

Mineta Transportation Institute



MTI

Annual Report 2001 - 2002



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CENTER

THEME

Policy Guidance Management of Transportation Systems

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 technology/information transfer programs relative to the policy control and management of all surface transportation modes. In short, MTI accomplishes 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 our 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 the other industrialized countries, the U.S. will not be able to outspend so must instead outsmart the competition. MTI's objective is, therefore, to identify through research, to teach through education, and to broadly disseminate through our technology/information 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.

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





A Note from the Executive Director

Rod Diridon

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 three years. Less than four years ago, with a \$500,000 annual budget, the Institute had four research projects in process and was conducting a Master of Science in Transportation Management (MSTM) and graduate Certificate in Transportation Management (CTM) with less than a dozen students enrolled. Though a web page existed, funding shortages precluded the required improvements.

A congressionally designated four-year TEA-21 grant for \$750,000 per year was authorized for MTI via the U.S. Department of Transportation's Research and Special Programs Administration. An equal matching grant from the California Legislature was provided via Caltrans. Delays resulted in MTI receiving three fiscal years of grant funding between April 1999 and July 2000, resulting in an abnormally high level of effort during the past two years.

Finally, 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 2002 and 2003 final two years of the TEA-21 authorization period. After an extremely competitive application and

interview process, MTI was chosen as one of the 10 continuing centers. Though the State of California is facing a major budget deficit, the federal grant will be matched by the California Department of Transportation, confirming their remarkable level of support for MTI programs.

RESEARCH:

Since mid-1999, MTI published 26 peer reviewed research projects and has nine more under contract and in process. The current fiscal year's research budget encumbers approximately \$1.3 million. Research supported by the TEA-21 grant has engaged 65 of the Institute's certified Research Associates (RA), most of whom are Ph.D.s, plus 65 student research assistants. The research topics are selected annually through a carefully structured needs assessment process involving designated U.S. DOT and Caltrans committees, the MTI Board of Trustees, and other national transportation leaders. The projects and research teams are chosen after a structured bidding and selection process. This year's research project selections will reach the contract stage by the end of the coming fall. This annual process was delayed approximately six months by the RSPA limited competition and the following new state grant contracting process.

EDUCATION:

Seventeen California State University System accredited Master of Science in Transportation

Management (MSTM) degrees have been granted since 1999, five of which were conferred this fiscal year. Beyond the graduates, current attendance in the degree and certificate programs has expanded substantially to 30 fully matriculated MSTM student plus 44 pre-matriculation or Certificate in Transportation Management (CTM) students. The Caltrans-provided 12 site statewide videoconference format is now supplemented with two-way online, videostreaming instruction available to mobility impaired and out-of-state students. In addition, this year Caltrans installed a state-of-the-art videoconference origination site in the SJSU College of Business Tower for use by MTI. The student counseling, syllabi, assignments, homework, testing, and a “chat room” for each class are provided through the education section of the MTI webpage (<http://transweb.sjsu.edu>) or via e-mail, fax and telephone contact with the professors.

TECHNOLOGY/INFORMATION TRANSFER:

The aftermath of the 9/11 attacks defined information transfer for MTI. The staff fielded numerous calls from the media and government officials seeking information on MTI transportation security research. The Institute organized and presented a national summit on the topic six weeks after the attacks. MTI’s transportation security reports were, by far, the most popular downloads from the website, and many hard copies of the reports were distributed.

The MTI webpage has been expanded to provide all MTI publications online, and support of the education program has been significantly enhanced. *The World In Motion*, MTI’s quarterly newsletter, is published and distributed in hard copy and on-line. A major portion of the annual research needs assessment, request for proposal distribution, and proposal responses are conducted via e-mail and the webpage.

In addition, to promote information transfer, MTI has conducted and published the proceedings of six national symposia or summits, and four additional regional forums or state-wide summits have been conducted since 1999. One more national and two more regional and statewide forums will be conducted before the end of the calendar year. Also, during the past year, the Executive Director, Research Director, Education Director, and Research Associate team leaders have given several dozen speeches and panel presentations on MTI issues both throughout the U.S. and, when the costs have been covered, in foreign countries. Those will be summarized in the following Directors’ “successes” sections.

STAFFING:

Dr. Peter Haas joined the MTI staff as Education Director in October 2001 and has had an extraordinary impact on the program. His biographical information is included in the education section of this report.

CONCLUSION:

The past year provided remarkable growth and continuing challenges. The MTI staff enjoys this dynamic 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 Centers’ program, will outsmart the competition and prevail in the global geo-economic competition of the 21st century.





“The Administration Department provides general management in areas such as budget control, grant acquisitions and management, personnel functions, facilities, office management, Board of Trustees and the Research Associate’s Policy Oversight Committee activities, university, state and federal relations, and general correspondence and communications.”



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Honorable Rod Diridon, Executive Director

Rod Diridon has directed MTI's efforts since its inception. Known as the "father" of modern transit service in Santa Clara County, California, Rod has chaired over one hundred national, state, and local programs and projects, most related to transit and the environment. Before leading the MTI team, Rod completed five terms and served six times as Chairperson of both the Santa Clara County Board of Supervisors and Transit Board. He has also served as Chairperson of the American Public Transit Association and as North American Vice President of the Union Internationale des Transports Publics (International Transit Association) in Brussels where he continues as a member of the Board of Directors. Rod chaired the National Association of Counties' Transit and Railroads Committee for 18 years. He has been a member of the Federal Transit Administration's Transit Industry Technical Advisory Committee and the National Research Council's Transportation Research Board Transit Cooperation Research Program, which he was elected to chair in 1995. He currently serves as chair of the TRB/TCRP panel on "Combating Global Warming Through Sustainable Transportation Policy" and was recently appointed by the Governor and elected to Chair the California High Speed Rail Authority Board. He is also on the Executive Committee of the national Council of University Transportation Centers. He has a BS in Accounting and a MSBA from San Jose

State University and was president of a private research corporation for seven years. He also served two combat tours as a U.S. Navy officer in Vietnam.



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Leslee Hamilton, Communication Director

A former Peace Corps Volunteer, Leslee Hamilton has extensive administrative and communications experience through her work with environmental organizations, on electoral campaigns, and as former Communications Director for San Jose Mayor Ron Gonzales. She has a BA in Business Economics from UC Santa Barbara. In addition to handling MTI's administrative functions, Ms. Hamilton is working to increase the exposure and use of MTI's research products. An avid outdoor enthusiast, she commutes to work by bicycle.

ADMINISTRATIVE SUCCESS:

The Administration Department provides general management in areas such as budget control, grant acquisitions and management, personnel functions, facilities, office management, Board of Trustees and the Research Associate's Policy Oversight Committee activities, university, state and federal relations, and general correspondence and communications.

MTI participated in the Group B and C University Transportation Centers limited competition, submitting a proposal in November 2001 and providing oral defense in December. MTI was proud to be selected in May 2002 as one of the ten

UTCs to receive continued funding for the final two years of TEA-21.

In January 2002, MTI submitted the semi-annual report to U.S. DOT-RSPA. The report presented summaries of MTI successes for the preceding six month period. Those relating to the Administrative Department will be updated in the following section.

MTI's Board of Trustees annual meeting was held on June 29, 2002. Maria Contreras-Sweet, Secretary of the California Business, Transportation, and Housing Agency joined the trustees during the all day meeting. Board member



and House Transportation and Infrastructure Committee Ranking Member James Oberstar provided an update on security and reauthorization issues. The 11th Annual Mineta Transportation Institute Board of Trustees Scholarship Awards Banquet followed, during which Oberstar and Contreras-Sweet were joined by U.S. DOT RSPA Administrator Ellen G. Engleman as guest speakers. The banquet raises scholarship funds for MTI students.

During the past fiscal year, Executive Director Rod Diridon represented MTI and surface transportation issues through numerous panels, media interviews, speeches, and other presentations. Included were workshops for the

Great American Station Foundation, California Transit Association, and Rail~Volution conferences. He gave interviews to KCBS, KNBR, KQED, KBAY, KNTV, the San Jose Mercury News, Silicon Valley Business Ink, and met with the editorial boards of the San Jose Mercury News and the Sacramento Bee on behalf of MTI and associated transportation projects. Mr. Diridon also made similar presentations to South Bay Transit Officials, Sierra Club, Silicon Valley Manufacturing Group, and the California Commonwealth Club, among others. He also participated in a briefing session for the General Accounting Office on lessons learned through MTI's transportation security research.

FACILITIES:

The Institute is located in the Business Tower on the beautiful San José State University campus (the oldest and one of the largest of the 23 California State University's campuses). Located in downtown San Jose, the campus is in the heart of Silicon Valley. The six full-time staff members, one part-time employee, and six part-time student assistants work in eight rooms provided by the University, which also provides videoconferencing, classroom, meeting, and other facilities. The College of Business also provides utilities, some equipment, and technical support for MTI's extensive computer systems.

FINANCIAL CONTROLS:

Communications Director Leslee Hamilton administers MTI's QuickBooks accounting system to provide real-time project-based budget and expenditure information for all projects and functions. The Institute uses this system to track expenditures in detail and to supplement the funding source-based accounting reports from the San José State University Foundation. The QuickBooks system is used daily to track fund and expense balances. The SJSU Foundation's reports are provided monthly, corroborate the MTI

system's balances, and provide grant-based budget information.

OFFICE ADMINISTRATION:

Communications Director Hamilton administers the office as well as external communications. She is responsible for updating the extensive office procedures manual that documents and helps streamline procedures for all program areas. The manual is an ongoing effort that the staff, under Ms. Hamilton's direction, continues to maintain and refine as Institute activities evolve.

PARTNERSHIPS:

California University Transportation Centers

In 1999, at the urging of the MTI Executive Director, Caltrans created the "UTC Cal Group" consisting of the directors of the three California UTCs and Caltrans liaison staff. The group has met three times per year since, hosted on a rotating basis by the three centers. During the 2001/2 fiscal year, the group decided to collaborate on a project to identify the systems and infrastructure security research needed for California surface transportation.

Council of University Transportation Centers

The MTI Executive Director is a member of the CUTC Executive Committee and has been active in several other CUTC committees. As host of the 2002 annual meeting, MTI organized a panel of transportation leaders to discuss TEA-21 reauthorization strategies with CUTC members. The meeting also featured a keynote address by RSPA Administrator Ellen G. Engleman, and time was allotted for MTI to showcase its research and distance learning based education programs.

University Transportation Centers' Directors Association

The MTI Executive Director founded the UTC Directors' Association in 1995 and chaired the group until 2000 when he nominated Mike Kyte and Steve Albert as co-chairs. MTI has contributed

several important policy documents and assisted the organization's members to work more closely together to benefit the total national UTC program. MTI hosted the annual UTC Director's meeting in late June.

Jointly Sponsored Symposia, Forums, and Projects

During the past fiscal year, MTI has or is in the process of co-sponsoring projects with the following organizations: Transit Cooperative Research Program of TRB, AASHTO, APTA, Transportation Trades Department of AFL/CIO, California State Automobile Association, San Francisco Bay Area MTC, San Francisco Bay Area Council, Great American Station Foundation, Commonwealth Club of California, Los Angeles MTA, Marin County Board of Supervisors, National Public Radio, Bay Area Rapid Transit District, and others. Most of these partnerships generated attendance and/or financial support for MTI programs and also resulted in substantial media attention for MTI and UTC efforts.



Community Involvement

Both the MTI Executive Director and Research Director maintain significant collateral activities in the community. For example, the Executive Director chairs a NRC/TRB/TCRP panel on "Combating Global Warming Through Sustainable Transportation Policy", was appointed by the Governor to the California High Speed Rail



Authority Board (an unpaid position), and is a member of several other transportation boards and committees. The Research Director is the president of a local Rotary Club, a sought after speaker on transportation and environmental issues, and on several related boards and committees.

These kinds of activities are encouraged by the University and the MTI Board of Trustees with the understanding that the MTI responsibilities come first. These kinds of activities also promote a support network for MTI which has proven to be extremely valuable both in terms of program effectiveness as well as fiscal support for both programs and in the form of scholarships for the MTI students.

CHALLENGES:

MTI will play a leadership role in providing information, when requested, to Congress and others as the UTC program is considered during the reauthorization debates.

Student and employer interest in the MTI MSTM program continues to grow. MTI continues to receive inquiries from such public organizations as Amtrak and Caltrans as well as privately held companies to provide instruction for their employees. Meeting the needs of current and potential future students presents an exciting challenge to the education program staff. An updated of the North American transportation education needs assessment, done by MTI in 1995, will ensure that students are receiving the most relevant educational information.

While MTI is proud of providing relevant, applicable research, a challenge is to make sure that reports are produced in a timely manner without sacrificing the validity of the research. The Institute will concentrate efforts on more aggressively marketing the reports, in hard copy and electronically and through symposia and forums, so that end users may take advantage of the findings more quickly.



“The Research Program manages selection and completion of research projects and sponsors symposia and fora. The Research Director coordinates the selection and efforts of the Institute’s Research Associates, which now number 124 professionals and educators. The research staff works closely with the Information and Technology Transfer area to publish the final research reports and event proceedings.”



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Honorable Trixie Johnson Research Director

Before joining Mineta Transportation Institute in July 1999, Trixie Johnson served the full limit of two terms on the San Jose City Council (1991 through 1998). Ms. Johnson is recognized as a land use and environmental specialist. Her council service included two years as Vice Mayor, and several years as the chairperson of the city's Transportation, Development and Environment Committee. Other public service included chair of the Environmental Quality Committee and 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 County Transportation Authority (VTA) and chair of its Congestion Management Committee; vice-chair of the Caltrain board (commuter rail); and served on the Legislative Committee of the American Public Transit Association (APTA). Ms. Johnson is a Phi Beta Kappa graduate with honors of the University of Utah, with a BA in History. She earned her M.A. in English from the University of Washington.

RESEARCH PROGRAM GOALS:

The Mineta Transportation 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 that are judged by peers and other experts to advance the body of knowledge in transportation policy and management from an intermodal perspective.

THE PEOPLE:

MTI actively recruits academic involvement from several departments at San José State University and from other colleges and universities. MTI also taps the experience and knowledge of individuals from other public and private sector organizations to build research teams. Each team includes at least one academic member and student, and projects are conducted in an academic format, including research methodology, report writing, and peer review of work prior to publication.

MTI certifies all Research Associates prior to their involvement in projects. 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 department heads or representatives of the primary SJSU academic departments with which MTI works, reviews the applications and

recommends certification where appropriate. Final certification is by the Executive Director and must be renewed every five years.

Projects:

Project selection begins with an extensive needs assessment process by staff, Caltrans and MTI's Board of Trustees (BOT). MTI also requests ideas from the U.S. DOT Western Resource Center. MTI then issues a formal Request for Proposals. RAPOC, Caltrans and a representative from U.S. DOT review the responses. After referral to the BOT, the Executive Director makes the final decision.

MTI emphasizes policy and management research, rather than technical research. The Institute seeks projects that address improving the development and operation of the nation's transportation surface systems, improving transportation decision-making, and ensuring the global competitiveness of the United States. MTI selects research products with immediate and practical value for transportation officials and practitioners. To that end, MTI has adopted the following areas of emphasis:

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

TRANSFER OF RESEARCH INFORMATION:

All research is published, following peer review, and every new report is available on MTI's website, www.transweb.sjsu.edu. The Institute also added selected past reports to the website, a project that will continue in the coming year. MTI has developed a number of other approaches to information transfer, including sponsoring symposia, funding post-research travel for researchers to address groups of end-users, and developing cost-effective materials to present the research in summary form for distribution to practitioners.

RESEARCH PROGRAM ACCOMPLISHMENTS:

MTI Terrorism Research Gains National Attention:

MTI has been conducting terrorism research since 1996. Two projects were completed under the ISTEA grant: *Terrorism in Surface Transportation: A Symposium* (96-1) and *Protecting Surface Transportation Systems and Patrons from Terrorist Activities: Case Studies of Best Security Practices and a Chronology of Attacks* (97-4). The September 11 terrorist attacks occurred as MTI was in final edit on the third terrorism project. Brian Jenkins, MTI's Project Principal Investigator, was in constant demand for television, radio analysis, and congressional testimony. MTI rushed pre-publication copies of the Overview document that includes a Best Practices Checklist to the General Accounting Office, turning around bound and copy-ready masters within hours. Within weeks, MTI completed publication of *Protecting Public Surface Transportation Against Terrorism and Serious Crime: Continuing Research*

on Best Security Practices (01-07) and Protecting Public Surface Transportation Against Terrorism and Serious Crime: An Executive Overview (01-14).

Six weeks after the event, on October 30, in response to requests from APTA and AASHTO, MTI presented a “National Transportation Security Summit” for the heads of state departments of transportation, large transit systems, national transportation labor union presidents, and U.S. DOT leadership. RSPA and Caltrans provided additional funding for the emergency project. The program presented the findings of the MTI research projects and information about various training and assistance programs and was highlighted by Secretary Norman Y. Mineta’s keynote address.

The MTI team welcomed the addition of Dr. Frances Edwards-Winslow, Director of Emergency Preparedness for the City of San José, a nationally respected disaster/medical response expert. MTI’s experts have access to the confidential sources essential to this field of research, and MTI’s ability to produce in a very short time frame has made the Institute an important resource for those on the front-lines in the fight against terrorism.

National Transportation Security Summit Leads to California Events:

Following the success of the national summit, Caltrans Director Jeff Morales asked MTI to conduct similar meetings for California state and local officials responsible for transportation infrastructure and systems operations. Sessions were held in late March 2002 in Oakland and Los Angeles to present a nearly identical program. While these events and the national summit are a success story for Information Transfer, it is the solid, respected research that forms the base.

Increased Quantity of Products:

Twenty-three research projects made it through the selection, negotiation, and final approval stages between April 1999 and June 2001. All were reported as Ongoing Projects in the 2000-2001 Annual Report. All twenty-three were completed this year. For 2001-2002, an additional nine projects have full approval. All of the new projects are on shorter timelines, even though their scopes are equal to the previous projects that took longer to complete. Under the prior ISTEA grant, eleven research reports were produced, three of which were actually published after the end of the grant. The comparison of the two grant periods amply illustrates the growth in scope and accomplishment made possible by the increase in funding under TEA-21. (ISTEA – 11 completed in 5 years; TEA-21 – 23 completed in 4 years.)

Timely Processing of Projects:

In general, the projects selected in the third round (the 2000 series) have moved through the process almost twice as fast as those from the 1998 and 1999 cycles. This is, in part, due to the streamlined management processes and the addition of a staff member specifically assigned to oversee the peer review and publication phases of projects. Because the research staff also manages many non-research activities (fora, symposia, and other technology/information transfer projects), the sheer volume of work completed between approval of the Strategic Plan in April 1999 and June 2002 represents a signal accomplishment in research performance.

Increasing Number of Projects Address Identified Needs:

A new criterion for rating 2001 proposals based on the researcher's use of an RFP-suggested topic produced more proposals on needs assessment topics than ever before. Even though the criterion was not weighted, RAPOC used it in making final selections.

MTI developed a new problem statement template for those participating in needs assessment in preparation for selecting the 2002 projects. Many problem statements were submitted by the Caltrans committee and even more by the MTI Board of Trustees. By including the new problem statements in the RFP for 2002, MTI will be adding further emphasis on those topics and providing additional support for those who choose to write proposals that address them. Combined with the rating criterion, this should result in a higher proportion of proposals that meet identified needs.

Extensive Use of Student Assistants:

The TEA-21 funded projects have employed 65 student assistants from eight campuses. Every project must include at least one SJSU student, and many students worked on more than one project. Participants ranged from junior level undergraduate to 4th year Ph.D. candidates. Two students have earned a special mention:

Allison Yoh, a doctoral candidate at UCLA and research assistant on project 2005, *Increasing Transit Ridership: Lessons from the Most Successful Transit Systems in the 1990's*, was appointed by Mayor Hahn to the Board of Directors of the LA County Metropolitan Transportation Authority. The mayor cited her work on the study as one qualifying factor for the appointment.

Dali Zhang, a SJSU masters candidate, received several awards from a San Francisco Bay Area non-profit association for professionals in Geographic Information Systems and spatial mapping. Mr. Zhang has been the primary research assistant on both of the Envisioning projects (9810 and 2001) and has recently completed assignments for the local smart growth project (2111).

Research Projects Presented at Conferences:

Several MTI projects were presented at prestigious conferences and in other end-user settings during the year.

- Urban and Regional Information Systems Association (URISA) 2001 Annual Meeting Dr. Bossard presented his "Envisioning Transit Oriented Development" work from two reports. He has also done numerous poster sessions (including sessions at Rail~Volution and the Second International Conference on Quality of Life in Cities) and presented the work to faculty and students at the University of Oregon, Portland State University, University of Southern California, UCLA and other institutions.
- Association of Collegiate Schools of Planning (ACSP) Drs. Levine and Inam have been invited to present both of their studies, one last year and another this year. Dr. Tom Horan presented his GIS work in November 2001.
- TRB Annual Meeting Five different MTI studies were featured at the 2002 conference. MTI's UC Davis researchers Robert Johnston and Dr. Caroline Rodier presented two sessions discussing modeling that more accurately reflects the impacts of land use variations, social equity issues, and environmental constraints. David Koffman's workshop featured his

study on transit services for seniors. Dr. Peter Haas presented the newest tax measures study. MTI's counter-terrorism expert Brian Jenkins spoke in the special series on terrorism. Additionally, a poster session featured *Developer-Planner Interaction in Accessible Land Use Development*, based on MTI project #9905.

- National Transit Institute (NTI) Drs. Oestreich and Whaley frequently use the material developed during their study, *Transit Labor Relations Guide*, during professional training sessions they conduct for NTI.
- Caltrans Dr. Ferrara presented his study, *A Statewide Study for Bicyclists and Pedestrians on Freeways, Expressways, Tunnels and Toll Bridges*, to Caltrans officials in November 2001 and then to the state's Citizens Advisory Committee on Pedestrian Safety.

MTI Research and End Users:

MTI stresses research with practical application. Recent activities suggest that MTI is succeeding.

- Researchers John Niles and Dick Nelson (*A New Planning Template for Transit-Oriented Development*, Project #9807, Publication # 01-12; and *Designing a Template for Understanding Freight Movement and Logistics at the Metropolitan Region Level*, Project #2004) experience an ongoing demand for presentations and media interviews throughout the country related to their MTI work. They provide professional assistance to neighborhood groups assessing TOD developments and provide a technical assistance service for local governments and civic groups called the Regional Transportation Reality Check.
- A Seattle think tank participating in planning new tunnels in the downtown is benefiting from the MTI counter-terrorism studies, according to MTI Research Associate John Niles, who alerted the group to the work.
- Niles also reports that the tax measure studies are finding use in the official discussions about transit infrastructure in the Seattle metro area.
- The online *Journal of Homeland Security* quoted both MTI terrorism studies and provides a link to the online documents on *TransWeb*.
- The integrated urban model being developed over several MTI projects (*Applying an Integrated Urban Model to the Evaluation of Travel Demand Management Policies in the Sacramento Region*, Project #9804, Publication #01-03; *Applying an Integrated Urban Model in the Evaluation of Travel Demand Management Policies in the Sacramento Region: Year Two*, Project #2002, Publication # 01-08; and *Regional Transportation Planning for Smart Growth*, Project #2107) is now being supported by the area MPO, SACOG. Both SACOG and the MTI team are adding considerable content, enriching MEPLAN far beyond what the MTI funds alone could have supported. The result will be real world, side-by-side testing of the SACOG plan using the traditional transportation model and MEPLAN and potentially a major impact on the transportation choices of this rapidly growing metropolitan area.
- The National League of Cities' (NLC) special working group on Homeland Security will be benefiting from MTI's counter-terrorism research. Pat Dando, a San Jose City Councilmember and member of NLC's Transportation and Infrastructure Services Steering Committee, requested the publications and is sharing their contents during committee deliberations in June 2002.

MTI in the Press:

MTI's counter-terrorism research brought significant media attention following 9/11, attention that continues. The research team, especially Brian Jenkins, and MTI Executive Director Diridon and Research Director Johnson have provided numerous interviews for television and radio, distributed studies to members of the press for their research, and dealt with many calls for quick information on background. MTI had reported in the past that the press was beginning to use MTI as a resource; that was minimal compared to what happened this year.

San José State University publications keep the campus community abreast of MTI news and accomplishments, research activities, and information transfer events related to research projects. *This Week*, an online newsletter, has carried several stories to its 1,231 primary subscribers who then distribute to their staff members. More significantly, *Washington Square*, the university's quarterly magazine with a circulation of 135,000, has featured MTI news and plans a feature on the Institute's success in the recent RSPA competition.

MTI Research Director:

During the past year, Trixie Johnson has been asked to participate or speak at many events, often to report research results or bring that background to discussions.

- Ms. Johnson testified to the U.S. Senate Committee on Governmental Affairs on December 13, 2001. Her panel addressed the question: Riding the Rails: How Secure Is Our Passenger and Transit Infrastructure? C-SPAN broadcast the session. Johnson provided the committee with copies of Publication #01-14 *Protecting Public Surface Transportation Against Terrorism and Serious Crime: An Executive Overview* that received high praise from committee members.
- Caltrans invited Ms. Johnson to attend a Policy Advisory Retreat to assess the draft *California Transportation Plan 2025*. Over a two-day period in November, she joined with over 20 other invitees to review the document, discuss issues, and make recommendations to Caltrans. The agency wanted the plan to be thoroughly examined before it was released for public discussion – and it was.
- *Thinking Beyond the Car: Innovative Transportation Solutions*, a workshop for the League of California Cities' Annual Planners Institute on March 21, 2002, offered Ms. Johnson an opportunity to share current research and engage city planners and planning commissioners from throughout the state in lively conversation about alternatives to automobile dependency.
- The League of Women Voters of Santa Clara County invited Ms. Johnson, a former LWV local president, to speak on a panel for their Transportation Day, April 6, 2002. Her primary topic was the Institute and the research program, but a wide-ranging question and answer period provided many opportunities to apply that research to issues raised by the audience. One spin-off of the event was an interview by a futurist doing research with SRI for their annual scan of issues and developments to watch in the coming year.



RESEARCH PROJECTS COMPLETED:

The following three projects were described in more detail in prior Annual Reports. They are listed here to assure that all projects completed under the current grant 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.

MTI completed the following 23 reports this year. They are listed in numerical order by project number.



Project #9802
Publication #01-06
Principal Investigator:
George Gray

California Border Zone Land Transportation Issues

The project is the second by this PI examining impacts and issues related to the California-Mexico border following the North American Free Trade Agreement (NAFTA). Since the original research (IISTPS 99-2, *Impacts of the North American Free Trade Agreement on Transportation in the Border Areas of the United States*) many new issues had evolved. Many emerged from the passage of TEA-21, California legislation (SB 45) revising transportation planning and funding, completion of the “Binational Border Transportation Planning and Programming Study”, and activities in Mexico to privatize rail systems, ports, and airports.

To further review these issues, the study analyzed new, modified, and proposed land transportation policies and their effect on U.S.-Mexico trade. Areas of study included a review of the existing systems and their condition, funded improvements, and proposed projects. The report analyzed the issues, determined alternatives, and recommended resolutions for at least five of the key issues, which were selected with the assistance of District 11, California Department of Transportation.

The study produced 20 Observations and Recommendations for Caltrans. Among them are:

- Enact legislation to revise the *Streets and Highway Code* regarding state highway service to international ports of entry, modify existing state highway routes, etc.
- Construct the San Diego and Arizona Eastern Intermodal Yard, San Ysidro.
- Consider border inspection facilities as part of the operating highway system.
- Include pipeline and conveyor technology in the planning process.



Project #9803
Publication # 01-19
Principal Investigator:
Jonathan Levine, Ph.D.

Land Use and Transportation Alternatives: Constraint or Expansion of Household Choice? (new title)

(This project was titled *Transportation and Land Use Innovation: Impacts on Household Residential Choice* until peer review comments led to the published title.)

Much land use planning now actually discourages development of alternatives to the large lot and single-family house. If planners viewed changes to their current rigid templates as opening up choices for residents – choices that

households desire and would act upon – they might be able to plan for both a reduction in automobile use and a better land use environment.

The research used surveys, GIS analysis, and discrete choice modeling to estimate the loss of household choice associated with a highly automobile dependent metropolitan area. The research focused on Boston, a region offering rich opportunities for residents in pedestrian and transit-oriented neighborhoods (and relatively low vehicle miles traveled per capita), and on Atlanta, an area with few such opportunities and very high vehicle miles traveled per capita. The contrast shed light on the spectrum of choices residents would make if transit or pedestrian-oriented neighborhoods were available.

The study findings include:

- Communities can provide more choice by relaxing regulations that give preference to homogenous development in the form of low-density, single land use, automobile oriented settings.
- Communities can be proactive in promoting regulations that facilitate development of a wider range of neighborhood types at the metropolitan and even local scales.
- Where such zones are designated but do not offer sufficient profit potential to developers, they will remain undeveloped.
- Planners and policy-makers should work more closely with those who have a better sense of market demand, such as consumers and real estate developers.
- Similarly to developers, planners can even create market demand through planning high visibility projects, or actively conveying the potential of development forms that relate transportation and land use in innovative ways.



Project #9804
Publication #01-03
 Principal Investigator:
 Robert Johnston

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

The standard approach to regional transportation planning is to project the travel demands of the past into the future and then plan to “meet” the “needs.” This method does not analyze the social equity effects of plans and projects. The old models generally do not represent changes in the number of trips, trip lengths, auto ownership, time of travel, and land development due to changes in transportation policies, nor do they reflect the dynamic that more roadway capacity leads to induced travel.

This study builds on four prior years of work at the University of California at Davis on an integrated urban model (travel and land use) called TRANUS, making it more sensitive to Travel Demand Management (TDM) policies. A number of policy scenarios were run through the model. Because TRANUS will facilitate simulation of critical travel behaviors not usually modeled, it should better represent the effects of TDM policies and thus encourage their

use. The project involved local groups interested in making regional transportation planning more responsive to environmental and social equity concerns.

The following conclusions were made:

- The induced travel effects of changes in land use and trip distribution may be critical to accurate evaluation of transit and highway alternatives.
- Integrated land use and transportation models can provide important policy insights.
- Land use intensification measures accompanied by supportive transit and/or pricing policies can produce comparatively large reduction in vehicle miles traveled and vehicle emissions.



Project #9805
Publication #01-07
Publication #01-14
Principal Investigator:
Brian Michael Jenkins

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

Protecting Public Surface Transportation Against Terrorism and Serious Crime: An Executive Overview

(Original title: Assisting Public Transportation Operators in Responding to Chemical and Biological Threats)

MTI previously sponsored a national symposium (IISTPS Report 96-1) and an earlier research project by the same Principal Investigator (IISTPS Report 97-4, *Protecting Surface Transportation Systems and Patrons from Terrorist Activities*). The latter produced case studies of transportation security in New York, Atlanta, Paris, and at Amtrak and combined them with results of a Federal Transportation Agency survey of nine public transportation systems in the U.S.

This report continues the multiphase project with a study of best practices for protecting surface transportation systems against terrorism and serious crime, including chemical and biological threats. The scope includes case studies in the U.S., Tokyo, London and other international sites to identify lessons learned and best practices. Transportation security officials were interviewed and their responses analyzed. The project included the publication of an Executive Overview of all the reports in the series that also contains a “Best Practices” guideline. These publications were the primary materials for the National and California Security Summits discussed in the Information Transfer section of this report.



Project #9806
Publication #01-09
 Principal Investigator:
 Tom Horan, Ph.D.

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

TEA-21 seeks to integrate transportation into urban life while pursuing goals of sustainability, economic development, global competitiveness, and increased multimodal options. Tools such as Geographical Information Systems (GIS) can help achieve these policy goals by providing planners, policy makers, and stakeholders with spatial data on community transportation preferences. This enables better decisions about transportation and community design by assessing transportation options for community livability through use of place-based planning.

Five case studies provide a model for cities wishing to enact place-based planning strategies. Specifically, planners can reflect community preferences by geocoding survey data for the development of rich spatial maps, full of details about community travel patterns and citizen perceptions of community relationships based on their everyday encounters with the built environment, especially the transportation environment. The Magnolia Corridor in Riverside, California was selected for an in-depth prototype analysis.

The results of the analysis demonstrated a high sense of community along the corridor, though there are some important sub-corridor spatial differences in perceived assets and liabilities.

Based on the data, the following recommendations can be made:

- Encourage walking along and within the Magnolia Corridor.
- Explore multimodal transportation options.
- Examine traffic patterns in neighborhoods.
- Develop small-scale commercial activity.
- Foster existing asset areas.
- Consider high-density residential design that unites the neighborhood.
- Study housing stock redevelopment options.
- Utilize GIS to involve all stakeholders.



Project #9807
Publication # 01-12
 Principal Investigator:
 Dick Nelson

A New Planning Template for Transit-Oriented Development

(Original title: *Creating a Planning Template for Non-work Travel and Transit Oriented Development*)

This project sought to improve the planning methodology for TOD by bringing a sharper focus on data display and analysis on non-work trip generators. Using the central Puget Sound region as a case study data source, the team mapped and analyzed the non-work travel environment of the Seattle-Tacoma-

Bellevue-Everett metro area and used the results to create a planning template for transportation and land use planners pursuing TOD. Trip generators were mapped using desktop GIS capabilities, private and public sector databases, and field surveys. Spatial relationships were analyzed. The team also quantified the increasingly larger trade areas of the new retail formats.

The report provides a planning template and specifies the activities that should be mapped, including forces such as electronic commerce that are shaping urban retail form, factors that will determine TOD regional (not just station-area) success, planning process steps, and plan outputs.

A sampling of the findings and recommendations includes:

- There has not been a careful analysis of the actual spatial environment for nonwork activity and the travel patterns it engenders.
- Nonwork activities account for approximately two-thirds of all personal travel and will continue to grow in variety. Reducing automobile use for these trips requires a range of alternatives, not just TOD.
- Work trip modal choice is determined in large measure by nonwork activities linked to work travel.
- Gauging the success of TOD must distinguish between station-area benefits and costs and corridor or regional benefits and costs.
- A benefit-cost ration for the TOD paradigm that is superior to other investments that increase transit market share may not be an *a priori* possibility in every metropolitan region. One size does not fit all.
- A Backcasting Delphi process can be a useful supplement to the planning process. U.S. DOT should support the refinement and testing of the new planning tool, just as it now supports conventional regional planning.
- Considerable information and data is needed to support TOD planning, including surveys on why residents choose to live in a TOD, what nonwork activities might succeed in a TOD, and the role of personal choice in nonwork travel.



Project #9808
Publication #01-23
 Principal Investigator:
 Evelyn Blumenberg,
 Ph.D.

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

(Original title: *Transportation and Welfare Reform: The Travel Behavior and Needs of Welfare Recipients*)

A successful transition from welfare to work for the millions of recipients moving into the paid labor market is in part dependent on transportation. Previous studies have examined the adequacy of the transportation links between welfare populations and potential job centers or the effect on mobility of not having an automobile. Most research focused on large urban areas, yet one-quarter of all welfare recipients live outside these areas.

This study focused on the day-to-day travel behavior and needs of actual recipients in Fresno County, located in California's agricultural Central Valley. The heart of the study was an extensive multilingual survey of current and former welfare recipients using proprietary information developed at UCLA. The study used an advisory committee of individuals from agencies and organizations active in welfare-to-work, as well as six focus groups of recipients representing urban and rural areas in Fresno County. The analysis assessed the relationship between access to transportation and employment outcomes. The PI then developed a set of policy and planning recommendations to improve the transportation options of welfare recipients and other low-wage workers living in smaller metropolitan and rural areas.

The findings include the following policy solutions:

- Provide automobile programs to facilitate ease of travel, particularly among welfare recipients who are looking for jobs.
- Target investments in urban public transit, which may include extending service hours, and, perhaps, experimenting with non-fixed route service to large employment sites outside of the metropolitan area.
- Increase the supply of childcare services, particularly in rural areas of the county.
- Include administrative efforts to ensure that those who qualify for transportation subsidies receive them.



Project #9809

Publication #01-13

Principal Investigator:
Andrew Nash

Implementation of Zurich's Transit Preferential Program

Zurich, Switzerland has implemented a successful transit preferential program, even in the face of competing demands for roadway space. Transit priority improvements are relatively low cost ways to make a transit system work better by reducing vehicle delays. Specific improvements fall into the following categories: roadway improvements and traffic regulations, traffic signal preemption, exclusive transit lanes, transit malls, transit system operations, transportation system improvements, and major transit facilities and bus rapid transit. This study examined Zurich's program to provide an understanding of the measures used and how they were implemented. Transit preferential programs have been more difficult to implement in the U.S., and this study looked at Santa Clara County, California as an example to compare with the Zurich case study.

The authors inventoried and described the measures used to provide priority. Much of the critical information was developed in interviews of key decision-makers to determine why they made the technical and political choices they did. Elected officials, civil servants, transit staff, researchers, business, and community groups were surveyed. The focus was on analyzing and understanding the political and practical aspects of implementation. While acknowledging the difficulties encountered, the study highlights eight implementation lessons:

- Obtain and maintain strong public support.
- Enlist elected official support.
- Use smart implementation techniques.
- Organize government to effectively deliver the program.
- Use careful traffic engineering and appropriate technology.
- Implement complementary programs to improve the transit system.
- Use capital investments to leverage institutional change.
- Think carefully at the systems level.



Project #9810
Publication #01-15
 Principal Investigator:
 Earl G. Bossard, Ph.D.

Envisioning Neighborhoods with Transit Oriented Development Potential

While there are many advocates for transit-oriented development (TOD), implementation has not realized the full potential. This project developed techniques for use by regional planning agencies, local governments, and developers to screen, analyze, select, and promote areas with TOD potential. The package includes socio-economic, demographic, land use, transportation, and design measures in a spatial setting. The focus was on light and heavy rail corridors in the greater San Francisco Bay and Sacramento regions.

The “Envisioning Neighborhoods” (EN) technique uses census data and brings together multiple maps, charts, and images. Data screening was designed to facilitate use of year 2000 data. The technique also utilizes digital ortho photos for analysis of developable and redevelopable land and GIS map analysis to estimate densities of population, potential riders, workers, and customers in rings and sectors around transit stops. To increase understanding, the EN technique also uses multiple digital images of block fronts and video pans. The final publication includes a CD that demonstrates the technique.

The resulting tool, while still in development, demonstrates the ability of the various visual computer programs and capabilities to provide extensive data and rich content in a usable format. A subsequent study (Project #2001) continues development of the tool in ways that retain the rich graphic presentation in a web environment.



Project #9811
Publication #01-10
 Principal Investigator:
 Donald R. Rothblatt,
 Ph.D.

Best Practices in Developing Regional Transportation Plans

Both ISTEA and TEA-21 increased the importance of the regional transportation plans (RTPs) developed by metropolitan planning organizations (MPOs). Identifying and sharing best practices could improve the quality of the plans. The study examined 17 RTPs representing a balance of geographic location, growth rate, transit orientation, size, density, and air quality conformity status.

The analysis compared the planning process and documentation in terms of past history and current progress in planning approaches toward addressing the transportation impacts of land use decisions, methods/degree of citizen involvement, evaluation processes used, and the databases available to support evaluation. The survey asked the MPOs to provide self-assessment, including how/if MPOs affect transportation outcomes in a region. The publication is expected to be of particular benefit to smaller MPOs.

Some of the conclusions are:

- The size of MPOs (geographic boundaries) is appropriate.
- Modest efforts are being made to broaden the representation of stakeholders in the RTP process, but public participation needs to be improved so that it is meaningful and broad-based.
- Coordination with state DOTs appears to be seriously lacking in most of the plans.
- Better multimodal evaluation and scoring criteria for projects are needed.
- There is a potential for the RTP to be updated less frequently than it is now (every three years) and still be a good planning document.
- MPOs need to make the transition to a system management and operations focus.
- MPOs should work to improve coordination with ports and airports.
- The quality of planning data in certain areas needs to be improved to make the RTP a more useful and reliable document. In particular, the specific planning data most in need of improvement included data on use of nonmotorized modes, long-term structural shifts in lifestyle and travel behavior, and the availability and price of energy.



Project #9901

Publication #01-05

Principal Investigator:
Scott Lefaver, Ph.D.,
AICP

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

This study responded to a need expressed by many of the local governments involved during a prior study (IISTPS 97-1, *Public Land with Private Partnerships for Transit Based Development*) for more policy guidance in implementing transit-based development. The prior study identified both policy and legislative issues that impeded implementation in spite of stated policies encouraging such development.

Six cities were the focus of case studies: San Jose, Mountain View, San Francisco, Los Angeles, and San Diego, California; and Portland, Oregon. All have used the available tools, and the success of their use was assessed. In keeping with the past report, one focus was the use of public-private partnerships. The team studied the impact of such variables as financing, timing, and permit processing, including environmental reviews. They evaluated the setting and attitudes that can create the environment for a successful partnership.

To encourage successful implementation of TBD, the report outlines steps for all levels of government, among them:

- Local government could adopt and then implement land use policies to encourage TBD and formulate incentives to attract

development, but it must also understand the limits of public policy requirements and how they fit into the market.

- State government could adopt legislation to encourage TBD, use tax credit and tax-exempt private development set-asides to encourage affordable housing with transit corridors; forego the property tax to encourage affordable housing; and, in California, exempt housing within a designated transit corridor from the California Environmental Quality Act.
- The federal government could expand legislation to encourage TBD, raise the limit on tax credits and tax-exempt private activity bonds for affordable housing, or, for a specific period of time, eliminate the ceiling for low-income housing projects within transit corridors.



Project #9902
Publication #01-04
 Principal Investigator:
 David Koffman

How to Best Serve Seniors on Existing Transit Services

Increases in the size of the elderly population and changes in travel patterns are expected to create significant new mobility expectations. This research provides tools for transit providers and public policy makers to make the greatest use of existing fixed-route transit resources to serve the mobility needs of the growing senior population. It demonstrates how customer satisfaction surveys can be used to set priorities for improving fixed-route service. The primary analysis technique used was the impact score technique. This method determines the relative impact of various improvements on overall customer satisfaction. It does this by measuring how much customers' overall satisfaction changes depending on their satisfaction with particular aspects of service. Satisfaction data from rider surveys from three West Coast transit systems were analyzed, comparing the responses of seniors and non-seniors.

Key trends among the elderly include the following:

- Older people rely on private automobiles for local travel and are likely to continue to do so.
- Older people need and choose to limit their driving as they age, resulting in declining ability and increasing dependence on friends, relatives, and neighbors.
- Although many seniors do ride transit, many find that existing transit services do not meet their needs.

The research reveals the following patterns about seniors' opinions regarding transit services:

- In general, seniors appear to rate service attributes more highly than do non-seniors.
- While importance scores for non-seniors tended to cluster together, the results for seniors appear to indicate that certain service attributes are significantly more important than others.

- At the two systems that used a similar method of survey administration and question format, there is broad consistency in importance ratings for seniors.
- Direct questioning suggests that the greatest increase in ridership would result from adding service.

**Project #9903****Publication #01-20**

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

Effects of Online Shopping on Vehicular Traffic Patterns

Online purchasing of consumer products and services is now firmly established and is projected to increase. This is MTI's second study of the impact of the "information superhighway" on traffic patterns and trip demand (IISTPS 96-4, *Issues Relating to the Emergence of the Information Superhighway and California Societal Changes*).

The report examines whether these changes in consumer buying will affect shopping trip traffic volume, traffic patterns, and traffic timing, including any anticipated changes in the use of public transit. Significant changes in consumer buying and travel patterns would have implications for transportation and land use planning, such as parking standards. The study looked at increases in shipping to individuals rather than to stores and the consequent traffic changes. The study assumed that different segments of the consumer population adopt online shopping at different rates and change their transportation patterns at different rates as well. Thus the data represents consumer innovators, early adopters, and early/late majority potential adopters of online shopping. The use of online surveys targeted that population.

The team expected to find some level of noticeable impact on traffic. However, the implication of the findings is that there will not be much reduction in traffic from online shopping in the next few years. However, there may be a noticeable, but still small, impact on weekend traffic by 2004. Even with extremely high trip savings assumed, short-distance traffic still decreases only about 2.7 percent for the year. This will be a noticeable drop in high-congestion areas but is still relatively minor in magnitude.

**Project #9904****Publication # 01-17**

Principal Investigator:
Richard A. Werbel, 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

(Original title: *Passing Local Transportation Tax Measures: A Follow-up Study*)

The original study (IISTPS 99-4, *Why Campaigns for Local Transportation Funding Initiatives Succeed or Fail*) examined four cases studies, as well as

national data. The objective was to ascertain the impact on voter approval of a large number of variables, including the process, the coalitions in support and opposition, the nature of the package and the funding mechanism, and the campaign and its messages.

This study examines especially important issues previously identified for more research: incremental versus comprehensive transportation improvement packages, importance of geographic distribution of benefits, growth containment bundled with traffic relief, the role of organized opposition, and contingency strategies. All of the eleven selected case studies focused on initiatives featuring expensive and complex projects with a transit component. Four of the communities had two similar ballot measures within a three-year interval, with substantially different results between the two measures. The existence of two recent measures in these communities allowed systematic comparisons, facilitating an understanding of how the transportation package and the process used to determine it, as well as how the communications campaigns used by proponents and opponents may influence the outcomes of these measures.

Some of the important conclusions are identified as follows:

- The combination of energetic and credible opposition and a questionable reputation of the transit agency and/or the transit system make it extremely difficult for a ballot measure to be successful.
- When a community has no prior rail transit system, a comprehensive rail-only package is extremely unlikely to be successful.
- Without approximately \$1 million or more to spend on a combination of direct mail and television advertising, it is difficult for proponents to be successful. It is extremely difficult to be successful in fundraising without having the business community and key elected officials enthusiastically supporting the ballot measure.
- The degree of enthusiasm that the business community and key elected officials hold is apparently influenced by the degree to which they are involved in developing the transportation package. Involving the business community, key elected officials, and possibly representatives from environmental organizations can make it difficult to develop a consensus about a specific transportation package that can be enthusiastically supported by all groups and key individuals.
- Under certain circumstances, voters do not appear to place significant importance on the existence or length of the expiration date of the tax used to fund the transportation package.

**Project #9905****Publication #01-21**

Principal Investigator:
Aseem Inam, Ph.D.

Developer-Planner Interaction in Transportation and Land Use Sustainability

This study argues that significant unmet demand exists for alternatives to conventional auto-oriented development and that planning interventions that restrict densities and land use mixing in developed areas are a major reason that this demand remains unmet.

The study included a national survey of developers, selected at random from the database of the Urban Land Institute in Washington, DC. They were asked about market acceptance, perceptions of unmet market demand, long term benefits for developers who produce more sustainable development forms, and obstacles to their building more sustainably (e.g. regulations, community opposition, uncooperative planning authorities, financing difficulties). The second investigative approach included four case studies, two assessed by the authors as successful and two as unsuccessful. The case studies explored such questions as: Do developers want to build more sustainably than regulations allow? Is there potential profit motive for developers who build sustainable projects? What tools or incentives would yield more sustainable growth patterns and attract developers? What constitutes “successful” alternative development?

The findings of the survey of developers include:

- There is considerable market interest in alternative development (from 10 to 25 percent of the market in at least three-fourths of the survey responses).
- The planning function and local regulations are the most significant obstacles to alternative development.
- The interest is nationwide. The highest interest is in the Northeast and Mid-Atlantic regions (as high as 90 percent). The South Central region was the lowest at 50 percent.
- Two-thirds of those surveyed had proposed such development, with nearly half of those being rejected. Of the approved projects, two-thirds were altered significantly to reduce the density, lessen the land use mix, or cut back on pedestrian or transit-oriented amenities.
- Developers strategically propose higher than intended densities to allow for reduction.

The findings from the case studies include:

- In small towns, the elected officials play a larger role than city staff in determining the outcome of proposals. The councils of larger cities are less involved in individual projects.

- The professional staff plays a neutral role; the elected officials and the community take sides, often without acknowledging the planning functions and regulations that apply. Planning is viewed as a restriction against, rather than an enabling mechanism for, alternative development.
- Developers did not analyze the market for housing. They used familiarity with local demographics, experience in other areas, and instinct.
- Sometime the right thing happens for the wrong reason. The higher density may have been proposed to foster transit ridership in a suburban area, but research shows little relationship in a suburban setting. However, the result was an alternative housing choice that might not otherwise have been built.



Project #9906
Publication #01-02
 Principal Investigator:
 Herb Oestreich, Ph.D.

Transit Labor Relations Guide

External and internal pressures are forcing both public and private transit entities to formulate new and innovative policies and strategies to improve their labor-management relations. Studies have shown that the collective bargaining relationship between union and management is the factor with the most direct and measurable effect on organizational effectiveness. Many transit managers and union leaders want a more cooperative relationship and are exploring joint labor-management committees and a negotiating style called “interest-based” or “mutual problem solving,” but they are exposed to much misinformation. Exaggerated success stories have oversimplified the process required and hide the many failures.

Through literature review and extensive interviews and correspondence, this study produced a guide for successful cooperative union-management relations in the transit industry, with emphasis on the reasons behind successes and failures. It includes a thorough explanation of the legal framework, which is different from other private or public sector labor relations systems, that must be understood regardless of the negotiating and dispute resolution styles employed.

Some of the findings and conclusions include:

- Major strikes can devastate both unions and transit organizations, and that realization has increased the interest in interest-based bargaining.
- Poor labor-management relations negatively affect marketing and profits of transit organizations, public or private.
- Management must be proactive in dealing with labor leaders.
- A striker replacement policy creates horrendous legal problems that tend to drag on.

- A weak union is more disadvantageous for management than one with strong trusted leadership.
- The threat to survival is a powerful incentive to cooperate and succeed.
- Effective long-term collaboration depends on visionary role models at the top, especially the general manager, and their initiation of changed thinking at the lower levels of the organization. The middle management must be trained and encouraged to facilitate the change.
- Outside consultants and mediators are an indispensable ingredient for success.
- Conflicts of interest will remain; interest-based bargaining and mutual problem solving is not a panacea.
- The spirit is more important than the procedures.
- The impact on grievances is inconclusive, but there is some evidence that fewer are filed or concerns are addressed before they become formal grievances.



Project #9908
Publication #01-11
 Principal Investigator:
 George Gray

Non-Pricing Methods to Optimize High Occupancy Vehicle Lane Usage

The unused capacity of high occupancy vehicle (HOV) lanes often leads to pressure to abandon their use, especially when the condition exists next to congested mixed flow freeway lanes. One means of increasing their use has been congestion pricing which allows single occupant vehicles to use the lane for a variable fee. This study explored non-pricing methods that could optimize use of excess capacity in carpool lanes. It focused on identifying and evaluating the spectrum of possible users that might be considered and recommends worthy candidates for additional study.

The rationale for establishing HOV facilities in California, as identified by Caltrans Policy and Procedure for Bus and Carpool (HOV) Lanes, is to:

- Increase the people-moving capacity of the freeway system.
- Reduce overall vehicular congestion and motorist delay by encouraging greater HOV use.
- Provide time and commute cost savings to the users of HOV lanes.
- Increase overall efficiency of the system by allowing HOVs to bypass congestion on lanes designed for their use.
- Improve air quality by decreasing vehicular emissions.

The original potential identified user groups were reduced to seven candidates, which were further appraised considering input from a variety of external sources. Based on the outreach finding and the previously cited criteria, the following user groups are recommended for additional study:

- Electric and other low emission vehicles
- Radio dispatched passenger vehicles
- EPA certified high mileage vehicles and vehicles using alternative fuels
- Deadheading transit, school, and charter buses.



Project #9909

Publication #01-01

Principal Investigator:
Dr. Thomas C. Ferrara

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

Proposals for access to two major San Francisco Bay bridges were the impetus for this study. Groups representing pedestrians and bicyclists have become increasingly active in seeking access to such restricted facilities. The California Department of Transportation (Caltrans) also desired a fresh look at their policies in this area in light of the multi and intermodal nature of both ISTEPA and TEA-21. To assure that all views were considered, the team worked with a broadly representative advisory committee throughout the study.

The study used literature review and surveys of most of the states, approximately eight other countries, and the comments of advocates both as individuals and as groups. Data includes accident records, facility characteristics, and intensity of use for facilities with access and a control group without access. A reference group comprised a third data set, indicating accident trends unrelated to the presence or absence of bicycles and pedestrians. The team developed recommendations and policy guidelines for Caltrans that account for impacts on all users and affected agencies. The report covers proposed policies, facility design and modifications, guidelines, and a methodology for monitoring safety and operations of the implemented recommendations.

Specific findings and conclusions include:

- Bicyclists should never be encouraged to use a freeway, but allowing them to do so requires specific actions.
- Continue and enhance efforts to inform drivers that they should avoid exiting their vehicles on freeways.
- A bicycle-counting program needs to be implemented in order to further study bicycles in a quantitative manner.
- The possession of a driver's license should be a requirement for using a bicycle on freeway shoulders.
- Shoulders and ramps must be carefully designed and reviewed for specific criteria.

- Drain inlets must be reconstructed or removed from shoulders where bicycles are allowed.
- The bicyclist is responsible for safe crossing of a freeway ramp. Caltrans should review all freeway ramps at which bicycles are allowed to cross on the freeway side, particularly for adequacy of the sight distance and traffic volume.
- Little data is available for evaluating bicycles on bridges or making very specific recommendations. Shoulders, expansion joints, warning devices, and railings should be considered based on what is known.
- Without recommending that bicycles be allowed on the Richmond-San Rafael Bridge, that structure can be used to discuss the issues raised by the consideration of such use.



Project #2001
Publication #01-24
Principal Investigator:
Earl G. Bossard, Ph.D.

Using the Internet to Envision Neighborhoods With TOD Potential

In an earlier study (*Envisioning Neighborhoods with Transit Oriented Development Potential*, Project #9810, Publication #01-15), Dr. Bossard developed the Envisioning Tool. In this study, he expands the research to take advantage of additional data sources and new means of displaying that data. The project focuses on developing systematic ways to find, filter, transform, model, and synthesize these data into small replicate maps, charts, digital images, and tables which can be combined to enable envisioning of areas with transit oriented development (TOD) potential. An Internet-friendly envisioning tool will be more usable and effective than the version developed for the first study.

This project estimated travel times to transit centers, added bicycle-commuting data to the current sites and identified additional sites that have good network data, bicycle data, or information related to special needs populations. The publication includes a demonstration website, available on the MTI website, *TransWeb*, as part of the web posting of the project. The goal continued to be development of a tool that will assist planners, developers, funders, and others to analyze the potential of sites for transit-oriented development.



Project #2002
Publication # 01-08
 Principal Investigator:
 Robert Johnston

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

This study continued the development of a model that could incorporate the evaluation of travel demand management policies, which has particular importance in coordinating transportation and air quality planning. (See *Applying an Integrated Urban Model to the Evaluation of Travel Demand Management Policies in the Sacramento Region*, Project #9804, Publication #01-03). This increment added submodels for floor space, heavy truck freight, and analysis of impact on households by income (for use in assessing equity issues). The model interfaces with a GIS model, and the resulting information was presented to local citizen groups to assess its potential for empowering participants in the regional transportation planning process. Specifically, the case study evaluated transit investment alternatives combined with supportive land use policies and pricing policies in the Sacramento region and compared those alternatives with highway investment alternatives.

Based on the results of the case study, the report presents these conclusions:

- Transportation investment in both highway and light rail may allow for greater decentralization of regional development. Land use and pricing policies may be used to “tame” the decentralizing effects of transportation investments.
- New highway capacity projects, even if they include HOV lanes, may increase vehicle miles traveled and emissions.
- Transit investment with supportive land use policies and/or pricing policies may be very effective in reducing VMT and emissions.
- Transit investment with supportive land use and/or pricing policies may provide congestion reduction that is as great, if not greater, than highway investment policies.
- The highway investment policies may, however, provide the greatest level of benefit (i.e. changes in travel time and cost from the base case) compared to transit with and without supportive land use and/or pricing scenarios.
- Equity measures are useful to identify possible disparities in the benefits that may result for the location of transportation investments and policies that may result in losses to certain groups.

**Project #2003****Publication #01-18**

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

The California General Plan Process and Sustainable Transportation Planning

All California cities and counties are required to have local general plans that serve as the “constitution for all future developments” in their jurisdiction. These plans have the potential to serve as a basis for sustainable development, and this study assessed the role played by the concepts of sustainable development or sustainable transportation in a wide sampling of current plans. The study defined and then identified criteria for assessing sustainability in the elements of a plan, especially in the transportation/circulation element. It serves as a baseline against which progress can be measured.

The research emphasized a review of current planning efforts because sustainability in plans is a relatively new concept. Guidelines and model language for the circulation, land use, and housing elements were explored, as well as the potential for a separate sustainability element. The study included a literature review to define sustainable transportation and sustainability, collection of 400 general plans from throughout California, a planning director’s survey, and seven case studies of jurisdictions with exemplary or instructive plans and planning processes.

Certain consensus lessons emerged:

- General plans take a long time to prepare and take even longer to implement, and thus require a sustained community commitment to achieve success.
- Sustainable programs and practices can occur without benefit of a new general plan with explicit policies and implementation measures.
- Sustainable transportation requires a holistic, multi-modal approach to community mobility, including pedestrian, bicycle, transit, and automobile use. In general, reduction in the use of the automobile is necessary.
- Sustainable transportation also entails simultaneous, inter-related planning for resource conservation, air quality, land use, housing, design, and other community conditions related to mobility.
- Sustainable transportation requires a regional approach and cooperation among neighboring communities.
- Sustainability in general requires community consensus and inclusion, together with a public education process to build a long-term constituency.

Some of the recommendations include:

- The State of California needs to set an example for local governments by developing sustainable principles involving state-level activities.
- A “Sustainability Element” is not recommended. Sustainability will need to be integrated throughout the general plan document through interlocking goals, policies, implementation programs, and clearly defined actions.
- Local general plans should demonstrate how the sustainability elements relate to the surrounding communities and the region to demonstrate that non-sustainable impacts are not being transferred to other jurisdictions.
- The state Office of Planning and Research (OPR) should revise the *General Plan Guidelines* to include more opportunities for including sustainability planning, should encourage the use of sustainability indicators as a monitoring tool, and should play a leading role in creating dialogue, education, and training to assist local governments.

In general, the report recommends more frequent updating of general plans, the need for greater emphasis on implementation of plan policies, and the need for educational and outreach efforts aimed at enhancing the proliferation of general plan policies that promote more sustainable transportation systems at the local level.



Project #2005

Publication #01-22

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

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

The 1990's saw volatile movement in transit ridership, from the stagnation of the recession early in the decade to stabilization at the end. Some systems, however, increased ridership even in the recession or grew dramatically during the recovery. This study examined why these increases occurred, particularly in the latter half of the decade.

The research employed a wide array of methodological approaches, including an analysis of nationwide transit data and trends; a survey of officials from agencies that increased ridership in the late 1990's; and case studies based on in-depth, open-ended interviews with transit officials from 12 agencies that were particularly successful at attracting new riders during the study period. While the research is largely dependent on the perceptions of transit managers, they are the professionals for whom service provision and consumption is a daily (pre)occupation.

Following the tabulation of the surveys and dissemination of the interviews with transit officials, the following conclusions were made:

- The most significant factors influencing transit use are *external* to transit systems, e.g. population increases, economic growth, congestion, etc.
- Transit systems that have been successful at increasing ridership are concentrating their efforts on producing effective service for the most responsive areas and groups of riders.
- Ridership productivity is easiest to maximize in traditional transit territory.
- Transit fares may be less important to ridership levels but are still significant, especially for particular market segments. System managers were generally enthusiastic about the result from universal fare coverage and partnership programs.
- While niche marketing is not new to the transit industry, more agencies are targeting market segments to increase ridership.
- Transit agencies' abilities to form partnerships with communities, businesses, universities and schools, social service agencies, and local government clearly garner support and interest in meeting the needs of changing demographics and development patterns.
- Above all, transit systems with the greatest increases in ridership appear to tailor their services and product mix to meet customer needs.



Project #2007
Publication #01-16
Principal Investigator:
Walter Siembab

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

Transit authorities currently have few incentives they can use to encourage transit-oriented development (TOD) adjacent to rail stations. Yet this development is needed to help generate long-term ridership and justify the capital investment that rail requires. This project examined whether fiber optic networks developed in rail authority rights-of-way can be used, in some cases, as an incentive to encourage TOD.

This study is concerned with the feasibility of introducing three telecommunications-based incentives for transit-oriented development (direct access to fiber, network services, and network access centers). The market for these hypothetical incentives is the developers of transit-oriented projects. California's San Francisco Bay Area/Silicon Valley and Los Angeles/Southern California regions are the study's geographical focus. The question is the extent to which members of the development community believe that the incentives would affect the viability of their transit-oriented projects.

In order to provide a context of meaning for the responses of the development community, two other research questions were asked:

- What are the current and best practices using telecommunications networks as development incentives elsewhere in the nation and in Western Europe?
- Based on the current telecommunications network policies in Southern California and the Bay Area, what are prospects for, and barriers to, offering network incentives to TOD?

Conclusions of this study include the following concepts:

- Common and best practices in the United States and Europe suggest that regardless of the relative degree of telecommunications market liberalization, rail transit authorities are looking to joint development arrangements with private telecommunications companies for network infrastructure to support internal operations or to generate revenue.
- The development community wants the incentives.
- Network strategy is close to adoption somewhere. The prospects for offering the network incentives in either the northern or southern metropolitan regions in California may be good.
- The challenge is to overcome the barriers to innovation.

New Projects

All of the projects in this group were approved and begun in the current year. One project has completed the active research phase with the submission of a draft final report. Eight projects continue in the active research phase, and all will be published between August and December 2002.



Project #2004
Principal Investigator:
John S. Niles

Designing a Template for Understanding Freight Movement and Logistics at the Metropolitan Region Level

Preliminary research by the primary team members determined that Metropolitan Planning Organizations (MPOs) in the United States are not yet incorporating into transportation planning a complete understanding of emerging trends in freight (all non-passenger) movement. The result can be very inaccurate forecasts that result in poor and inadequate planning and allocation of resources. This study should assist planners and decision-makers in determining the allocation of resources in support of sustainable commerce, environmentally sound land use, and efficient intermodal connectivity. This study will provide tools in the form of a planning template to help MPOs fully incorporate freight transportation in their regional plans, as directed in TEA-21.

The study workscope includes:

- Develop prototype techniques for collecting primary source data on freight systems in a metropolitan area.
- Develop data display formats that support work on public policy issues.
- Examine eight candidate sources for primary source data collection; select two to four for measurement trials.

The methodology will be developed in the Puget Sound region, with limited testing and refinement in the San Francisco Bay Area. Some of the planning issues to be addressed include: peak and off-peak delivery, impact on congestion at major centers of activity, parking restrictions on deliveries, truck delivery and loading interference with street traffic, delivery volumes in residential areas, and changes related to electronic commerce.

- Create educational, on-line documents (the template) for outlining, writing, creating graphics, and web publishing.

The template has the following components:

1. A statement of the general planning problem of addressing urban freight movements to meet business requirements.
2. A set of questions about changing patterns to address through data and other empirical information.
3. Description of measurable categories and parameters in prototype tables, graphics, and other data displays that generically characterize freight patterns.
4. Examples of a few freight patterns, sufficient to demonstrate practicality, utility, and applicability of the data displays.
5. Policy options and research directions for addressing freight mobility.



Project #2102

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

Bridging the Gap: Planning Interjurisdictional Transit Services

Transit services are provided within agency boundaries, but passengers often need to cross those boundaries. Many experts opine that providing a “seamless” service is an important factor in encouraging transit ridership. This study focuses on two interjurisdictional case studies: the Fremont-Milpitas corridor in the Silicon Valley area of the San Francisco Bay Area and the Seattle-Everett Corridor in the Puget Sound region.

The work includes an examination of federal, state, and local programs, policies and legislation for improving transit service across jurisdictional boundaries. It will inventory plans, policies, and legislation (both enacted and proposed) to determine the range of tools available to local government and transit providers to make the connections and provide better service. A

two-stage literature review will cover the general sources and legal sources. The review will identify the tools available.

The team will conduct qualitative interviews of fifteen policymakers in each area, ten in public agencies and five representing major high tech employers, to test both knowledge of, and the probable success of, each mechanism identified by the earlier work.

The PI anticipates producing a report in two parts: a research report and a working paper/manual for policymakers to provide guidance for research in similar communities.



Project #2106
Principal Investigator:
Richard Lee, Ph.D.

Sustainable Transportation Indicators for California

The project will develop performance indicators for local and regional government surface transportation agencies (both planning and operating). It seeks to integrate transportation and sustainability indicators. It is a fundamental premise of this study that effective sustainability indicators will build on indicators already in use. While the report will focus on California, the results are expected to be relevant generally.

The team proposed to examine 19 candidate transportation performance indicators. The study will use the following methodologies: literature review; collection, analysis, and evaluation of current indicators in use; surveys and structured interviews with key stakeholders and interested parties; and case studies. A synthesis process will be used to devise indicators for (1) planners, (2) transportation infrastructure managers, and (3) public transit service providers at the regional and local levels. The findings and recommendations will include suggestions for changes to state planning law and guidelines and the creation of model Sustainability Performance Indicators.



Project #2107
Principal Investigator:
Robert Johnston

Regional Transportation Planning for Smart Growth

This research team, in two prior MTI projects (*Applying an Integrated Urban Model to the Evaluation of Travel Demand Management Policies in the Sacramento Region*, Project #9804, Publication #01-03; and *Applying an Integrated Urban Model in the Evaluation of Travel Demand Management Policies in the Sacramento Region: Year Two*, Project #2002, Publication #01-08) and on other grants, has developed a very advanced urban model (MEPLAN) for the Sacramento region. This project enhances the model by adding new variables, changing the structure to match the zones in the SACOG plan (to allow comparisons of results), and recalibrating the data for 1980, 1990, and 2000.

Recently, the Sacramento regional planning process changed, and the area is now considering two beltway freeways. The enhanced model will be applied to more complete smart growth scenarios to be developed with local environmental and social equity organizations and with farmer groups in the outlying counties. These scenarios will be compared with the official SACOG results for the No Build and Beltway scenarios. By joining MEPLAN and Uplan (a GIS companion) and applying them to the comprehensive issues involved, this project moves the team's work into real-world application.

**Project #2108**

Principal Investigator:
Caroline Rodier, Ph.D.

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

The conformity requirements of the Clean Air Act assume the ability of travel models to estimate key travel inputs to emissions models accurately enough to forecast emissions to within a few percentage points, and thus demonstrate conformity with the approved state implementation plan. Nonconformity can result in the loss of federal highway funds, as occurred in Charlotte, NC and Atlanta, GA. The Principal Investigator's past work with a team at UC Davis has shown that most regional travel demand models are deficient in representing induced travel. They underestimate vehicle miles traveled (VMT) and congestion for roadway projects and overestimate VMT and congestion for transit projects. These deficiencies then affect subsequent air models. The issue is how to use uncertain models responsibly.

This project is a 10-year validation study of the Sacramento regional travel demand model that will assess the predictive accuracy of the model, its representation of induced travel, and actual induced travel in the region. It is the first known formal validation study of a regional model.

**Project #2109**

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

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

California is now a majority-minority state, and many residents have an immigrant history. Knowing how various groups view and use transit would assist in planning transit service in the future for this growing population. This project is the first phase of a two-part proposal, a pilot survey to prepare for a more extensive and complete survey that will provide the data for analyzing very complex questions. This project description applies to the full project to place the pilot survey in perspective.

The transit attitudes and behavior of three targeted ethnic segments will be identified using a survey questionnaire administered by telephone interviewing. The targeted segments are a) Asians, b) Hispanics, and c) African-Americans. With Asians and Hispanics, only first generation immigrants will be included in the sample. With Asians, the focus will be on

first generation immigrants from China, the Philippines, and possibly Vietnam. In addition, nonhispanic whites will be included as a fourth study group for comparison purposes.

The primary study objectives involve:

- The extent that the transit system meets the transportation requirements and needs of each of the three targeted ethnic segments.
- An identification of factors that differentiate transit *choice* riders from those who choose *driving* as their primary mode of transportation (for those members of the study groups who have been *transit dependent* riders in the past).
- The magnitude of the differences, if any, in transportation behavior, transit requirements, and transit attitudes between the three ethnic segments and the fourth segment.
- Variables contributing to differences *within* each of the three ethnic segments in terms of relevant transportation behavior and attitudes.

Making Growth Work for California's Communities

(Original Title: *An Assessment of the Receptivity of Smart Growth Land Use and Transportation Planning Concepts at the Local Level in California*)



Project #2111

Principal Investigator:
Kenneth R. Schreiber,
AICP

If the State of California is to become a stronger advocate for transportation and land use policies that address sprawling growth patterns and related conditions associated with new development, it will be important to have a clear understanding of:

- Applicable land use and transportation planning techniques;
- The extent to which local planning agencies are incorporating these concepts into local plans;
- The extent to which local planning agencies are seeing these concepts implemented; and
- Sources and nature of support and opposition to these concepts.

The report to be prepared for this study will focus on the following questions:

- What are the land use and transportation techniques appropriately associated with smart growth?
- To what extent are local planning agencies (i.e. cities and counties) incorporating smart growth concepts in their planning strategies? What obstacles do they face?
- To what extent are local planning agencies seeing smart growth concepts being implemented? What obstacles do they face?

- Who are the advocates and the opponents of smart growth plan?
- What are the perceived motivations of advocates and opponents?
- What actions could the state take that would be both effective in facilitating smart growth plans and be acceptable to the constituencies that would have implementation responsibilities?

The study will use literature review, extensive surveying and interviewing, and analysis leading to conclusions and recommendations.



Project #2113
Principal Investigator:
Andrew Nash

Shared Use of Rail Infrastructure by High Speed Rail: Best Practices in Design and Operations

The purpose of this research project is to describe best practices for integrating high speed rail service with regular rail service in European rail systems and to assess their potential for use in the United States. The research will consider operating strategies, specific infrastructure designs, and how these two work together to make shared use of facilities possible and effective. Sharing will be necessary where there is not enough space to build new infrastructure and where it would be impossible for political, community, or economic reasons to do so.

The Principal Investigator will survey those responsible for planning, building, and operating European high-speed rail systems regarding shared use of facilities on their systems. The following general list of questions serves as a starting point for the research:

- What is their basic philosophy behind shared use?
- How do the various types of rail services operate together?
- How was the question of shared use versus new infrastructure evaluated analytically in the planning process?
- Would they make any changes to the evaluation process based on operating experience?
- How were specific facilities (e.g. stations, track, and structures) designed with shared use in mind?
- What are their best examples? How did facility design and operating philosophy work together?
- Have there been any important lessons learned in the process?

The study will include a literature review and interviews with U.S. rail and high speed rail system planners and operators and with the Federal Railroad Administration (FRA) regarding regulatory issues. Extensive interviews with appropriate staff from the major high speed rail operators in Europe will

have two main objectives: to learn the operator's basic approach to shared use and to learn what specific operating techniques and infrastructure improvements were made to put this approach into practice.



Project #2114
Principal Investigator:
Brian Jenkins

Public Surface Transportation: Lessons Learned in the 9-11 Terrorist Attacks

The September 11 terrorist attacks on the World Trade Center and Pentagon were of unprecedented scale, created an atmosphere of fear and alarm, caused major disruptions in commercial aviation and public surface transportation systems, and required dramatic increases in security. These efforts were complicated by the anthrax letters that made bio-terrorism a reality, continuing warnings of further terrorist attacks, and the inevitable hoaxes that follow all major terrorist incidents. Much was learned on September 11 and in the weeks following the attacks, and it is vital that these lessons be identified and preserved as a single comprehensive document that will assist transport operators in the future.

The proposed research will focus on the public surface transportation systems in New York that were directly and indirectly affected by the 9-11 attacks and subsequent terrorist threats. These include the MTA and its operating entities: NYTA, Metro-North Railroad, Long Island Railroad, Long Island Bus, and Bridges and Tunnels, and the MTA Police, PATH and the Port Authority Police, NYPD and NYFD, and other inter-connecting transportation systems such as NJRR and Amtrak. The study will also examine the experience of Washington's Metro.

The research will address prior preparations, the events on September 11, and subsequent alarms. It will include crisis management, security, and restoration of service.

The project is not an audit of performance, but rather is intended to focus on lessons learned that may be applicable to future terrorist attacks or natural disasters.

The research will be conducted primarily through interviews with transportation authorities and public officials. In addition, all publicly available literature will be reviewed, as well as all analysis and briefings prepared by the operators.

OTHER RESEARCH PROJECTS:

This list does not include several projects that may have appeared in past reports. Though they were assigned project numbers, they never received formal Caltrans approval. To clear the record, they are listed below, along with the reason they are no longer on the project list.

Project #2008 *Labor Management Mediation*

This project depended on identifying willing parties in a mediation process who would allow the research team and videographers to attend their sessions, interview them along the way, and analyze the outcome. They would agree to being used as the subject of a training video. After two years of reserving funding for this project, the likelihood that such an opportunity would occur seemed unlikely, and the project was dropped from active consideration.

Project #2009 *Update of Needs Assessment for Management Training and Education in Surface Transportation in the United States and Canada*

The project had reserved funds for two years. The MTI Education Director, now retired, was designing this project. The designated PI was appointed to be MTI's new Education Director, thus reducing the time he had available for the project. The project will be pursued in the coming year under a new number, and a new PI has been identified.

Project #2010 *Web-Based Interactive Communication Systems for Transportation Management*

The project was not pursued since the most immediate need had been satisfied by the installation of videoconferencing equipment.

Project #2104 *Integration of Transportation and Land Use Planning: Policy and Program (Framework Development Project)* and

Project #2105 *Integration of Transportation and Land Use Planning: Policy and Program (Outreach and Dissemination Project)*

Principal Investigator: Kenneth R. Schreiber, AICP

These projects were an outgrowth of a major study completed for Caltrans under a separate contract. They were submitted for approval and then withdrawn when it became clear they could not be completed should MTI not be selected in the UTC competition. Project #2111, *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), was approved in their place. That project allows continued work on a facet of the larger study, and the draft final report has been submitted.

FUTURE PROJECTS:

MTI conducted the annual needs assessment process with the Board of Trustees and Caltrans, requested input from the U.S. DOT Western Regional Center in San Francisco, and researched websites and publications presenting research agendas. The delayed announcement of the results from the competition among University Transportation Centers (Groups B and C) resulted in a late posting of the RFP. Consequently, new proposals will not be due until late summer, 2002. Project selection is anticipated by September, with projects receiving approval and matching Caltrans funds possibly by October.

Seed Projects

MTI implemented a new Seed Grant program, designed to attract faculty members at San José State University to the research program. Two grants were submitted, approved, and completed this year. Seed grants do not result in a published report. Both Principal Investigators have indicated their intention to submit full-fledged research projects based on the work accomplished.



A Model for Assessing Demand-Response vs. Prescheduled Paratransit Systems

Project #2115

Principal Investigator: J. Michael Pogodzinski, Ph.D.



The Impact of Telecommuter Rail Cars on Modal Choice

Project #2116

Principal Investigator: James C. Hayton, Ph.D.



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



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Sonya Cardenas Research and Publications Assistant

With a career as varied as a buyer and as a program director for a NASA program, Research Program and Publications Assistant Sonya Cardenas brings a fresh approach to one of MTI's most important assignments, that of publishing transportation issue studies for use by both the public and private sectors.

A lifelong Bay Area resident, Sonya most recently served as the Education Program Director for NASA Ames Research Center's STELLAR education program. In that position, she was the recipient of several awards for program excellence, including the National Rotary Award in Space Education in 1999, and 12 Specific Productivity Awards from NASA Ames from 1985 to 1996. Sonya enjoys living in Gilroy and takes pleasure in time spent with her teenage son.



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Barney Murray Web Administrator

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. Barney took charge of the site in October 2000. Hits to the site increased 23 percent the first month and have peaked as much as 85 percent higher over a nine-month period.

A native of White Plains, New York, Barney's computer background includes working in computer science research and development, hard drive failure analysis, as well as Web design. Knowledgeable in all aspects of Internet technology, and proficient in programs used to design websites, Barney is always searching for ways to improve the user experience and available functions.

As a self-employed business consultant, Barney has provided marketing plans, market research, and website development to small businesses throughout the Bay Area and East Coast.

INFORMATION & TECHNOLOGY TRANSFER GOALS:

The goals of the Information and Technology Transfer Program are to:

- provide research results in the form of quality publications in print and on the Web for use by transportation professionals around the world,
- disseminate the recorded results from discussions of significant transportation issues, and
- provide library and Web resources for a wide range of transportation interests.



LIBRARY:

Mineta Transportation Institute and San José State University's Clark Library continue to cooperate in making the MTI transportation library more available and visible. Using circulation data, MTI was able to make data-based decisions on periodical renewals for the first time, and MTI staff worked with library staff to assure that center publications and provided materials were properly identified and easily accessed. Each MTI item is identified in the catalog and by a special bookplate that credits the U.S. DOT-RSPA and Caltrans for acquisition funding. The benefits of increased circulation and visibility as a result of the transfer from the MTI office to the library are apparent just one year later.

Some duplicate materials are retained at MTI and are readily accessible to the staff, research

associates, graduate students, and student assistants. Institute staff review new incoming material and enter collection information into the MTI database before transfer to the Clark Library.

MTI has arranged for special borrowing privileges for active researchers who are not eligible for access through the California State University system.



FORA AND SYMPOSIA

Lessons Learned: A Conference on Transit Referenda and Why They Succeed or Fail:

Publication S-01-03 (plus FTA New Starts Workshop)

In order to present information to members about running successful transportation tax elections, APTA approached MTI to host and co-sponsor a national conference. MTI was chosen because of a strong research history on the topic, expertise in planning major events, and the strong relationship that exists with APTA. The conference registration exceeded expectations, and the participant evaluations were outstanding.

On July 29 and 30, 2001, nearly 200 transit agency managers, agency board members, community activists, consultants and other campaign principals from across the nation gathered for the

presentations and crucial networking. The MTI research findings were presented, and a panel of national experts associated with successful transportation tax campaigns made presentations to and answered the questions of the attendees.

The conference concluded on July 31 with an FTA New Starts workshop. The combination of the tax measures and FTA conferences provided a unique opportunity for participants to learn successful electoral strategies and how to use their local election victories to leverage federal funds. This session was not included in the publication, since MTI acted only as a host by arranging and staffing the half-day activity.

Transit-Oriented Development: a National Conference Series:

MTI co-sponsored a national symposium on station-oriented development with the Great American Station Foundation (GASF) and MTI Board Member Hank Dittmar, GASF's President/CEO. Working with New Mexico University, which is managing the national project for GASF, MTI provided event logistics, meal planning, publicity and outreach for the event. MTI Executive Director Rod Diridon was one of the workshop presenters. Because this was part of a series of similar symposia around the nation, MTI did not produce a publication of proceedings.

Many MTI research projects have explored the connection between transit sites and adjacent land use activity, so this event was a natural extension of the Research program into Information Transfer. Approximately 150 participants from the San Francisco Bay area participated in the one-day event.

National Transportation Security Summit:

Publication S-01-01

After the September 11 attacks, MTI responded to requests from APTA and AASHTO to organize and present a national summit to share MTI's transportation security research and showcase several national security and disaster response training programs. RSPA and Caltrans contributed financial support as primary co-sponsors. Due to the sensitive nature of the information shared, all attendees were present by invitation and required positive identification for admission. The invitations were issued to all heads of state DOTs and their top security officials, the general managers and security officials of the nation's largest transit properties, the heads of the national transportation labor unions, and federal officials identified by RSPA.



The MTI team presented the morning session. Secretary Mineta delivered the keynote address, including comments on airport security measures that were the lead national news story of the day. The afternoon highlighted federal security training and disaster response programs, California's bridge and tunnel security work, and other counter-terrorism assistance programs. All participants received copies of MTI publications, *Protecting Public Surface Transportation Against Terrorism*

and Serious Crime: Continuing Research on Best Security Practices (Publication # 01-07) and Publication #01-14 *Protecting Public Surface Transportation Against Terrorism and Serious Crime: An Executive Overview*.

MTI's ability to organize an event of this import and complexity in such a short time amply demonstrated the Institute's access to the leaders of the major national transportation organizations and nontraditional (for an academic institution) researchers, entrepreneurial approach, and political experience.

California Security Summits:

Publication S-01-04

Following the success of the National Transportation Security Summit in October, Caltrans Director Jeff Morales asked MTI to present the same information for transportation and security officials in California. With additional funding from Caltrans, the March 28 and 29, 2002, sessions were held in Oakland and Los Angeles, with attendance nearing capacity in each case. Invitations were issued to the leading executives of transit agencies, local and regional transportation facility providers, and key Caltrans personnel, as well as the staff members responsible for security functions for the entities involved. The MTI research team and many of the same presenters for the national summit again constituted the program, and the same MTI publications were provided to all participants. RSPA Administrator Ellen Engleman provided the keynote address at both locations. The proceedings of the two California sessions have been integrated for the resulting publication.

Regional Transportation Hot Spot Forum: Marin/Sonoma/ Hwy-101

Publication F-01-01

On April 11, 2002, MTI continued its series of regional forums highlighting major transportation "hot spots" with a lively discussion of the issues and possible solutions for congestion in the corridor. Three elections for varying transportation improvements had all failed in the past, each for different reasons, and the leaders in both affected counties were again meeting to discuss next steps. The MTI forum was designed and timed to be the first general public discussion since those renewed efforts began, with the hope that a neutral, outside convener might provide the environment for a productive session.

The full day event included a morning forum with speakers from both counties representing government, business, and environmental perspectives. Ample time was provided for public questions and panel discussion. Caltrans Director Jeff Morales offered keynote remarks aimed at putting the local issues in a statewide context and stressing the intermodal goals of his department. His speech and the following audience question and answer session were recorded by the Commonwealth Club of California, an event co-sponsor, and broadcast over the NPR network. The day concluded with the panelists discussing and then adopting a set of agreed principles and next steps.

The capacity crowd of 130 was enthusiastic in their evaluations of the day, which received excellent news coverage both before and after the event.

LOOKING FORWARD:

More events are already well underway for the first half of 2002-2003. This includes the postponed Garrett Morgan Youth Videoconference on Sustainable Transportation, the third time MTI has organized this unique opportunity for middle-

school students to study about transportation issues, plan a sustainable transportation project, and engage in a dialogue with students from around the nation and the transportation leaders who host their sites.

The Caltrans Planning Division has asked MTI to organize a roundtable for developing a research agenda on the subject of Advanced Technology and Smart Growth. A small group of researchers, technology and planning experts, and Caltrans staff will meet in early October for the first phase of a research effort on the subject. MTI was selected based on recent research in the smart growth field and several studies looking at ways to use technology in planning and directing growth.

Also in progress is a forum to highlight the 30th birthday of the Bay Area Rapid Transit (BART) system. MTI, again in collaboration with the Commonwealth Club of California and other regional organizations, will co-sponsor this October activity. Included in the plans are a forum discussing both the past and the future of transportation, particularly in the Bay Area, and a keynote address to be broadcast on NPR. MTI is responsible for raising the funds for the event, as well as participating in the planning and production.



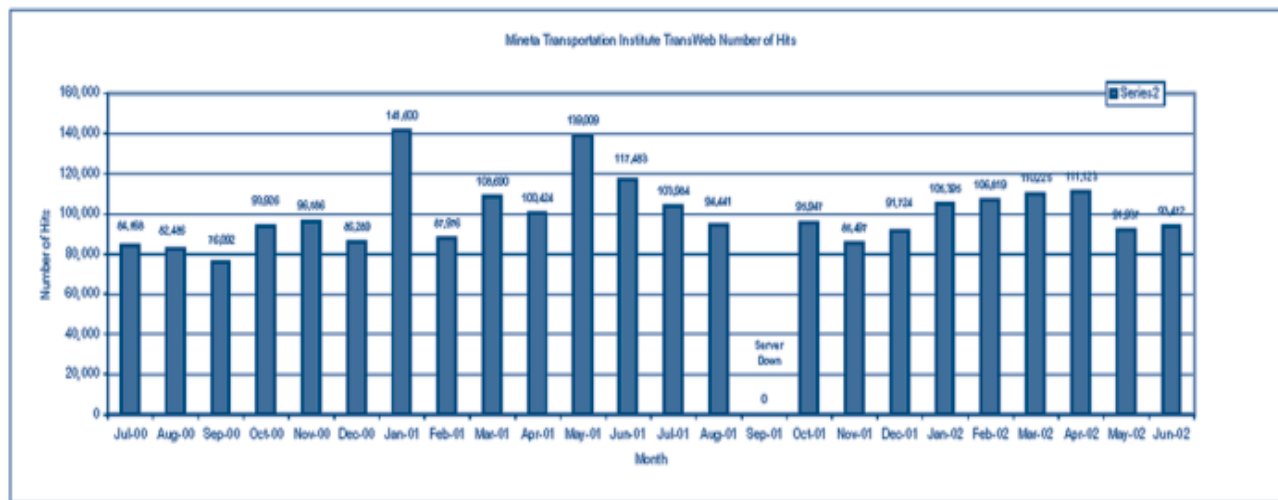
At the invitation of an MTI graduate student, MTI is exploring the possibility of a roundtable titled Policy Issues Related to Transportation Safety Reporting. Though in the early stages, this activity is already involving automobile manufacturers, national consumer protection organizations, as well as medical and accident reporting experts. The activity would be financed by a private grant.

TRANSWEB:



The Information and Technology Transfer area includes a recently redesigned and daily expanding website, TransWeb (www.transweb.sjsu.edu). TransWeb is a transportation information hub widely used by non-Institute individuals and organizations. The site provides links to national and international sites related to all modes of surface transportation and surface transportation policy. TransWeb includes MTI's home page and, through that portal, the Research Program and the Education Program pages.

In the past year, the number of visitors to the *TransWeb* site has increased over 25 percent to around 100,000 hits per month. The increase is due in part to the efforts of Webmaster Barney Murray to create an attractive and usable site, to the timely nature of MTI's research, to the reliance of students in the Education Program on web-based materials, and to a concerted effort by MTI staff to provide relevant content.



The popular “Kids and Transportation” section is undergoing major enhancements to feature a turnkey transportation education program for middle school students. MTI anticipates contributions from MTI’s first National Transportation Summer Institute for high school students, broadening the site’s appeal to an older age group. Encouraging youth to consider careers in transportation is an underlying theme of this *TransWeb* area.

The MTI Research Program website provides, among other items, research proposal information, standard forms used by research associates, research project descriptions of all active Institute research, and links to full-text files of all MTI final research reports published since 1999. Posting of MTI publications printed prior to 1999 is in progress.

The Graduate Transportation Management Program (GTMP) website remains a priority and has been updated and reorganized to better serve prospective and current students. It is first and foremost designed for current students, who are able to view upcoming class schedules, register for classes, and request information about the program. Video streaming of all classes allows busy professionals to keep up with their class, repeat important sessions, and take advantage of guest

speakers from past sessions. Course instructors utilize the Web 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 this other aspect of distance learning for a rich, interactive graduate education experience.

WORLD IN MOTION:

First circulated in 1994, the quarterly *World in Motion* newsletter keeps researchers and the public informed on the work MTI is encouraging through education, research, and information/technology transfer. Every issue includes an update from Executive Director Rod Diridon and columns from Education Director Peter Haas and Research Director Trixie Johnson, plus information transfer features and statistics.

The front page features a biographical profile of a member of MTI’s Board of Trustees. Transportation officials profiled in the past year include George D. Warrington, former President and CEO of Amtrak; Bill Dorey, VP and COO of Granite Construction; Celia Kupersmith, General Manager of the Golden Gate Bridge, Highway and Transportation District; and John Horsley, AASHTO Executive Director.



Summer 2001



Fall 2001



Winter 2001



Spring 2002

The research column includes information about new projects and those being completed, awards and presentations, program development, research associates, and student assistants. The education column has featured awards and accolades received by students in the MSTM program, changes and course enhancement in the education department,

and stories about events hosted or co-hosted by MTI.

With a mailed circulation of 750 and availability on *TransWeb*, the newsletter is working to spread the word to the transportation community about MTI's ongoing surface transportation policy research and education efforts.

The Mineta Transportation Institute Research and Information Transfer* Publications (ISTEA)

Publication Number	Title	Authors
99-3	Analysis of Policy Issues Relating to Public Investment in Private Freight Infrastructure (December 1999)	D. Evans, J.D.
94-1	Assessment of Needs for Management Training and Education in Surface Transportation in the United States and Canada	J. Giglerano R. Vitale
97-5	Capital versus Operating Grants for Transit: Economic Impacts for California	P. Haas, et al.
96-1	*Terrorism in Surface Transportation: A Symposium	IISTPS Staff
96-2	Conduct of Background Research for the Establishment of an International Surface Transportation Policy Conference in California—"Global Cooperation Through Transportation: Joining Forces Across Borders"	G. Murray, et al.
96-3	Development of a Statewide Surface Transportation Network Utilizing the International Transportation Information System	S. Belanger, et al.
S-99-1	*Driving into the 21 st Century: Technology Solutions to Transportation Problems	IISTPS Staff
99-2	Impact 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	G. Gray, et al.
96-4	Issues Relating to the Emergence of the Information Superhighway and California Societal Changes	J. Botha, et al.
99-1	Maintenance and Continued Development of the IISTPS Transportation Information System, TRANSWEB™	S. Belanger S. Kwan
M-00-1	*Our Transportation Crisis: Who Will Pay?	IISTPS Staff
95-1	*Planning for Surface Transportation and Land Use: A Symposium	IISTPS Staff
97-4	Protecting Surface Transportation Systems and Patrons from Terrorist Activities: Case Studies of Best Security Practices and a Chronology of Attacks	B. Jenkins, et al.
97-1	Public Land with Private Partnerships for Transit Based Development	S. Lefaver, et al.
F-98-1	*Rail Transit: Issues and Opportunities for the Bay Area and California	IISTPS Staff
00-1	Why Campaigns for Local Transportation Funding Initiatives Succeed or Fail: An Analysis of Four communities and national Data	P. Haas, et al.

1998-2002 Research and Information Transfer* Projects/Publications (TEA-21)

Project Title	Project/ Publication Numbers	Principal Investigator
*Advanced Technologies in Smart Growth (Statewide Roundtable that will produce an informal report rather than a publication)	2119	MTI Staff
Applying an Integrated Urban Model to the Evaluation of Travel Demand Management Policies in the Sacramento Region	9804 01-03	Robert A. Johnston
An Assessment of the Receptivity of Smart Growth Land Use and Transportation Planning Concepts at the Local Level in California	2111	Ken Schreiber
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
*BART to Silicon Valley: How Now? (Regional Forum)	9913 F-01-01	MTI staff
Best Practices in Developing Regional Transportation Plans	9811 01-10	Dr. Donald N. Rothblatt
Bridging the Gap: Planning Interjurisdictional Transit Services	2102	Dr. Patrick McGovern, J.D.
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
Construction of Transit-Based Developments: New Policy Initiatives for Governments	9901 01-05	Dr. Scott Lefaver
Creating a Planning Template for Nonwork Travel and Transit Oriented Development (TOD)	9807 01-12	Dick Nelson
*Crossing the Bay: Water Transit Initiative Forum (Regional Forum)	9814 F-00-1	MTI Staff
Designing a Template for Understanding Freight Movement and Logistics at the Metropolitan Region Level (Project approved September 2001)	2004	John S. Niles
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
Envisioning Neighborhoods with TOD Potential (Includes Demonstration CD)	9810 01-15	Dr. Earl G. Bossard

1998-2002 Research and Information Transfer* Projects/Publications (TEA-21)

* (Garrett Morgan) Youth Videoconference and Symposium on Sustainable Transportation (National Symposium)	9911 S-01-01	Dr. Dongsung Kong
* Garrett Morgan Youth Videoconference on Sustainable Transportation (National Symposium)	2103	Dr. Dongsung Kong
GIS for Livable Communities: Using GIS to Improve Transportation Planning and Community Livability	9806 01-09	Dr. Tom Horan
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
How to Best Serve Seniors in Existing Transit Services	9902 01-04	David Koffman
Impact of Ethnic Diversity on Transit: How Do Various Population Groups View and Utilize Various Transit Modes?	2109	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
Labor/Management Mediation (Project discontinued; see detailed explanation in Research section)	2008	Dr. Arne Lawrence
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
A Model for Assessing Demand-Response vs. Prescheduled Paratransit Systems (Seed Grant that does not produce a publication)	2115	Dr. J. Michael Pogodzinski
MTI Needs Assessment (Project discontinued; see detailed explanation in Research section)	2009	Dr. Peter Haas
NAFTA II: California Border Zone Land Transportation Issues	9802 01-06	George Gray
Non-Pricing Methods to Optimize High Occupancy Vehicle Lane Usage	9908 01-11	George Gray
Protecting Public Surface Transportation Against Terrorism and Serious Crime: Continuing Research on Best Security Practices	9805 01-07	Brian Jenkins

1998-2002 Research and Information Transfer* Projects/Publications (TEA-21)

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
Public Surface Transportation: Lessons Learned in the 9-11 Terrorist Attacks	2114	Brian Jenkins
Regional Transportation Planning for Smart Growth	2107	Robert A. Johnston
*A Transportation Hot Spot Forum on the Marin/Sonoma/101 Corridor (Regional Forum)	2112 F-01-01	MTI Staff
Shared Use of Rail Infrastructure by High Speed Rail: Best Practices in Design and Operations	2113	Andrew Nash
Statewide Safety Study of Bicyclist and Pedestrian Accommodation and Safety on Freeway, Expressway, Toll Bridges, and Tunnels	9909 01-01	Dr. Thomas C. Ferrara
Sustainable Transportation Indicators for California	2106	Dr. Richard Lee
Transit Labor Relations Guide	9906 01-02	Dr. Herb Oestreich
Transportation and Welfare Reform: The Travel Behavior and Needs of Welfare Recipients (Formerly Transportation and Welfare Reform: The Travel Behavior and Needs of Welfare Recipients)	9808 01-23	Dr. Evelyn Blumenberg
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
Verifying the Accuracy of Regional Models Used in Transportation and Air Quality	2108	Dr. Caroline Rodier
*Visioning: A Forum with US DOT Secretary Rodney Slater	F-00-2	MTI Staff

Project Under Separate Caltrans Contract

Sustainable Communities/San Joaquin Valley Growth	Ken Schreiber
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“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 and a Graduate Certificate in Transportation Management.”



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Dr. Peter Haas Education Director

Dr. Peter Haas was appointed Education Director in October of 2001. Dr. Haas has been a member of the faculty in the Graduate Transportation Management Program (GTMP) since 1999. He joined the SJSU faculty in the Department of Political Science in 1986 and has served as the Director of the Master of Public Administration program. Dr. Haas has a B.A. from Valparaiso University, an MA from Kent State University, and a Ph.D. in Political Science (Public Policy and Public Administration) from the University of North Carolina at Chapel Hill. 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 *Applied Policy Research: Concepts and Cases*.



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Vivianne Ferea Education Program Assistant

Vivianne Ferea was appointed to the position of Education Program Assistant (EPA) in August 2000. As EPA, Vivianne is the primary contact for marketing and administration of the Graduate Transportation Management Program. Among her many responsibilities are the continued efforts to recruit for the Certificate and Masters program, revision and maintenance of the Education Program's website, and course planning and scheduling. Vivianne 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.

EDUCATION PROGRAM GOAL:

The goal of the Graduate Transportation Management Program (GTMP) is to develop and administer a multidisciplinary, state-of-the-art program of coursework and experiential learning that provides students with the skills and knowledge to manage and lead transportation systems.

Overview:

The GTMP had a successful year in 2001-2002, with record enrollments in classes, further improvements in instruction technology, and new education activities. The Education Director, Dr. Peter Haas, and Education Program Assistant, Vivianne Ferea, form the administrative/development team that strive to enhance the GTMP as a dynamic, up-to-date, adaptively evolving distance learning program.



Enrollment Increases

During academic year 2001-2002, the GTMP achieved an all-time high in graduate student enrollment. In Spring Session “B”, 54 students participated in three graduate seminars, marking the first time enrollment had exceeded 50 students and providing evidence of the effectiveness of increased recruitment efforts during the period. Additionally, the number of matriculated GTMP students increased to 30, also an all-time high. Moreover, 44 CTM students participated in the program, bringing the number of active students during the academic year to an all-time high of 74. Of that number, 24 (or nearly 33%) were new to the program this year. As recruitment efforts continue, the GTMP program should continue to prosper.

Instructional Technology

The GTMP transitioned successfully into its new base of videoconferencing, a state-of-the-art studio classroom provided by Caltrans to the SJSU College of Business (COB). The new facility enabled improvements in both regular videoconferencing and web-based streaming of GTMP classes. In this regard, transmission of videoconferencing was upgraded to the “T1” level (from ISDN), while the latest in video streaming hardware was installed and made operational.

Continuing the drive to keep the instructional technology of the program at the cutting edge and to enhance course quality and growth, the Core Course Enhancement Project (supported by a \$55,000 grant from the California State University Commission on Extended Education – CSU CEE) was completed. The grant-supported project enabled program faculty to enrich the quality of GTMP core courses with web-based teaching tools, thereby providing students with a more diverse and challenging delivery of instruction.

The Education Program successfully pursued funds to offer a Summer Transportation Institute (STI) to area high school students. The STI program, which originated as a pilot program on the South

Carolina State University 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 will continue to require 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 will be to encourage these students to seek professional careers in transportation through obtaining a college education. A total of 2,230 secondary school students have completed the national program hosted by thirty-four colleges and universities in twenty-three states across the nation. The contract grants \$40,000 in federal funds to help create an STI on the SJSU campus.

PROGRAM ACCOMPLISHMENTS:

Courses Offered

In Academic Year 2001-2002, the GTMP offered eleven courses, with a record number of enrollments in Spring Sessions A & B. Details on enrollment and class receive sites follows each course listing below:

Following are the details on enrollment and site location for each course from Fall 2001 to Spring 2002 inclusive. (* denotes new class site)

Fall 2001

MTM 201: Fundamentals of Transportation Management

12 enrolled in Bakersfield, Oakland, Los Angeles, SJSU, and Sacramento

MTM 203: Transportation Markets and Business Development

20 enrolled in Bakersfield, *Eureka, Marysville, Oakland, San Bernardino, San Diego, Sacramento, SJSU, and Stockton

MTM 214: Transportation Policy and Regulation

10 enrolled in Eureka, San Bernardino, San Luis Obispo, SJSU, Sacramento, and Stockton

MTM 215: Transportation Systems Planning and Development

14 enrolled in Los Angeles, Oakland, San Luis Obispo, Sacramento, Stockton, and SJSU

MTM 283 Internship/Independent Study

1 enrolled in Oakland

MTM 297: Current Topics in Transportation

6 enrolled in Oakland, Sacramento, and Stockton

Spring 2002

MTM 202: Accounting, Finance & Business Systems

18 enrolled in Eureka, Los Angeles, Oakland, San Diego, SJSU, San Luis Obispo, and Sacramento

MTM 217: Leadership and Management of Transportation Organizations

33 enrolled in Bakersfield, Fresno, *Irvine, Los Angeles, Oakland, San Diego, *San Francisco, SJSU, Sacramento, and *Ventura (web cast)

MTM 286: Project Management

11 enrolled in Bakersfield, Oakland, *Irvine, San Luis Obispo, and Sacramento

MTM 296A: Transportation and the Environment

15 enrolled in Eureka, Fresno, Oakland, Los Angeles, *Redding, San Diego, Sacramento, and Stockton

MTM 283 Internship/Independent Study

1 enrolled in San Diego

MTM 290: Capstone

5 enrolled in Sacramento, Oakland, and San Bernardino

Number of additional students matriculated, by semester:

Fall 2001 - 4

Spring 2001 - 4

Spring 2002 - 20

Pending - 8

Total currently matriculated: 30

Graduates

The faculty and staff of MTI and the College of Business at SJSU were proud to present the MSTM graduating class of 2002 at the 11th Annual MTI Board of Trustees Awards Banquet, whose numbers tied the program's existing record of five students. The dedication of these students, each of whom completed 30 hours of coursework while meeting the duties of full-time professional employment, is to be admired.

The following is a list of the five MSTM graduates who were hooded at MTI's Eleventh Annual Board of Trustees Awards Banquet.

MSTM graduates:

James Chai
Jeremy Ketchum
Meshack Okpala
Sarah Picker
Carole Sanders



In addition to our MSTM graduates, the following sixteen students received the graduate CTM:

Rajpal Brar
Alva Carrasco
Nell Hill
James Helmer
John Naylor
Tim Pokrywka
Juanette Reese
Jeff Spencer

John Burke
Gerard Chadergian
Larry Holser
Helen Jones
Robin Owen
Leeanne Provost
Amos Rendler
Satnam Singh



The twelve-unit CTM program is rigorous and intense, consisting of four MSTM program core courses. 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 Financial Awards

Twice a year, subject to funding, the MTI awards \$1,000 MSTM Continuing Student Performance (CSP) Financial Awards. Thanks to this generous funding program, students are able to continue their studies in the MSTM. In the 2001-2002 Academic Year, \$18,000 was awarded through this CSP Financial Awards program to the following deserving MSTM students:

James Chai, Melanie Choy, Crystal DeCastro*, Gabriel Corley, Ahron Hakimi, Jeremy Ketchum*, Mark McCumsey*, Joanne McDermott, Sarah Picker, Hector Romero, Carole Sanders*, Khalil Shaktour, Jeffrey Spencer, E. Lyle Stockton

*received a financial award both semesters

Twice a year, subject to funding, the MTI awards \$500 CTM CSP Financial Awards. Thanks to this generous funding program, deserving students are assisted in their efforts to continue their studies in the GTMP. \$11,500.00 was awarded to the following CTM students:

Rajpal Brar*, John Burke*, Alva Carrasco*, Gerard Chadergian, Gabriel Corley, James Helmer, Larry Holser*, Helen Jones, Rocquel Johnson, Gregory Kausch, Stan Kung, Todd LaCasse, LEEANNE Provost, Amos Rendler, Satnam Singh*, Jeffrey Spencer, Kathleen Zahniser*

*received a financial award both semesters

SUCCESS STORIES:



MTI Outstanding Student of the Year

The GTMP faculty and staff were proud to announce Mr. James Chai as the MSTM Student of the Year for 2001. James was selected by program faculty based on his strength in academic work, leadership, research, and contribution to the Mineta Transportation Institute. In addition to the honor of this award, James received a \$1,000 scholarship. The award certificate for Outstanding Student of the Year was presented by the U.S. Department of Transportation, Research and Special Programs Administration, at TRB in January 2002.

Officials from the U.S. Department of Transportation were on hand to present the awards given to outstanding students from University Transportation Centers (UTCs) from across the nation. James has been selected for the California Department of Transportation Executive Leadership Program and has been paired with a District Director, a high honor.

Carole Sanders wins Eno Foundation fellowship

MTI is very proud to report that MSTM student Carole Sanders was selected by the Eno Transportation Foundation for its prestigious Eno Leadership Foundation Program. She attended the five-day Eno Leadership Development Conference in Washington, DC in May 2002, which provided exposure to many of the leaders and agencies involved in shaping transportation policies and legislation. Carole was also named “Resident Engineer of the Year” for Caltrans District 8 Construction.

James Helmer wins the George Krambles Scholarship

MTI had the opportunity to showcase its best and brightest when recommending applicants for the George Krambles Transit Scholarship. This award is given for the purpose of encouraging students to develop professional capability for future careers in the transit industry. James has devoted his career in public transportation to transit-related endeavors and challenges, consistent with the criteria for the scholarship. The Krambles selection committee honored James as one of its winners in June 2002. He received a letter of recognition, a certificate, and a financial award of \$2,500.00.

Donna Kelsay Promoted to General Manager

MTI is pleased to announce that Ms. Donna Kelsay, a recent MSTM graduate and 1999 APTA Leadership Program participant, was recently appointed as General Manager of the San Joaquin Transportation Department. Donna was formerly an Assistant General Manager with the same agency.

Art Duffy Named to State Board of Registration of Professional Engineers and Land Surveyors

In April of 2002, California Governor Gray Davis appointed Art Duffy, who earned his Certificate in Transportation Management at MTI, to the State Board of Registration of Professional Engineers and Land Surveyors. Art worked as a Public Works Engineer for the City of Brisbane from 1986 to 1987 and then became a Transportation Engineer for Caltrans, a position he held from 1987 to 1998. From 1998 to 2000, Mr. Duffy served as a Senior Engineer in a special two-year assignment, wherein he also served as Secretary of the Commission’s Engineering Criteria Review Board. He now works for Caltrans as a Transportation Engineer in Oakland.

Other Student Achievements

MTI congratulates the following students on their accomplishments:

- Mark McCumsey of Caltrans was promoted to Associate Transportation Planner in October and is relocating to San Luis Obispo from Stockton
- Tim Pokrywka of Caltrans was promoted to Sacramento Office Chief, also in October.
- Jeffrey Spencer was chosen to appear in a Caltrans video titled “Operation Lifesaver,” involving railroad safety.
- Gabriel Corley acted as Coordinator for Caltrans’ review of local development activities assess impacts to the State Highway System.

Bringing In the Experts

A continuing goal of the GTMP is to enhance the breadth of knowledge students receive with elective coursework. This academic year, Terry Trumball, an attorney and expert in the field of environmental issues, taught a seminar concerning the environmental issues surrounding transportation management.

Trumball, a past Chair of the California Waste Management Board, has a distinguished record in his field. His law firm, The Trumball Law Firm, specializes in issues related to the environment, energy, and land use, including issues of direct relevance to the field of transportation. He is currently serving on the Advisory Committee to the Bay Area Air Quality Management District as well as the Santa Clara County Planning Commission. Graduate students in the MTI education program benefited from his experience in this increasingly important aspect of transportation management.

Outreach

A program outreach effort continues to be a vital part of our ongoing program development efforts to locate, contact, and attract eligible student prospects. In the 2001-2002 Academic Year, the GTMP continued outreach efforts to include in-person site visits to local transportation related agencies and underserved professional groups. These efforts included face-to-face meetings with a group consisting of each Caltrans Training Officer in Sacramento and several on-site visits to Caltrans and other transportation employment centers across the state.

Assistance and Support:

Able assisting and facilitating this project are the following Caltrans and Caltrans-related personnel:

Wes Lum, Chief, Office of Infrastructure Research, Caltrans
 Sallybeth Scott, Associate Transportation Planner, Office of Infrastructure Research, Caltrans
 Joanna Kremer, VTC-Caltrans
 Steve Styduhar, VTC-Caltrans
 Carl Harvell and Steve Guerrero, Frontline

Able assisting and facilitating this project are the following SJSU administration, faculty, and staff:

Luann Budd, Administrator, SJSU
 Marc Catto, Network Analyst, Networking & Telecommunications, SJSU
 Dave Conrath, Dean, College of Business, SJSU
 Rod Diridon, Executive Director, Mineta Transportation Institute
 Nancie Fimbel, Associate Dean, College of Business, SJSU
 S. Lee Jerrell, Associate Dean, College of Business, SJSU
 Chris Laxton, Director, Media Production & Delivery, SJSU
 Wayne Ross, Operations Coordinator, Academic Technology Network, SJSU
 Mark Weisler, Telecommunications Director, Networking & Telecommunications, SJSU
 Benjamin Dubois, Videostream Coordinator, MTI

The Education Program at MTI extends sincere thanks to all those listed above for their time and effort in bringing this project forward.

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ILLUSTRATION OF FUNDING SOURCES - MINETA TRANSPORTATION INSTITUTE FISCAL YEAR 2001-2002

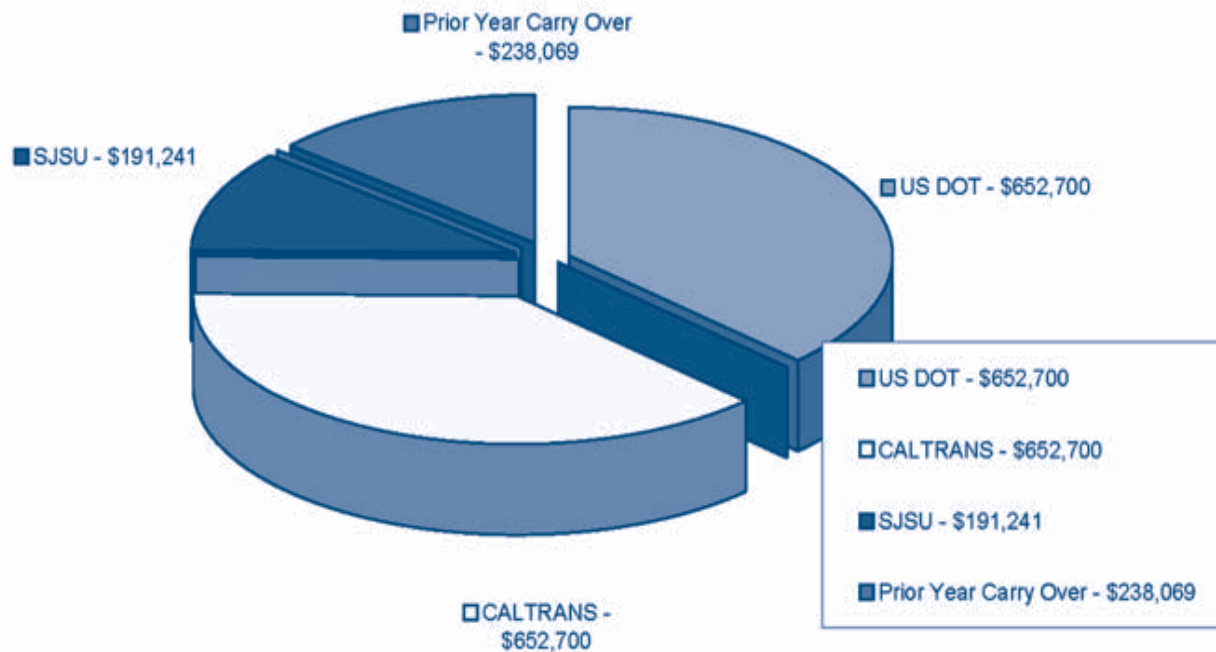
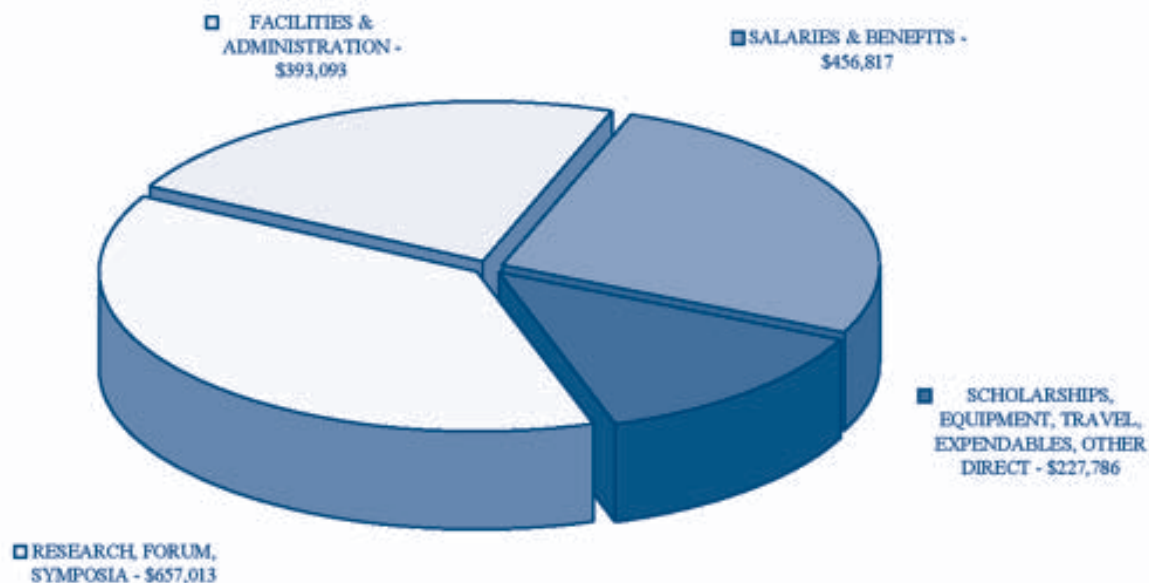


ILLUSTRATION OF EXPENDITURES - MINETA TRANSPORTATION INSTITUTE FISCAL YEAR 2001-2002



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Dr. Richard Werbel, Marketing and Decision Sciences

Vice-Chair

Dr. Burton Dean, Organization and Management (ret.)

Members

Dr. Jan Botha, Civil & Environmental Engineering

Dr. Howard Combs, Chair, Marketing and Decision Sciences

Dr. Dongsung Kong, Political Science

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