hatch Mott MacDonald's Tunnels and Transportation Group, where he will be working on the Alaskan Way Viaduct Project in downtown Seattle.

Edujie Imoisili (MSTM, 2005) has joined the URS Corporation and was recently promoted to senior transportation engineer. She will be located in San Jose.



Education



Bringing In the Experts

A continuing goal of the GTMP is to use elective coursework to enhance the breadth of knowledge students receive. In the upcoming semester, yet another distinguished expert will join the MSTM faculty. Mr. Matt Raymond is currently the chief communications officer for the Los Angeles County Metropolitan Transportation Authority (MTA). He previously directed communications for transportation authorities in Denver, Dallas, and Los Angeles. An innovative leader who designed, developed, and implemented some of the most successful transit programs, products, projects, and services in the country, Mr. Raymond helped introduce light rail in three regions. He pioneered business-to-business marketing in the public transportation industry and has won over than 30 national advertising awards. Mr. Raymond holds master's degrees in marketing management and in public administration.

Outreach

The GTMP continued outreach to locate, contact, and attract eligible students; efforts included site visits to local transportation-related agencies and underserved professional groups. These efforts included appearances at the annual meeting of the California Transit Association in San Jose and several on-site visits to Caltrans as well as the MTA of Los Angeles. Through these efforts, a new videoconferencing classroom site was created at the County of Alameda Public Works Department.

Additionally, the California Department of Transportation (Caltrans) co-sponsored a statewide videoconference for Caltrans employees that publicized the graduate program offerings available via MTI. The videoconference occurred on May 10 and was available to all Caltrans employees with access to one of the 24 videoconference facilities across the state. Caltrans Director Will Kempton joined MTI Executive Director Rod Diridon and Education Director Dr. Peter Haas to inform Caltrans employees about the opportunities for professional development and advancement created by these graduate education programs.



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Financial Illustrations



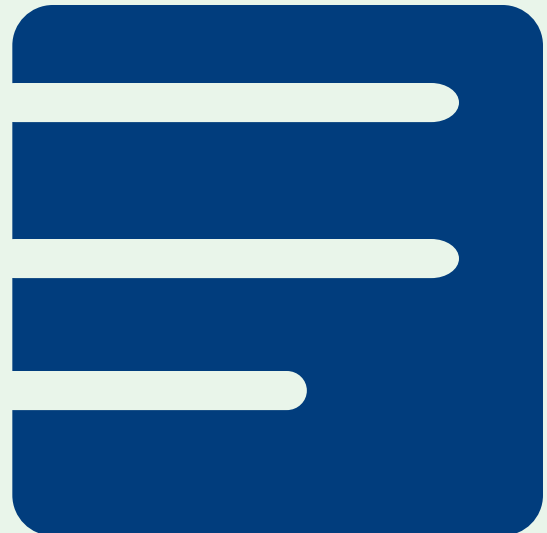
FISCAL YEAR 2005 - 2006

Funding Sources

Caltrans \$780,000

US DOT \$780,000

SJSU \$595,109

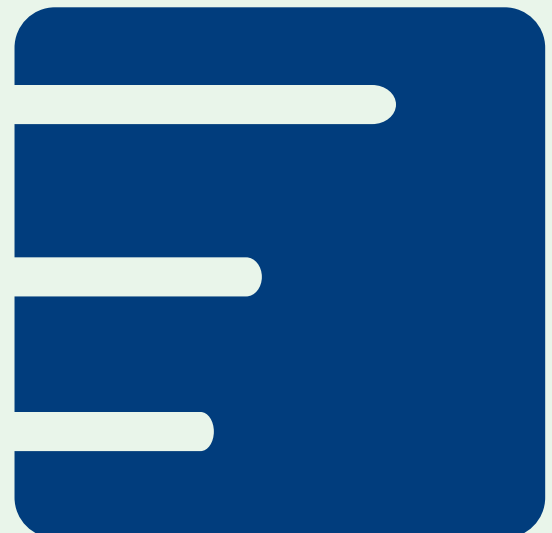


Expenditures

Research and Symposia \$726,434

Education \$405,223

Administration \$324,124



Research Associates Policy Oversight Committee (RAPOC)

Chair Dayana Salazar, Urban & Regional Planning

Members

Dr. Jan Botha, Civil & Environmental Engineering

Dr. Dongsung Kong, Political Science

Dr. Jacqueline Snell, Marketing and Decision Science

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Robert Johnston

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Research Librarian Diana Wu, Acquisitions Coordinator Rae Ann Stahl, and Periodicals Specialist Elaine Seto assure that the Martin Luther King, Jr. Library provides excellent service to faculty, students, and community users of the MTI collection.

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