

# National Center for

National Center for Transit Research



# Transit Reso

Annual Report  
July 2001

National Center for  
Transit Research

National Center



## Message from the Director

The National Center for Transit Research is fully engaged in its mission of enhancing the performance and relevance of public transportation and alternative forms of transportation in urban areas. Research faculty at NCTR already have completed eight research projects, ranging from identifying methods of improving security for transit bus operators to developing guidebooks for establishing and improving the performance of transportation management associations. Another 30 projects are in various stages of completion, and the majority of those will be completed by December 2001. Each of them will result in information that will be practical and of immediate use to transit agencies, MPOs, or other agencies charged with implementing improvements to transit and other alternative means of travel.

The results of the research being conducted are being widely shared with the transportation industry. Completed reports are available on line through our website, which has been enhanced to include webcast digital videos that allow visitors to hear and see presentations of the research that has been completed. In addition, multiple listservs have been established in areas dealing with telecommuting, transportation demand management, bus rapid transit, and transit planning and management. Nearly 1,000 members participate in the listservs, sharing information freely and rapidly as these electronic networks become increasingly popular and effective.

NCTR continues to educate and help provide opportunities for research and professional development for many students interested in making transportation their career. Five recent graduates joined private and/or public transportation-related agencies this past year. NCTR faculty have completed an assessment of the feasibility of establishing a graduate transportation degree program, and we look forward to sharing its positive results with a new incoming Dean of the College of Engineering. Many other exciting developments are under way as well, including entering partnerships with major non-profit foundations, as described in the full report.

The research faculty and students of NCTR are committed to our mission and are happy to see that results of their efforts are being well received and utilized in the public transportation field.



Joel Volinski, NCTR Director



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## Introduction

In September 1999, the National Center for Transit Research (NCTR) was approved for research funding by the U.S. Department of Transportation's Research and Special Programs Administration. The NCTR program builds on the goals and philosophies of the National Urban Transit Institute, which was established at the Center for Urban Transportation Research at the University of South Florida in Tampa by the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991.

## Theme of NCTR

The theme of NCTR is "to enhance the performance and relevance of public transportation and alternative forms of transportation in urban areas." NCTR is focusing on these modes to help promote USDOT's strategic goals of safety, mobility, economic growth, and community sustainability. Virtually all of the projects undertaken at NCTR are, and will continue to be, dedicated to improving the ability of the operating agencies (transit authorities, commuter assistance programs, transportation management associations, etc.) to provide their services in a manner that is efficient, productive, and attractive to the traveling public, and in a manner that adds value to the communities they serve.

## Organizational Structure of NCTR

NCTR is housed within the Center for Urban Transportation Research (CUTR) in the College of Engineering at the University of South Florida. Following are key personnel of NCTR.

Chair	Gary L. Brosch
Director	Joel Volinski
Administrative Director	Dennis Hinebaugh
Communications Director	Patricia Ball
TDM Program Director	Philip Winters
Education Director	Steven Polzin
ETS Director	Beverly Ward
Transit Training Program Manager	Lisa Staes
NCTR Program Assistant	Jennifer Perone



Being housed at CUTR, NCTR has the enormous advantage of being part of a large and extremely active transportation research center. **The faculty and students at the Center represent the largest concentration of public transportation researchers in a single university in the country.** This concentration of talent and research provides opportunities for education and professional capacity-building within the Center. Extensive technology transfer activities will ensure that research results are available to potential users in a form that can be implemented, utilized, or otherwise applied.

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## Program Overview

### Funding

NCTR just completed its second year, having been approved for funding in September 1999. The federal funding for this program helps to significantly expand the area of public transportation research already conducted by CUTR staff over the last 12 years. Federal funds for the program are matched with a **100 percent cash match** from the Florida Department of Transportation (FDOT).

The FDOT funding used to match the USDOT funds was acquired at a 5 percent indirect rate, as opposed to the federal indirect rate of 45 percent. This has created an actual doubling of the total program funding, and nearly a 250 percent increase in direct funds available for research, allowing for a much wider range of research in the field of public transportation. FDOT's commitment to match this grant was secured before July 1999, and it is important to note that the relationship remains strong, with FDOT remaining committed to providing this match for the length of the program. FDOT also has designated three senior members of its management staff to serve on the NCTR Advisory Board to help select future projects and guide the program.

### Advisory Committee

The NCTR Advisory Committee was created during the first six months of the program. The committee consists of 15 members of the public transportation community with knowledge in the areas of public transportation research and transit planning and operations. The members and their affiliations are as follows:

Gary L. Brosch  
*Chair, NCTR*

Dr. Lewis Clopton  
*Director of Research Management  
Federal Transit Administration*

Ed Coven  
*State Transit Office Manager  
Florida Department of Transportation*

Dr. Wendell Joice  
*Director  
International Telework Assoc. & Council*

Dr. Minnie Fells-Johnson  
*General Manager  
Miami Valley Regional Transit Authority*

Ysela Llort  
*State Transportation Planner  
Florida Department of Transportation*

Richard Long  
*Director, Office of Research  
Florida Department of Transportation*

Cal Marsella  
*General Manager  
Denver Regional Transit District*

Perry Maull  
*President  
Florida Public Transportation Assoc.*

Bill McCloud  
*Senior Vice President & C.O.O.  
Van Der Aa Mobility Group*

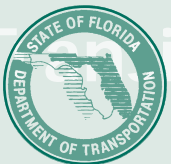
Jose Luis Mesa  
*Director  
Miami-Dade MPO*

Louis Sanders  
*Director of Research and Technology  
APTA*

Eric Schreffler  
*Director of Research  
TDM Institute, Association for  
Commuter Transportation*

Donna Vlasak  
*Transit Cooperative Research Program  
Synthesis Program Director  
Transportation Research Board*

Joel Volinski  
*Director  
National Center for Transit Research*



## Second-Year Accomplishments

### Research

The second year of the NCTR program has supported 25 new research projects as approved by the NCTR Advisory Board. These research areas consist of “core programs” that will be conducted throughout the life of NCTR, as well as annual research projects that explore methods to accomplish the goals of the Center in enhancing the performance of public transportation.

Core research areas include development and maintenance of a National Transportation Demand Management (TDM) and Telework Clearinghouse, provision of short-term technical assistance to transit systems, and publication of the *Journal of Public Transportation*. In addition to projects that fall into core program areas, research topics were solicited from public transportation professionals throughout the United States and Canada. A total of 86 research ideas were received.

### Project Status

New, ongoing and completed research projects and their principal investigators for FY 2001 are listed below.

#### *New Research Projects Initiated in FY 2001*

- Bus Signal Priority (*Shireen Chada, CUTR, 416-04*)
- Customer Survey Manual (*Michael Baltes, CUTR, 416-08.3*)
- Developing Interest in Public Transportation Careers (*Amber Reep, CUTR, 415-12*)
- Environmental Justice and Community Impact Assessment for Transit Agencies (*Beverly Ward, CUTR, 416-05*)
- Florida Transit Technical Assistance Program (*Lisa Staes, CUTR, 416-09.2*)
- Florida Transit Training Program (*Lisa Staes, CUTR, 416-09.1*)
- FSUTMS Mode Choice Modeling (*Fang Zhao, Florida International University, 416-03*)
- GIS in Transit Conference (*Steve Polzin, CUTR, 415-07*)
- Land Developer Participation at Bus Facilities (*Sara Hendricks, CUTR, 416-06*)
- Maintenance Training National Outreach (*Lisa Staes, CUTR, 415-13*)
- National Transit Bus Accident Data (*Chris DeAnnuntis, CUTR, 416-13*)
- Paratransit Securement/Accident Tracking (*Jennifer Hardin, CUTR, 416-07*)
- Pedestrian Mid-Block Crossing Difficulty (*Xuehao Chu, CUTR, 416-02*)
- Per Capita Decisions, Trends and Impacts (*Rob Gregg, CUTR, 416-12*)
- Perceptions of Transit Safety (*Jennifer Hardin, CUTR, 416-08.2*)
- Promotional Materials Clearinghouse (*William Mustard, Florida State University, 416-10*)
- Qualitative Methods for Transit Research (*Francis Cleland, CUTR, 416-08.1*)
- Quantifying the Business Benefits of TDM (*Phil Winters, CUTR, 416-11*)
- Synthesis of Transit Non-User Surveys (*Brenda Thompson, CUTR, 416-08.4*)
- Telecommunication and its Future Role in the Public Transportation Arena (*Sara Hendricks, CUTR, 416-01*)



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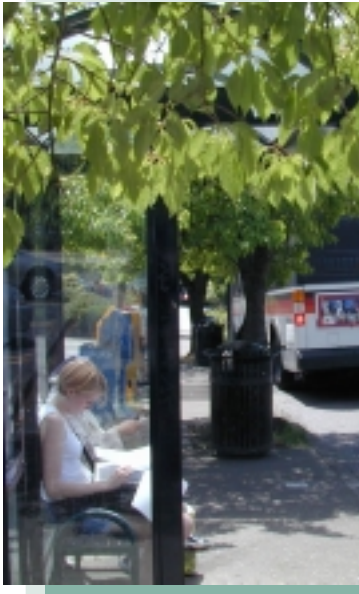
- Teleconferencing (*Phil Winters, CUTR, 415-06*)
- Transit Organizational Structure (*Keith Simmonds, Florida Agricultural and Mechanical University, 416-14*)
- Where are Tomorrow's Maintenance Technicians Coming From? (*Amber Reep, CUTR, 415-09*)

#### *Continuing Research Projects*

- Analysis of National Transit Database (*Steve Polzin, CUTR, 350-11*)
- Assessment of Operational Barriers and Impediments to Transit Use (*Jennifer Hardin, CUTR, 392-11*)
- Bus Rapid Transit Technology – A Case Study of the Lynx Lymmo Project in Downtown Orlando, Florida (*Joel Rey, CUTR, 392-15*)
- Developing Interest in Public Transportation (*Amber Reep, CUTR, 350-12*)
- Evaluation of the Economic Viability of Narrow-Gauge Local Rail Systems (*Laurel Land, CUTR, 392-09*)
- FSUTMS Mode Choice Modeling – Factors Affecting Transit Use and Access (*Fang Zhao, Florida International University, 392-07*)
- Graduate Research Program (*Dennis Hinebaugh, CUTR, 350-04*)
- Inventory and Analysis of Advanced Public Transportation Systems in Florida (*Joel Rey, CUTR, 392-04*)
- Journal of Public Transportation (*Gary Brosch/Patricia Ball, CUTR, 415-05*)
- Lessons Learned in Transit Efficiencies - Part 2 (*Joel Volinski, CUTR, 350-07, 392-06*)
- National Maintenance Training Program (*Lisa Staes, CUTR, 350-09*)
- National TDM and Telework Clearinghouse (*Phil Winters, CUTR, 350-10*)
- Neighborhood Intermodal Transfer Facilities (*Laurel Land, CUTR, 392-16*)
- Pedestrian Mid-Block Crossing Difficulty (*Xuehao Chu, CUTR, 392-14*)
- Teleconferencing (*Phil Winters, CUTR, 350-06*)
- Transportation Degree Evaluation (*Steve Polzin, CUTR, 350-05*)

#### *Completed Research Projects*

- Analysis of the FDOT Transit Corridor Program (*Lisa Staes, CUTR, 392-01*)
- Analysis of Florida Transit Bus Accidents (*Joel Rey, CUTR, 392-05*)
- Cops, Cameras and Enclosures: A Synthesis of the Effectiveness of Methods to Provide Enhanced Security for Bus Operators and Passengers (*Darin Allan, CUTR, 392-12*)
- Enhancement of the Public Transportation Promotional Materials Clearinghouse (*William Mustard, Florida State University, 392-08*)
- FDOT Statewide On-Site Technical Assistance Program (*Lisa Staes, CUTR, 392-02*)
- FDOT Statewide Transit Training Program (*Lisa Staes, CUTR, 392-03*)
- State Park-n-Ride Lot Program Manual (*Laurel Land, CUTR, 392-13*)
- Transit Customer Satisfaction Index for Florida Transit Properties (*Francis Cleland, CUTR, 392-10*)



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## ***Bus Rapid Transit***

One area of research selected as a core program very early in the development of NCTR was Bus Rapid Transit (BRT). BRT uses the advancements in vehicle technology, simulation systems, traffic engineering and intelligent transportation systems to create an enhanced bus service with faster operating speeds and improvements to local mobility, economic growth, and environmental quality. Research being conducted by NCTR staff in the area of BRT has created a knowledge base such that they are serving as technical assistants to other BRT interests. These include making presentations at conferences and serving as members of BRT technical committees in cities advancing the service. In January 2001, through the efforts of the work developed through NCTR, the National BRT Institute was created at CUTR with the charge of creating a national program for training, technical assistance, research, innovation and evaluation of existing and proposed BRT projects. Recent efforts of the Institute include serving as a technical representative on the Detroit Speedlink BRT evaluation, recently adopted and credited with bringing the regional and City transit systems together for improved regional service. The Institute also served as a member of the Technical Advisory Committee for the FTA-sponsored "Vehicle Design and Planning Competition," aiding in the selection of advanced design BRT vehicles and systems. Finally, the BRT Institute was recently awarded a foundation grant from the W.Alton Jones Foundation to continue its efforts in the BRT arena. All of these accomplishments of the Institute's program are attributable to the system startup created by the UTC program funding for the NCTR.

## ***Cops, Cameras, and Enclosures: A Synthesis of the Effectiveness of Methods to Provide Enhanced Security for Bus Operators***

The safety of operators and passengers is a primary concern of transit systems and has become an increasingly important issue to transit bus operators themselves. Many transit agencies have experienced incidents of assaults against their bus operators that have resulted in serious injuries or deaths. These incidents also can expose passengers to assault and injury. Even when there are less serious consequences, assaults on operators can lower morale, increase absenteeism, and strain labor-management relations. There is also substantial cost to transit agencies in terms of lost availability of injured operators.

A number of transit agencies use different techniques to minimize the possibilities of assaults against their bus operators and passengers. Many use either uniformed or plainclothes police officers or security guards on particularly troubling routes. Digital cameras strategically placed inside buses also are being used to help discourage criminal assaults as well as other unwanted behavior such as graffiti and unwarranted claims of injuries from passengers. Perhaps the most visible effort to discourage assaults on operators is the provision of bus operator enclosures that separate the operators from anyone else on the bus and protect them from attacks. However, while this method can provide enhanced protection to bus operators, it might negatively affect passenger relations and increase the image of a bus as a place where crime might be committed.

This project surveyed transit agencies that have employed these techniques to determine their level of success, cost effectiveness, and acceptance by both bus operators and passengers. The project also identifies other techniques transit systems are using to protect their bus operators, such as passenger relations training to avoid conflict. The effect that "full wrap advertising" has on onboard activity and passenger safety is also explored.

## **Analysis of Florida Transit Bus Crashes**

In this project, transit bus occurrence data from selected Florida transit systems were collected and reviewed to analyze changes in crash occurrence over time in relation to the effectiveness of specific safety campaigns in reducing bus crashes. Two systems were selected to complete this investigation: Hillsborough Area Regional Transit Authority (HART) in Tampa and LYNX Transit in Orlando. HART was included to analyze the effectiveness of a safety campaign involving an operator refresher training course. LYNX was included to analyze the effectiveness of a safety campaign involving a vehicle-related capital improvement (i.e., rear-end high density lights). This report has documented the case study analyses of these safety campaigns and their effectiveness in positively impacting crash occurrence at the two systems.

As in the case of the LYNX safety campaign, it is apparent from this case study that the system's motorbuses have been experiencing a particular problem with rear-end collision impacts and that the rear-end high density light campaign has had a beneficial impact on this issue. In the database provided by LYNX, rear-end collisions accounted for almost a third of all the crashes that occurred during the two-year period for which data were included. To help mitigate this type of involvement, LYNX chose to implement the rear-end high density lights on many of its vehicles. Analysis during pre- and post-implementation periods showed that vehicles outfitted with the high density lights experienced a 7.8 percent decline in per vehicle rear-end crash rates. Even more significant is the fact that vehicles without the upgraded lights experienced a 21.7 percent increase in per vehicle rear-end crash rates during the same time period. These comparative percentage changes suggest that, overall, there was a 29.5 percent decline from the level of rear-end crash occurrence that would have been expected had the high density lights not been implemented at all.

### ***Year 3 Research Program***

NCTR recently completed the process to solicit and select research ideas for the FY 2002 program year. The process necessary for submitting research ideas was made available on the NCTR website along with a user-friendly web-based form. Letters requesting research ideas and proposals were sent to all of the Public Transportation directors, MPO directors, APTA committee chairs, and DOT Public Transit Managers in Florida. Idea requests also were sent to all public transportation-related committees of TRB, as well as national listservs. From the submission of 85 different research ideas, the NCTR Advisory Committee provided assistance in selecting 19 core program and research projects for funding in FY 2002.

### **Education**

Education is a core program area of NCTR. Student involvement in project research has always been a high priority of CUTR and remains so in the NCTR program. For many years, CUTR has been an active member of the Southeastern Transportation Center (STC), a consortium dedicated to training professionals to address the transportation needs of the region and nation.

During the first two years of NCTR, more than 20 graduate and undergraduate students participated in public transportation research projects and were supported by funding from NCTR. The major areas of study of these students are multidisciplinary in nature, including engineering, economics, anthropology, business, geography, and public administration.

Through research and guidance, NCTR aids in developing well-informed, educated students to serve as future ambassadors in the public transportation industry. The following are summaries of specific core areas of the NCTR education program.

### ***Exploration of the Feasibility of a Transportation Degree***

The Transportation Degree Evaluation is an initiative designed to determine the feasibility of establishing a graduate degree program designed for persons with an interest in transportation careers to address the increasing diversity of the transportation industry workforce. A report outlining how such a program would be implemented at USF has been produced. The working proposal recommends a Master's degree transportation program that would complement the USF Department of Civil Engineering's transportation Master's program and the Graduate Interdisciplinary Transportation Program coordinated by CUTR.

To date, the work effort has included the identification of possible course offerings, the development of an implementation program, the estimation of a program budget, and the solicitation of industry interest and feedback on the draft proposal. An industry focus group was held to gauge industry interest and ideas, which reaffirmed the interest in the degree program and provided valuable input on curriculum expectations. Remaining as a critical obstacle in successful implementation is determining the best strategies to attract students to the degree program/profession.

The degree proposal has been preliminarily reviewed by USF administrators but currently is on hold awaiting major institutional changes that will govern how the program is evaluated for approval. This past year, the Florida Legislature abolished the statewide Board of Regents, the group that historically authorized new programs. Subsequently established was the USF Board of Trustees, appointed in July 2001. Authority for approving a new Master's degree program rests with this new board. Working with USF administrators, the proposal will be presented to the Board at the first available opportunity, within the next 6-12 months. Simultaneously, the College of Engineering has appointed a new Dean to start in September 2001, who will be instrumental in reviewing the program and working with university administration to identify appropriate funding strategies for the program.

The program proposal continues to be modified to include the most current information. A key element in attracting students to the program is the development of an undergraduate "Transportation in Society" course to be offered to juniors and seniors. The curriculum for this course will be developed and submitted for consideration as a new course offering.

### ***Developing Interest in the Field of Public Transportation***

The purpose of this activity is to research and develop a public transportation education program that will attract young adults into the industry. There are many similar programs that exist; however, none of them are geared towards a public transportation discipline. If public transportation is to compete for a new generation of professional practitioners, it will be critical to recruit students. Involving them at a young age will help influence their choice



*Brenda Joyce Thompson was awarded the Outstanding Student of the Year for the National Center for Transit Research (NCTR).*

of professional careers; in the new century, technology is influencing the public transportation planning process. Transportation education has moved from more formal, traditional means into new, innovative means. Many colleges and universities offer transportation disciplines as degree majors, and this advancement in technology can be used as a catalyst to draw young minds into the field of public transportation.

One of NCTR's goals is to create a public transportation education program targeted to reach high school students. Based on many of the existing programs, several avenues are being investigated to accomplish this task, including summer programs, regular course offerings, and instructional presentations at high schools.

### **CUTR Training, Seminars, and Conferences**

CUTR offered several training courses and seminars during the past year, aimed at providing state-of-the-art information to transportation professionals. The following were offered at CUTR:

- Demand Responsive Operational Efficiencies and the Impact of ADA on Fixed-Route Service
- Florida Maintenance Training Program, A/C
- Florida Maintenance Training Program, Advanced Electric - Coach
- Florida Maintenance Training Program, Air Systems/Brakes/Pneumatic-Gillig L/F Specific
- Florida Maintenance Training Program, ATEC/DDEC
- Florida Maintenance Training Program: Fleet Maintenance QMG
- Florida Maintenance Training Program, Intermediate Electric - Coach
- Florida Maintenance Training Program, Preventive Maintenance - Coach
- FTA Regulations Training
- Instructor's Course in Bus Operator Training (Vehicle Operations, Emergency Management and Customer Relations)
- Management and Productivity Skills (MAPS)
- Negotiation Strategies in Public Transportation: Understanding the Present & Developing Breakthrough Strategies and Tactics
- New Paradigms for Transportation & Environmental Management (teleconference)
- Productivity and Supervisor Skills (PASS)
- TDM Summit

### **Technology Transfer**

Excellent research is of limited value if the results are not made available to as many parties as possible that might benefit from the findings. Extensive technology transfer is a key determinant of NCTR's value. The following sections summarize specific accomplishments in the area of technology transfer by NCTR staff over the last year.

#### ***Professional Activities***

NCTR staff continue to have significant involvement with partners in the public transportation industry, including serving on nine Transportation Research Board (TRB) committees,

and holding leadership positions in the American Public Transportation Association (APTA), ITS America, the Association for Commuter Transportation (ACT), and the Institute of Transportation Engineers. This has created an opportunity to tout the NCTR program through solicitation of project ideas from organization members or in the transfer of research results. Following is a summary of the participation by NCTR staff as members of industry partners.

NCTR Director Volinski continues to serve as a TRIP ambassador, responsible for helping disseminate information on the results TCRP-funded research by making presentations at a variety of venues such as conferences, site visits, and expositions. He also informs transit professionals on how they can become more involved in the TCRP program through submission of research proposals and serving on research project committees. This close contact with transit professionals also allows him to keep abreast of issues of their greatest interest to the benefit of the NCTR program.

## Professional Involvement of Key NCTR Personnel

### Joel Volinski

- TRB Bus Transit Systems Committee
- TRB Committee on Transit Management and Performance
- TCRP Transportation Research Innovation Program (TRIP) Ambassador
- Leadership APTA Alumni Board of Directors
- APTA Human Resources Committee
- APTA Bus Operations Committee
- APTA Research and Technology Committee

### Gary Brosch

- International Road Federation, Board of Directors
- IRF Education Foundation, Executive Committee
- ARTBA, Education Committee
- Institute of Transportation Engineers
- American Public Works Association

### Dennis Hinebaugh

- TRB Fare Policy and Marketing Committee
- TRB Bus Transit Systems Committee
- TRB Bus Transit Systems Newsletter*, Editor
- Technical Advisor for the BRT Vehicle Design and Planning Competition
- APTA Bus Rapid Transit Committee

### Phil Winters

- TRB TDM Committee, Chair
- Association for Commuter Transportation (ACT):
  - TDM Institute Board of Directors, Board Member
  - TDM Review*, Editor
  - Technology Committee
- ITE Transportation Planning Council, Executive Committee
- Alliance for Clean Air and Transportation
- International Telemarketing Association
- Recipient, Program Partnership Award, American Lung Association of Gulf Coast Florida



**Shireen Chada**

ITS America Advanced Public Transportation Systems Committee

**Xuehao Chu**

*Transportation Research—Part A*, Editorial Board

*Journal of Urban Economics*, Referee

*Journal of Political Economy*, Referee

*Journal of Public Transportation*, Referee

*Transportation*, Referee

*Transportation Science*, Referee

**Margaret Giery**

Association for Commuter Transportation

**Jennifer Hardin**

TRB Committee on Paratransit

**Sarah Hendricks, AICP**

American Institute of Certified Planners

American Planning Association

Institute of Transportation Engineers

Association for Commuter Transportation

**Laurel A. Land, AICP**

American Institute of Certified Planners

American Planning Association

**Michael Pietrzyk**

ITS America Benefits, Costs and Evaluation Committee

ITS America Public/Private Partnership Committee

ITS America Weather Information Applications Task Force

**Steve Polzin**

Hillsborough Area Regional Transit Authority, Board

TRB Light Rail Transit Committee

American Planning Association

Institute of Transportation Engineers

**Amber Reep**

Federal Transportation Safety Institute (TSI)

**Joel Rey**

TRB Urban Transportation Data and Information Systems Committee

**Francis Wambalaba**

Association of Commuter Transportation

American Institute of Certified Planners

American Planning Association

Council of Minority Transportation Officials

**Beverly Ward**

APTA Minority and Female Speakers and Presenters Bureau

TRB Committee on Women's Issues in Transportation

Community Impact Assessment Joint Subcommittee

## Victoria Perk Wells

TRB Intermodal Passenger Facilities Committee  
TRB Social and Economic Factors in Transportation  
APTA Intermodal Operations Technical Forum, Vice Chair  
*SefTalk* Newsletter, Editor

### ***Publications and Presentations***

During FY 2001, NCTR researchers published a number of articles and made several presentations at state and national conferences and meetings, as follows:

#### *Publications*

- Gary L. Brosch and Beverly G. Ward, "Transportation in Megacities: The Tampa Bay Area Case," *On the Verge: Florida's Megacities in the New Millenium*, November 2000.
- Xuehao Chu and Steven E. Polzin, "Timing Rules for Major Transportation Investments," *Transportation* 27 (2000).
- Francis Cleland, "Interpreting Multiple Agency Gauges into Normed Evaluations," *Proceedings*, Association for Commuter Transportation (ACT) International Conference, September 2000.
- Margaret Giery, "Increasing Private Sector Involvement in Alternative Transportation: Lessons Learned," *Proceedings*, ACT International Conference, September 2000.
- Margaret Giery, "Private Sector Involvement in Raising Employer Awareness: Lessons Learned," *Common Sense Solutions*, Proceedings of the Western Regional Association of Commuter Transportation, June 2000.
- Christopher Hagelin, "Florida Motorcycle Helmet Use and the Impact of the Helmet Law Repeal," *Proceedings of the International Motorcycle Safety Conference*.
- Christopher Hagelin, "TDM and Bicycle Crash Data Analysis," *Proceedings*, ACT International Conference.
- Sarah Hendricks, "Transportation Management Associations as Advocates of Smart Growth," *Proceedings*, ACT International Conference, September 2000.
- Laurel Land, "Land Development and Access Management Strategies for Interchange Areas," *FLITE* (Florida Institute of Transportation Engineers), September 2000.
- Laurel A. Land, AICP, "Land Development and Access Management Strategies for Interchange Areas," *Transportation Planning*, Vol. XXV, No. 4, Winter 2000/01.
- Laurel A. Land, AICP, "Land Development and Access Management Strategies for Interchange Areas," *Proceedings of the 4<sup>th</sup> National Access Management Conference*.
- Laurel A. Land, AICP, "Land Development and Access Management Strategies for Interchange Areas," *Proceedings of the 8<sup>th</sup> TRB Transportation Planning Application Conference*.
- Laurel A. Land, AICP, "Land Development and Access Management Strategies for Interchange Areas," *Florida Planning*, Vol. XII, No. 5, August 2000.

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- Laurel A. Land, AICP (with Kristine Williams), "NCHRP Synthesis 289, Corridor Management," Transportation Research Board.
- Laurel A. Land, AICP, and Lisa Staes, "Public Transit Access to Private Property," *Transportation Research Record*, forthcoming.
- Michael C. Pietrzyk, P.E., "ETC Reduces Traffic Congestion in Florida," *ITS Solutions*, March 2001.
- Steve Polzin, "Point/Counterpoint: Questions about the Future of Light Rail in American," *Planning Forum*, September 2000.
- Steven E. Polzin, Xuehao Chu, and Joel R. Rey, Chapters 2 and 6, *Travel Patterns of People of Color*, Battelle, October 2000.
- Steven E. Polzin, Xuehao Chu, and Joel R. Rey, "Mobility and Mode Choice of People of Color for Non Work Travel," *Transportation Research Circular E-C026*, 2001.
- Steven E. Polzin, Xuehao Chu & Joel R. Rey, "Density and Captivity in Public Transit Success: Observations from the 1995 Nationwide Personal Transportation Study," *Transportation Research Record 1735*, January 2001.
- Phil Winters, "TDM In the Next Millennium," *Proceedings*, ACT International Conference, September 2000.
- Phil Winters, "Applying Creative Thinking Tools to Improving TDM Performance," *Proceedings*, ACT International Conference, September 2000.
- Phil Winters, "What is the Latest Research into TDM Telling Us?," *Proceedings*, ITE Annual Meeting, 2000.

#### Presentations

- Francis Cleland, "Interpreting Multiple Agency Gauges into Normed Evaluations," 2000 International Conference of the Association for Commuter Transportation (ACT).
- Francis Cleland, "An Overview of CUTR's Telecommuting Program," 2000 Western Regional ACT Conference.
- Francis Cleland, "A Market-Based Approach to Customized Trip-Reduction Program Design," 2000 Western Regional ACT Conference.
- Margaret Giery, "Private Sector Involvement in Raising Employer Awareness: Lessons Learned," 2000 Western Regional ACT Conference.
- Margaret Giery, "Increasing Private Sector Involvement in Raising Employee Awareness," 2000 International ACT Conference.
- Margaret Giery, "Non-Traditional Markets" Transportation Services in University North" Association for Commuter Transportation's TMA Summit, Atlanta.
- Margaret Giery, "Background Planning for the Pilot Circulator Study," Transportation and University Communities Conference, APTA, Gainesville.
- Christopher A. Hagelin, "Florida Motorcycle Helmet Use and the Impact of the Helmet Law Repeal," International Motorcycle Safety Conference, Orlando.
- Christopher Hagelin, "2000 Evaluation: TDM Efforts of South Florida Commuter Services," 2000 Florida TDM Summit.
- Christopher Hagelin, "Analyzing Bicycle Crash Data," ITE Conference, Clearwater.



- Christopher Hagelin, "TDM and Bicycle Crash Data Analysis," ACT International Conference, Orlando.
- Christopher Hagelin, "Motorcycle Helmet Use in Florida," State Motorcycle Safety Administrator's 2000 Conference, Indianapolis.
- Sara Hendricks, "Telecommunications in the Transportation Planning Arena," 2000 ACT International Conference, Orlando.
- Laurel A. Land, AICP, "Land Development and Access Management Strategies for Interchange Areas," 4th National Conference on Access Management, Portland, Oregon.
- Laurel A. Land, AICP, "Land Development and Access Management Strategies for Interchange Areas," 8th TRB Transportation Planning Application Conference, Corpus Christi, Texas.
- Laurel A. Land, AICP, "Public Transit Access to Private Property," 80th Annual Meeting of the Transportation Research Board.
- Laurel A. Land, AICP, "Managing Interchange Areas," Transportation Research Board Application of Transportation Planning Methods Conference in Corpus Christi, Texas
- Laurel A. Land, AICP, "Transportation Disadvantages Population and Demand Estimates," 9th Annual Training and Technology Conference, Orlando.
- Michael Pietrzyk, "Evaluation of a Simplistic Motorist Warning System for Wet Pavement Surface Conditions," ITE Annual Meeting, Nashville.
- Michael Pietrzyk, "Defining Rural ITS Needs for Florida," ITS America Annual Meeting, Miami Beach.
- Steve Polzin, "Strategies for the Functional Classification of Bus Service," Institute of Transportation Engineers Annual Meeting, Nashville.
- Amber Reep, "Information Transfer and Distance Learning Technologies," FTA Annual Conference, November 2000; "The Importance of Introducing Students to Careers at an Early Age," Hillsborough County Teachers Professional Planning Day.
- Amber Reep, "NCTR's Applied Distance Learning Technologies," 2001 Symposium of Teaching Technologies.
- Joel Volinski, "Transit Cooperative Research Program," Fall Conference of the New York Public Transportation Association," November; Program Chair, Florida Transit Association Annual Conference.
- Joel Volinski, "An Introduction to the Transit Cooperative Research Program" and "How to Attract and Retain Employees: Findings from TCRP Synthesis Report #33, Practices in Assuring Employee Availability," Southwest Transit Association Annual Meeting, Oklahoma City.
- Beverly G. Ward, "Environmental Justice Action Agenda Setting," 2nd Annual Conference of Toward Environmental Justice in Florida.
- Beverly G. Ward, "Community Impact Assessment Case Studies," FDOT Environmental Management Office Conference.
- Beverly G. Ward, "Developing a Community Profile for Transportation Planning," 2nd National Community Impact Assessment Workshop.
- Beverly G. Ward, "Welfare Reform: Today & Tomorrow," National Forum for Black Public Administrators (NFBPA) Florida Conference.

- Beverly Ward, "Getting Involved: Importance of Public Involvement to Environmental Justice," 80th Annual Meeting of the Transportation Research Board.
- Phil Winters, "Letting Kids Lead—Involving Youth in Mitigating Air Pollution from Mobile Sources," Air Pollution, Public Health and Automobiles Conference of the West Florida Air Quality Coordinating Committee in Tampa.

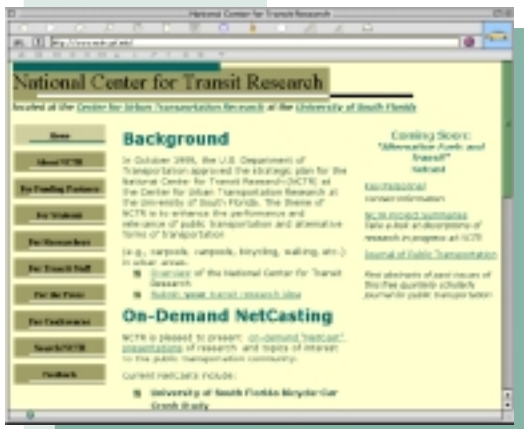


**Journal of Public Transportation**

The *Journal of Public Transportation* is a respected international journal containing refereed papers on current, original research and case studies associated with public transportation and related policy issues. Topics are approached from disciplines including economics, engineering, planning, GIS, finance, and safety, and include methodological, technological, and financial perspectives, with emphasis on the identification of innovative solutions to transportation problems. The Journal's circulation expanded to more than 1,700 subscribers in the past year, representing the U.S. and 30 countries and boasts a distinguished editorial board:

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**NCTR Website**

Effective use of the NCTR website ([www.nctr.usf.edu](http://www.nctr.usf.edu)) plays a major role in the effort to accomplish NCTR's goals. In support of NCTR's Education and Diversity goals, a diverse group of graduate students have had leading roles in the enhancement of the NCTR website's functionality and the dissemination of research results. One NCTR student designed a web-based database application to allow visitors to the NCTR website to quickly locate NCTR research projects using a wide variety of criteria, including TRB keywords. In addition, a group of graduate students developed a Trip Reduction Ordinance database for NCTR's National TDM and Telework Clearinghouse, and another student took the lead in the development and enhancement of NCTR's streaming media capabilities and presentations.

The website also is a significant contributor to NCTR's goal to "advance the body of knowledge in transportation." NCTR has enhanced its web presence by adding listservs, which are proving to be extremely well-received by the industry, as indicated by the growth in subscribers. In the past fiscal year, two new listservs were created under NCTR, in addition to those already established, that can be reached through the NCTR websites. These include the Bus Rapid Transit listserv, created May 2001 (69 subscribers); the Leadership APTA listserv, created April 2001 (99 subscribers); the Transportation Demand Management listserv, created October 1998 (455 members with 210 new subscribers since July 1, 2000); and the Telework listserv, created December 1999 (134 members with 63 new subscribers since July 1, 2000). Streaming media presentations have been added to the site. Completed projects are displayed prominently on the main page. Abstracts of all articles in NCTR's *Journal for Public Transportation* are contained on the website. Individuals also can request subscriptions via the web. The Research Projects online database provides an easy method for visitors to find what they want.

The website also serves as a means of collecting and disseminating information. In the past year, several NCTR research projects augmented mail survey questionnaires with web-based forms to collect data from transit industry professionals. Research ideas were solicited from the industry using the listservs (and other outlets) and individuals could submit ideas online. Visitors can provide feedback and request information or technical assistance via the website.

### **Virtual Conferences and Meetings**

In response to the need of many transportation organizations to work smarter and faster as well as hold down costs, NCTR began using methods for web-based communication tools to reach the public transportation industry and project team or advisory panel members who are located throughout the country. NCTR faculty have used web meetings to view draft survey questionnaires on screen, make changes in real-time that all can see, and finalize the draft with project managers and the advisory panel. This service also has been made available to other transportation organizations associated with NCTR, such as the Association for Commuter Transportation and Florida localities, to aid in developing strategies and accelerate the approval process for a model ordinance. In the future, NCTR will use these services to sponsor web events such as special topical workshops or training sessions online.

### **Detailed Web Statistics for June 2001**

**Successful requests:** 53,926 - *Successful requests* are those files which have been requested, including pages, graphics, etc. where the document was returned or was not needed because it had not been recently modified and the user could use a cached copy.

**Average successful requests per day:** 1,798

**Average successful requests for pages per day:** 489

**Distinct files requested:** 1,049 - *Distinct files requested* counts the various pages on the site

**Distinct hosts served:** 1,776 - *Distinct hosts* are the number of different computers requests have come from.

## **Streaming Media**

NCTR has developed the skills necessary to quickly disseminate information about research projects and supplement final reports and to allow researchers to obtain video clips from a wide variety of sources and efficiently integrate them into the presentations with a minimal expenditure of time using streaming media. Currently, the program permits rapid conversion from standard PowerPoint presentations (optional), several customizable features designed to facilitate creation of a polished streaming presentation, and inclusion of hyperlinks that permit the viewer to access each element of the sequential presentation independently.

Overall, NCTR is moving quickly with applying technology to reach its goals and achieve its mission. Recognizing that the world of technology is dynamic, NCTR's commitment and resolve to apply these tools to "enhance the performance and relevance of public transportation and alternative forms of transportation in urban areas" is steadfast.

## ***Conclusion***

In its second year, the National Center for Transit Research is producing a high volume of high-quality research of practical value to public transportation agencies throughout the country. The results of the research are being effectively distributed through a variety of means, including new electronic techniques that allow fast and flexible access to the information NCTR is producing. The program is helping to cultivate the next generation of transportation professionals by providing opportunities for dozens of students who assist in the research being conducted. Many of them are joining public and private sector transportation agencies upon graduation. The NCTR is excited about the possibilities of establishing an interdisciplinary transportation degree program that will attract even more students to the profession.

NCTR continues to enjoy a strong relationship with the Florida Department of Transportation, and has already started to leverage the UTC program funds through partnerships and contracts with non-profit foundations and the Federal Transit Administration. The research faculty and students of NCTR look forward to contributing to the rising success of public transportation agencies throughout the nation.

## Financial Summary

Figure 1 presents the funding sources for the second year (FY 2001) of the NCTR program. Figure 2 shows the split of expenditures for the fiscal year based on the key program areas of the NCTR Program. These expenditures are for the “core program” and research projects only and do not include administrative expenses of the NCTR Program. Expenditures are shown in three areas—education, research and technology transfer.

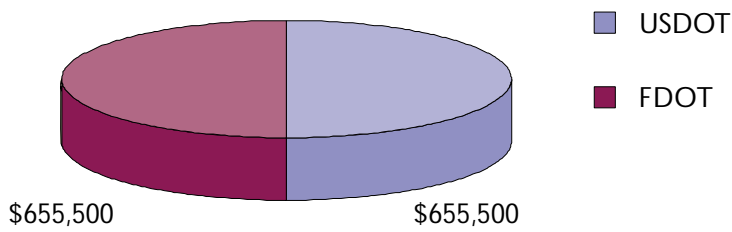


FIGURE 1

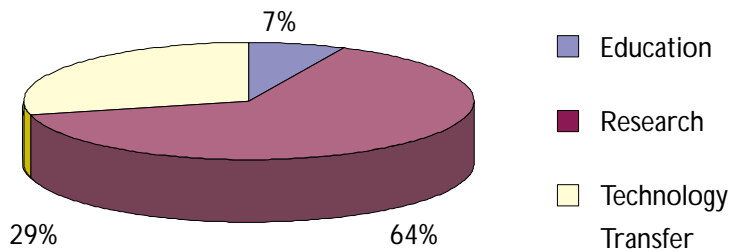


FIGURE 2