CUTR
Second Annual Report

Center for Urban Transportation Research (CUTR) at the University of South Florida College of Engineering

USF
CUTR ADVISORY BOARD

Carol Browner
Secretary, Department of Environmental Regulation

Chester Colby
Metro-Dade Transit Agency

Don Crane
Floridians for Better Transportation

Wallace Hawkes
Greiner, Inc.

Arthur Kennedy
Florida Transportation Commission

Gerhard Meisels
Provost, University of South Florida

Linda Loomis Shelley
Secretary, Department of Community Affairs

Ben Watts
Secretary, Department of Transportation

Jack Wilson
The Wilson Company
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Message from the University President</td>
<td>4</td>
</tr>
<tr>
<td>Message from the Engineering College Dean</td>
<td>5</td>
</tr>
<tr>
<td>CUTR Background</td>
<td>6</td>
</tr>
<tr>
<td>CUTR Research Program</td>
<td>7</td>
</tr>
<tr>
<td>Education Program</td>
<td>21</td>
</tr>
<tr>
<td>Faculty and Staff</td>
<td>22</td>
</tr>
<tr>
<td>Associated Faculty</td>
<td>24</td>
</tr>
<tr>
<td>Selected Presentations</td>
<td>26</td>
</tr>
<tr>
<td>Selected Publications</td>
<td>27</td>
</tr>
</tbody>
</table>
Message from the University President

Since its inception in 1988, the Center for Urban Transportation Research has continued to provide a strong research capability directed at accomplishing its legislative mandates of conducting and facilitating research and serving as an information exchange on issues related to urban transportation problems in Florida. The University takes great pride in the positive reports received from Center clients concerning the successful research projects being carried out.

CUTR, through the efforts of its highly educated and experienced researchers, has provided useful solutions to the kinds of transportation problems each of us faces daily. Beyond these benefits, CUTR complements the University environment by actively involving students in research projects, providing opportunities for affiliated faculty to apply and refine their knowledge, and supporting professional development and educational opportunities in transportation and related areas.

We look forward to CUTR's continued success and recognition and commend the Center for its energetic pursuit of research and dedication to quality. CUTR continues to be an asset to the University of South Florida, Tampa Bay, and the state.

Francis T. Borkowski
The College of Engineering has the dual mission of providing both an excellent undergraduate education as well as a graduate experience where active participation in research prepares students for substantive contributions to the advancement of technology. We point with pride to many significant accomplishments. The Center for Urban Transportation Research has contributed greatly to the success of our mission.

CUTR has made remarkable progress in the short time since its founding. The Center's work provides our graduate students and selected undergraduate students with opportunities to work on relevant and significant research. The national scope of the research projects conducted by CUTR has substantially raised the visibility of the College and allowed us to attract additional high quality students and faculty.

I commend CUTR on its pursuit of Total Quality Management and applaud the tremendous energy being invested in the pursuit of research excellence.

Michael G. Kovac
CUTR Background

The Center for Urban Transportation Research (CUTR) at the University of South Florida was created in 1988 by the Florida Legislature, the Florida Board of Regents, and the University of South Florida. In creating CUTR, the Florida legislature recognized the value to the public of having a concentration of technical and policy expertise in transportation to serve as a resource to both the public and private sectors in Florida. Through technical support, policy analysis, and research support and by identifying innovative solutions to transportation problems in the state, the Center provides a very high quality of objective transportation expertise that translates directly into benefits for the State.

CUTR’s staff of experts in the fields of finance, engineering, planning, human factors, economics, public policy, and the environment has grown along with its increase in research projects. Cooperative work with faculty in other USF departments and State universities continues to be a priority in an effort to enhance the teaching and research capabilities of the entire State University System.

CUTR has steadily expanded its staff resources, established an Advisory Board, increased its involvement in educational activities including sponsoring the USF Student Chapter of the Institute of Transportation Engineers, enhanced its research management capabilities by establishing a Total Quality Management program, developed a reference center, and established a community presence through involvement in civic and charitable activities such as the Adopt-A-Highway program and Paint Your Heart Out, Tampa. CUTR staff have been recognized for their outstanding work, including receipt of awards at conferences and publication of nationally-recognized books, and staff members are active members of numerous professional committees and organizations.

CUTR enters the new year with an expanded staff, a broad range of research projects under way, continued strong support, and resource commitments to address the continuing transportation research needs in Florida. We look forward to continuing to serve Florida with quality research.

Gary L. Brosch
Director
CUTR Research Program

Since its establishment, CUTR has provided a leadership role in transportation. Efforts to establish a national reputation through research, presentations, and publications have been highly successful. We continue to maintain an active research agenda in both State of Florida-sponsored research and contract and grant research for a variety of public and private clients.

These research efforts have resulted in numerous well-received technical reports that lead to action decisions by clients as well as to numerous publications and presentations.

As attested to in the project descriptions on the following pages, CUTR’s work involves a broad diversity of subject areas including suburban mobility, mass transit, high speed rail, transportation finance, transportation safety, training, and public policy, among others. Clients have included the U.S. Urban Mass Transportation Administration (now the Federal Transit Administration), the Florida Legislature, the Florida Transportation Commission, the Florida High Speed Rail Transportation Commission, the City of Orlando, the City of Jacksonville, and the City of Key West, among others.

Roadway Level of Service Determination

In a study for the Florida Association of Counties and the Florida Institute of Government, CUTR found that some accepted methods of estimating roadway levels of service may not provide planners and policy makers with accurate results. The study compared results of standard computer models to actual travel time study results and found that the models can be off by as much as two letter grades in their level-of-service estimates. To improve level of service estimates, CUTR’s report recommends that travel time study results be used to calibrate standard models or derive new statistically based models. The report addressed other issues as well: whether roadway levels of service should be analyzed on a facility-by-facility basis or on an areawide basis, and whether levels of service should be analyzed for the 30th highest hourly traffic volumes of a given year or for traffic volumes more typical of peak hours of the peak season.

Sponsoring Agency: Florida Association of Counties, Florida Institute of Government
Sponsor Project Managers: John Scott Dailey, Florida Institute of Government; Stephen Hogge, Florida Association of Counties
Benefits of High Speed Rail

At the request of the Florida High Speed Rail Transportation Commission, CUTR produced a brochure to educate Florida's citizens and the State legislature about the benefits of implementing high speed rail systems in the state. Two systems are proposed to be built in Florida: an electrically-powered high speed rail system between Tampa, Orlando and Miami and a magnetic levitation demonstration project between the Orlando International Airport and International Drive. The 20-page brochure describes the two proposed systems and highlights their benefits in terms of economics, the environment, cost, Florida’s transportation system, growth management, energy use, the attraction of high tech industry, increased comfort and convenience, and increased productivity. Also included are a timeline for planning and construction of the systems and a description of accomplishments of the Florida High Speed Rail Transportation Commission.

Sponsoring Agency: Florida High Speed Rail Transportation Commission
Sponsor Project Manager: Charles Smith

Electric Car

CUTR teamed with the USF Electrical Engineering Department, Florida Power Corporation, Tampa Electric Company, and the City of Tampa to develop an Electric Vehicle Site Operator Program for the testing and evaluation of electric vehicles under actual operating conditions. CUTR is responsible for evaluating the economics of these vehicles by quantifying the capital and operating costs of the program, as well as important societal benefits, and for assessing vehicle ergonomics, the study of human factors involved in operating the vehicles. The three-year program will test five commuter cars and several utility vans which will be parked under a structure covered with photovoltaic panels and charged during working hours. The study involves grants from several sources, including the U.S. Department of Energy, the Governor’s Energy Office, Florida Power Corporation, the Hillsborough County Environmental Protection Commission, the University of South Florida, and the City of Tampa. Ultimately, it is hoped that this research will lead to the kind of engineering breakthroughs that will make the concept of electric vehicles feasible for broad application.

Automatic Vehicle Identification

Automatic vehicle identification (AVI) is the term applied to toll collection techniques that uniquely identify vehicles as they pass specific points, without requiring any action by the driver or an observer. The Florida Department of Transportation, Office of Florida’s Turnpike, contracted with CUTR to conduct an analysis of AVI and its potential application on the 321-mile Florida Turnpike system. The three-phase project included review of state-of-the-art AVI technology, survey research relating to the attitudes and characteristics of current Turnpike patrons, and an evaluation of the specific application of AVI technology to the Turnpike. Results of the surveys were used to assess the market potential and anticipated level of participation in an AVI system. Specific costs and benefits of AVI were defined, enabling the determination of the cost-effectiveness of AVI. CUTR is continuing to provide assistance with site-specific traffic analysis, evaluation of privatization options, and system-wide cost-effectiveness analysis.

Sponsoring Agency: Florida Department of Transportation, Office of Florida’s Turnpike
Sponsor Project Manager: Chester Chandler

Advantage I-75

The Advantage I-75 program is a multi-state/province initiative designed to use advanced technology to increase transport efficiency, improve safety, and enhance mobility within a 2200-mile major highway corridor. Specifically, the project is intended to improve motor carrier productivity and to achieve more efficient state truck monitoring operations using automatic vehicle identification (AVI) technology. An AVI-equipped truck, after being weighed and certified legal once during a specific trip movement, may then bypass later weigh stations. The design concept provides for integration of AVI, driver notification, computer and communications networking, scale system interfaces, automatic vehicle classification, database management, and compliance verification. CUTR studied the extent of inherent benefits and costs to motor carriers, individual states/provinces, and to the overall Advantage I-75 corridor at weigh/enforcement stations resulting from the implementation of an IVHS system such as Advantage I-75.

Sponsoring Agency: Florida Department of Transportation
Sponsor Project Manager: George Herndon

CUTR 1991 - 9
Bay Area Commuter Services

The Florida Department of Transportation contracted with CUTC to develop and implement a regional commuter assistance program in the Tampa Bay area. Activities of the project include research and recommendation of an institutional framework for the program, coordination of the program with existing rideshare programs, development of an action plan, assistance with recruitment of a general manager and organization of a Board of Directors, assistance with incorporation, development of bylaws, administration of a subcontract providing funding for the program’s start-up and operation, development of a staffing plan, procurement and initial operation of a rideshare matching system, and production of a kick-off conference. The program will serve a four-county area including Hillsborough, Pinellas, Pasco, and Hernando counties.

Sponsoring Agency:
Florida Department of Transportation
Sponsor Project Manager: Bill Mustard

Capital City Transportation Management Association

CUTC served as the project manager for the planning and implementation of a commuter assistance program and demonstration transportation management association (TMA) for the Capital City area of Tallahassee. The scope of services included the provision of technical assistance and project oversight, contractual arrangement for the participation of Florida State University, and the integration of TMA experiences from other projects in Florida and throughout the U.S. The work efforts focused on actions to implement the TMA. As an impetus to the formation of the TMA, representatives of the public and private sectors in Tallahassee participated in a mobility conference and were recruited to serve on a steering committee to provide proactive and interactive means of assimilating input. This project work effort has resulted in the development of the Capital City TMA, and the cooperative effort of UF, FSU, and FDOT has been continued into a second year, with FSU serving as project manager. CUTC continues to provide technical assistance and act as a resource to aid in the implementation of various TDM strategies.

Sponsoring Agency:
Florida Department of Transportation
Sponsor Project Manager: Bill Mustard
Integration of Commute Alternatives into the Growth Management Process

Through contracts with the Florida Department of Transportation and the Florida Energy Office, CUTR designed a program to promote transportation demand management (TDM) measures throughout the state of Florida. This multifaceted program will educate Florida residents, agencies, and businesses of the benefits of TDM strategies such as car and van pooling, transportation management associations, alternative work hours, bicycle/pedestrian programs, employer subsidies, parking management, and traffic reduction ordinances. The project consists of production of the Commute Alternatives Systems Handbook, which introduces the concept of TDM; production of the Program Director's Manual, which gives specific information on TDM implementation; production of a TDM video; presentation of two series of 20 workshops across the state, each based on the manuals; and production of a statewide TDM conference. All phases of the project are designed to showcase TDM strategies and to develop grassroots enthusiasm for their implementation.

Sponsoring Agency: Florida Department of Transportation, Florida Energy Office - DCA
Sponsor Project Manager: Bill Mustard

TMA Clearinghouse

The Florida Department of Transportation and the Florida Energy Office contracted with CUTR to establish the TMA Clearinghouse, a service developed to foster the formation of transportation management associations (TMAs) in Florida and across the nation. The Clearinghouse project consists of several activities. A resource center is being established that will include a computerized database and bibliography of available TDM materials. A national newsletter, the TMA Clearinghouse Quarterly, is produced and distributed to detail current events and information in the TDM area. In addition, the Clearinghouse provides assistance upon request to district FDOT offices with the formation of TMAs or assistance to existing TMAs and to the Florida Commuter Assistance Program. This assistance includes development of work program goals and objectives, assistance in addressing the needs of commuters, implementation of innovative transportation services, and provision of experts to educate commuter program staff on visionary solutions to commuting problems. Finally, formal evaluation criteria to be used by FDOT will be established to monitor the performance of Florida TMAs.

Sponsoring Agency: Florida Department of Transportation, Florida Energy Office - DCA
Sponsor Project Manager: Bill Mustard
Florida Statewide Five-Year Transportation Disadvantaged Plan

At the request of the Florida Transportation Disadvantaged Commission, CUTR contracted with the Florida Department of Transportation to develop a five-year TD plan with the following purposes: identification of the current and future needs of Florida's transportation disadvantaged population, review and evaluation of the coordination of existing transportation services in each service area, and development of service performance measures. Additionally, the plan recommends service delivery improvements and identifies other areas for the Commission to review in the future. Technical memoranda were produced that include a historical perspective of TD services in the state, a statewide trend and peer analysis of community transportation coordinators and Section 9 operators, demand forecasts for TD services from 1992 through 1996, cost estimates and an assessment of funding needed to meet the demand, and a discussion of policy issues, goals and objectives, and implementation strategies.

Sponsoring Agency: Florida Department of Transportation
Sponsor Project Manager: George Brown

Private Sector Briefs

Under contract to the Federal Transit Administration, CUTR researched and produced a set of briefs on a variety of transportation topics for distribution at FTA's 7th Annual Conference in Louisville. Included were briefs on the new national transportation policy, emphasizing private investment initiatives, user charges, relaxation of barriers, and the Department of Transportation's short-term agenda and goals; high occupancy vehicle legislation and commercial parking taxes in Olympia, Washington; private sector competition in transit and related competitive services legislation in Pennsylvania; a public/private rail maintenance facility in Frazer, Pennsylvania; innovative financing and cross border leasing; and the successor clause in Phoenix, Arizona.

Sponsoring Agency: Federal Transit Administration
Sponsor Project Manager: Doug Birnie
Pinellas Suncoast Transit Authority Technical Assistance

At the request of the Pinellas Suncoast Transit Authority (PSTA) Board of Directors, CUTR provided technical analysis and support to the PSTA Board by conducting a performance review of PSTA that included both trend performance and peer comparison data. Subsequently, CUTR assisted in developing a work scope for a comprehensive performance review of PSTA operations and provided assistance with work scope development and consultant selection. At the request of the Pinellas legislative delegation and the Florida House Public Transportation Committee, CUTR also provided extensive research and technical support in the sunset review of PSTA, which included providing performance review materials as well as assisting in the development of the sunset process and in public hearings and information collection to fully assess the need for, performance of, and desired changes to PSTA enabling legislation.

Sponsoring Agency: PSTA
Sponsor Project Manager: PSTA Board of Directors

Public Transit Coordination Study

At the direction of the Florida Legislature and the Florida Transportation Commission, CUTR conducted a study of the need for coordination between local and regional public transit and fixed-guideway transportation systems. Research and analysis resulted in the finding that coordination of transit operations at the local and regional levels can enhance the quality and convenience of service to the public, therefore encouraging transit use. Although the study mandate focused solely on coordination between fixed-guideway and public bus transit systems, it was noted that the need for improved coordination also includes coordination of other areas such as transportation planning, land use planning, parking, and related policy decisions. A report entitled "A Study of Coordination of Local Regional Public Bus Transit and Fixed Guideway Transportation Systems in Florida" provides prescriptive recommendations to improve coordination and useful insight to guide decisionmakers and administrators seeking to improve the effectiveness of public transportation.

Sponsoring Agency: Florida Transportation Commission
Sponsor Project Manager: Jane Gargiulo
Performance Evaluation of Florida’s Transit Systems

As a result of Florida legislation requiring that FDOT and each transit system develop and report on transit system performance, CUTR conducted a performance evaluation of Florida’s urban fixed-route transit systems using 1989 data. A follow-up to a previous evaluation conducted by CUTR, the study consisted of three parts: a trend analysis, a peer review analysis, and a comprehensive executive summary. In the trend analysis, performance indicators and measures for the last five years were reviewed to determine how individual systems and the state as a whole have performed over time. In the peer analysis, performance measures of Florida’s transit systems were compared with similar systems within Florida and across the country. The study indicated that continued attention to marketing, careful service design, and cost containment should be pursued and that commitments to stable funding and supportive land-use policies that create a more favorable operating environment for public transit will be necessary to achieve significant improvements in transit system performance. An update of the performance evaluation using 1990 data will be available in early 1992.

Sponsoring Agency:
Florida Department of Transportation
Sponsor Project Manager:
George Brown

HART On-Board Passenger Survey

As part of a major systemwide service redesign and schedule revision, CUTR administered a survey of Hillsborough Area Regional Transit Authority (HART) passengers to assess their demographic characteristics, travel patterns and attitudes about service. This survey was designed to assist HART in service design, marketing and operations planning and was based on industry experience and previous CUTR survey work. Results provide information on ridership demographics, origins and destinations, work schedules, trip purposes, reasons for using mass transit, frequency of demand, transportation alternatives, and attitudes toward transit. The survey was administered over a two-week period under the supervision of CUTR staff, with drivers and survey takers distributing the questionnaires. The response rate was very good for this type of study, with approximately 33% of the passengers answering the questionnaire.

Sponsoring Agency: HART
Sponsor Project Manager: Tim Crobons
Tri-County Commuter Rail
Passenger Survey

At the request of the Tri-County Commuter Rail Authority (Tri-Rail), CUTR conducted a survey to determine passenger satisfaction, travel information, and a passenger profile of this new commuter rail operation in south Florida. This survey of 3,296 Tri-Rail riders indicated that an overwhelming majority of Tri-Rail riders are satisfied or very satisfied with every aspect of the service, including characteristics such as cost, on-time performance, travel time, frequency of service, hours of service, and availability of parking at stations. The most important reasons for riding were cited as convenience and economy. The survey also indicated that a significant majority of Tri-Rail users are "choice" riders as opposed to being dependent upon the train for transportation. The survey will be used by Tri-Rail in long-range planning and as a marketing tool.

Sponsoring Agency: Tri-County Commuter Rail Authority
Sponsor Project Manager: Gloria Jacaruso

Performance Evaluation of
Metro-Dade Transit Agency

At the request of the southeast Florida legislative delegation, CUTR compiled information on the performance of the Metro-Dade Transit System. This effort coincided with the statewide performance evaluation of Florida transit properties and involved extensive review of performance data for Metro-Dade. In addition to including extensive sections in the statewide report on the Metro-Dade system, a resource book of technical performance data was compiled for the agency. Historical and current performance data were included, with modifications of the data made to provide definitional consistency. A trend analysis of data from 1984 to 1988 was conducted, as was a peer review analysis to compare the performance of each mode with those operated by similar systems across the country.

Sponsoring Agency: Metro-Dade Transit Agency
Sponsor Project Manager: Ed Colby
Florida Maintenance Training Program

CUTR and the Florida Department of Transportation entered into a joint participation agreement to provide maintenance training resources to public transit agencies throughout Florida. CUTR's responsibility in the project included acting as a broker in delivering classroom and laboratory maintenance training for transit mechanics, establishing a resource center that provides training programs and audiovisual and reference materials to Florida transits on a free-loan basis, conducting advisory committee meetings, producing and distributing a quarterly newsletter covering maintenance training activities, training tips, and new training programs, and supervising and evaluating training sessions conducted as part of the program. Training areas include coach air conditioning, coach electrical systems, preventive maintenance, RTS doors, wheelchair lifts, and air brakes.

Sponsoring Agency: Florida Department of Transportation
Sponsor Project Manager: James (Mike) Johnson

Commercial Driver's License Training Program

As a result of a new Florida law that will require a classified commercial driver's license (CDL) for persons who currently hold a chauffeur's license and the high test failure rate experienced by states implementing the use of the CDL earlier than Florida, the Florida Department of Transportation contracted with CUTR to develop and conduct a training workshop for those applying for a commercial driver license. The reasons for the high rate of failure were assessed, resulting in the development of training classes with special features that included the development of new reading materials, extensive use of audiovisual and written materials, emphasis on study and test-taking skills, and distribution of audiotapes to all students. The workshops were presented in every FDOT district, and materials used in the workshops were made available for use by Florida transit properties.

Sponsoring Agency: Florida Department of Transportation
Sponsor Project Manager: Hank Donaldson
Central Florida Commuter Rail Authority

At the request of the Florida legislature, CUTR provided technical support to the Central Florida Commuter Rail Authority (CFCRA). CFCRA is a multi-county state agency tasked with developing commuter rail services in the central Florida area. CUTR was instrumental in working with local technical experts in the development of an Initial Work Plan for the Agency. Based on the plan, CFCRA developed a scope of work and hired a consultant to begin planning activities. CUTR also helped establish a technical advisory committee for local technical input and assisted in the development of a schedule, a selection process, and a position description for an Executive Director for the agency.

Sponsoring Agency: Florida Legislature

Tampa Bay Commuter Rail Authority

Having provided technical support to the regional task force that preceded the Tampa Bay Commuter Rail Authority (TBCRA), CUTR continues to provide research and technical support to the TBCRA, a state agency created to plan, implement, and operate rail services in Hillsborough, Pinellas, and Pasco counties. Serving as a member of the Project Development Committee and as a resource for the acting executive director and the Board, CUTR has assisted by providing information in a number of areas. These include development of a work scope, consultant selection support, informational reports on the status of planning and operations of other Florida commuter rail authorities, technical support in the development of Commuter Rail Feasibility work scopes and consultant selection processes, and informational briefings on relevant topics such as the federal alternatives analysis process, transit coordination, and the status of federal funding availability.
Manatee County Transit Development Plan

As a subcontractor to a private firm, CUTR supported the preparation of a five-year Transportation Development Plan for Manatee County Transit that analyzed several aspects of both paratransit and fixed-route transit operations such as demand for service, performance of existing services (peer and trend analyses), and detailed route level ridership. A survey of riders was conducted and recommendations concerning a service planning process and service changes were developed. Financial and organizational aspects of the system were also reviewed. The plan was developed with extensive participation by Manatee County Transit and goes beyond the traditional transportation development plan to include the strategic issues faced by the agency.

Sponsoring Agency: Manatee County Transit

International Drive Corridor Transportation Study

Under contract with the City of Orlando, CUTR provided technical support for a study of the International Drive Corridor that evaluated alternative public transportation systems for the corridor. CUTR's role included providing technical support to the project manager, the project steering committee, and the project consultant, specifically providing quality control, and advice to the project manager. The study followed a classic work program with steps to define the transportation problem, identify alternative solutions, and evaluate the impacts on costs, ridership, operations, the environment, traffic, financing, and related considerations. The information developed as part of the project resulted in both short-term recommendations for expanded bus transportation in the corridor as well as continued evaluation of future fixed guideway implementation.

Sponsoring Agency: City of Orlando

Sponsor Project Manager: Jan Charlier

| PERFORMANCE SUMMARY INTERNATIONAL DRIVE ALTERNATIVE TRANSIT CONCEPTS (1995) |
|-----------------|-----|-----|-----|-----|
|                 | BEST | BUSWAY | LRT  | AGT  |
| WITHOUT MAGLEV  | 5,452| 5,300 | 5,436| 6,107|
| Average Annual Ridership (000s)$ | 5.452| 5.300 | 5.436| 6.107|
| Annualized Capital Cost Per | 0.03 | 0.03 | 0.03 | 0.03 |
| Riders Per Revenue Mile (Cents) | 4.35 | 4.35 | 4.35 | 4.35 |
| Operating Cost Per Revenue Mile (Cents) | 55.1 | 25 | 25 | 25 |
| One-Way Travel Time (Minutes) | 30% | 87% | 90% | 77% |

WITH MAGLEV

|                 | 4,099| 6,245 | 8,307| 7,482|
| Average Annual Ridership (000s)$ | 4.099| 6.245 | 8.307| 7.482|
| Annualized Capital Cost Per | 0.38 | 3.00 | 3.00 | 3.00 |
| Riders Per Revenue Mile (Cents) | 4.78 | 5.43 | 5.43 | 5.43 |
| Operating Cost Per Revenue Mile (Cents) | 55.1 | 25 | 25 | 25 |
| One-Way Travel Time (Minutes) | 74% | 92% | 95% | 79% |

* Based on Average Annual Riders between 1995 and 2010.
** These are "across-train miles" to account for differences in the number of vehicles per consist.

The Best Bus/TSM, Busway and LRT options are all based on single vehicle consists. The AGT option assumes a three-vehicle train.
Functional Classification and Ownership of Florida’s Roadways

During the 1990 session, the Florida Legislature commissioned CUTR to develop a new system for classifying Florida’s roads and for determining jurisdictional responsibility. CUTR was directed to develop classification criteria, recommend appropriate level of service and access standards for roads of different classes, and analyze the fiscal impacts of the proposed classification. Based on the belief that a fundamental difference exists between ownership and classification, the study determined that state ownership should be based on identified statewide functions of the roadway, whereas physical and operating attributes should form the basis for establishing roadway classification. Seven ownership criteria were determined and recommended, as were four classification criteria. Input from various entities was sought and a final report was submitted in July 1991. Implementation of CUTR’s recommendations on ownership is moving forward, and implementation of recommendations on classification is under review, pending clarification of new federal classification criteria.

Sponsoring Agency:
Florida Legislature

Sponsor Project Manager:
Jane Gargiulo, Florida Transportation Commission

Port Orange Transportation Utility Fee

CUTR assisted the City of Port Orange in reviewing legal issues surrounding the implementation of a transportation utility fee (TUF), developing fee options and initial fee schedules, drafting an implementing ordinance, developing a customized pavement management system to estimate revenue needs, and creating promotional materials for public information. A customized "Pavement Condition Survey Manual" was prepared to minimize subjectivity in visual pavement condition evaluations. Employees of Port Orange were trained in street sampling procedures, visual condition survey techniques, and identification of pavement distress by type, severity and extent. Sample segments were evaluated and pavement condition survey data were compiled in a computerized data base. An evaluation report was prepared to translate results of the assessment for use by public officials. The report outlines a program of pavement maintenance and rehabilitation aimed at correcting problems before they require costly reconstruction.

Sponsoring Agency:
City of Port Orange

Sponsor Project Manager:
Ken Parker
Metro-Dade Regional Mobility Forum

At the request of the Federal Transit Administration (FTA) and the Florida Department of Transportation, CUTR organized and produced a suburban mobility forum to address mobility problems in the Metro-Dade area. Sponsored in cooperation with the Greater Miami Chamber of Commerce, the Metro-Dade MPO, and the Metro-Dade Transit Agency, the forum brought together representatives of both the public and private sectors to hear experts present information on the transportation problems in the area and to discuss potential solutions to those problems. Emphasis was placed on finding innovative, low-cost solutions that combine creativity with good transportation management. The forum served as a springboard for continued community involvement in mobility management in the Miami area. A Green Light for Mobility, a publication summarizing the forum, was produced and distributed throughout the state.

Sponsoring Agencies: Federal Transit Administration, Florida Department of Transportation
Sponsor Project Managers: Walter Kulyk, FTA; Harry Reed, FDOT

Northeast Florida Mobility Conference

At the request of the City of Jacksonville, CUTR coordinated and produced "Gridlock 2000: Prospects for Mobility in Northeast Florida." The one-day conference was sponsored by the City of Jacksonville, the Jacksonville MPO, the Northeast Florida Regional Planning Council, the Jacksonville Chamber of Commerce, the Federal Transit Administration, the Florida Department of Transportation, the Northeast Florida Sierra Club, the Jacksonville Transportation Authority, and Floridians for Better Transportation. Speakers included experts from local, state, and national organizations who addressed mobility problems and prospects in northeast Florida. Breakout sessions on transportation financing, regionalization, and transportation demand management featured presentations by experts followed by discussion among attendees. A summary of the conference was produced and distributed and was followed by a second conference to further clarify issues.

Sponsoring Agency:
City of Jacksonville
Sponsor Project Manager:
Calvin Burney
An important part of CUTR's mission is to complement the University's educational program by coordinating our research activities with various academic departments. This is accomplished by integrating the benefits and results of our research into the students' learning experience. In order to be most effective and make the greatest contribution to the University, the local community, and the state generally, CUTR is taking a comprehensive approach to transportation research and education. Our approach includes an interdisciplinary transportation program, student assistantships, a lecture series, seminars, continuing education, cooperative internships, and involvement in student activities.

The interdisciplinary transportation program is especially designed for graduate students in civil engineering, economics, and public administration who desire a better understanding of urban transportation issues or who plan a career using the skills developed in their respective disciplines to help solve tomorrow's transportation problems.

In addition to employing the students on research projects, CUTR continues to assist students in their educational and professional development in a variety of other ways. CUTR helped start a USF student chapter of the Institute of Transportation Engineers (which won the 1990 award for Best ITE Student Chapter in Florida). A CUTR staff member serves as faculty advisor to the chapter, and all three presidents of the chapter have been CUTR student assistants. In addition, staff members serve on student thesis committees and assist graduating students with professional job placement.

CUTR's commitment to education assists the state in retaining Florida's brightest students for future employment, providing the state with needed transportation professionals for the future.

**Student Research Assistants**

Jane Alfriend, Geography
Lisa Argiry, Art Education
Michael Baltes, Organizational Management
Rick Bowers, Civil Engineering
Lori Burns, Geography
Maryellen Cooke, Political Science
Manuel Geriakos, Civil Engineering
Brigitta Keitgen, Economics
Michael Neidhart, Public Administration
Dan Preslar, Civil Engineering
Thomas Rawls, Civil Engineering
Joel Rey, Civil Engineering
Tony Rodriguez, Engineering Management
Michael Yates, Civil Engineering

Yates, Baltes, Rey
Neidhart, Keitgen, Rodriguez, Burns
CUTR Faculty and Staff

FACULTY
Gary L. Brosch, Director. M.S., Economics, Florida State University; B.S., Economics, University of South Florida. Research interests: urban community economic analysis, innovative financing, urban mobility, transportation innovations.

F. Kon Jones, Deputy Director for Planning. Ph.D., Urban Planning and Economics, Massachusetts Institute of Technology; M.C.P., Transportation Planning, University of California-Berkeley. Research interests: transportation planning, elderly and disabled transportation, urban and regional economics, public policy analysis.

Edward A. Mierzejewski, Deputy Director for Engineering. M.S.C.E., Transportation System Analysis, Massachusetts Institute of Technology; B.S., Civil Engineering, Worcester Polytechnic Institute. Research interests: transportation systems management, environmental impact analysis, traffic and parking studies, highway planning, transportation economics, transportation planning.

Thomas L. Miller, Deputy Director for Training. Ph.D., Highway Traffic Safety, Michigan State University; M.E.D., Traffic and Transportation Safety, Miami (Ohio) University; B.S.E.D., Social Studies, Bowling Green State University. Research interests: transportation safety, transportation maintenance, hazardous materials safety, program evaluation, human factors, IVHS, drug abuse interdiction.

Steven E. Polzin, Deputy Director for Policy Analysis. Ph.D., Civil Engineering-Transportation, Northwestern; M.S.C.E., Urban Systems Engineering, Northwestern; B.S.C.E., University of Wisconsin-Madison. Research interests: policy analysis, transportation planning, public transportation systems evaluation, planning process design, mobility analysis.

Elizabeth Bachman, Research Associate. M.P.A., Urban and Regional Planning, Indiana University; B.S., Environmental Policy, Indiana University. Research interests: transportation disadvantaged, transportation planning, policy analysis, public transit operations analysis.

William Ball, Research Associate. M.A., Economics, University of South Florida; B.S., Economics/Political Science, Florida Southern College. Research interests: economic analysis, financial analysis, international trade and finance.

Daniel K. Boyle, Senior Research Associate. M.R.P., City and Regional Planning, Cornell University; B.A., Urban Sociology, Cornell University. Research interests: transit operations planning, policy analysis, transportation planning, statistical analysis, transportation systems management, transit marketing, fare structure.

John Lott Brown, President Emeritus, Ph.D., Columbia University. Research interests: vision and sensory systems, applications of sensory physiology and human factors in engineering, interactive video in education.

Glenn A. Burdick, Dean Emeritus, Ph.D., Massachusetts Institute of Technology. Research interests: electrical aspects of transportation, transportation safety, accident reconstruction, electromagnetic field theory, semiconductor physics, microelectronics.

Reid Ewing, Senior Research Associate. Ph.D., Transportation Systems/Urban Planning, Massachusetts Institute of Technology; M.C.P., City Planning, Harvard University; M.S., Engineering/Applied Physics, Harvard University; B.S., Mechanical Engineering, Purdue University. Research interests: innovative financing, growth management, traffic operations, community development, transportation demand management.

Patrick Griffith, Senior Research Associate. M.S., Transportation Engineering, Villanova University; B.S., Economics, University of Pennsylvania. Research interests: transportation finance and economics, public finance, transportation operations analysis, aviation forecasting, transportation planning, urban and regional economics, financial planning and analysis.

Patricia Henderson, Research Associate. B.A., Political Science, University of South Florida. Research interests: transportation demand management, suburban mobility, publications design and management, conference coordination, public relations.
Eric Hill, Research Associate. M.P.P., Public Policy, Rutgers University; B.S., Management Science, Rutgers University. Research interests: transit planning, public policy analysis, data analysis, transit service and operations planning.

Debra Hodes, Senior Research Associate B.A., Political Science, Ramapo College. Research interests: transportation demand management, financing public/private partnerships, suburban mobility, transportation management association initiatives, grants management.

Perry Maull, Senior Research Associate. M.B.A., Indiana University; B.S., Business Administration, Indiana University. Research interests: transportation disadvantaged, transit development and marketing, transportation demand management.

Paul Ouderkirk, Research Associate. M.P.S., City and Regional Planning, Western Kentucky University; B.A., Geography, State University of New York-Oswego. Research interests: transportation planning, capital program analysis, government operation, program administration.

Michael Pietrzyk, Senior Research Associate. M.S.C.E., Transportation, Pennsylvania State University; B.S., Civil Engineering, Virginia Polytechnic Institute. Research interests: transportation finance, conceptual design, regional mobility, intelligent vehicle and highway systems.


Beverly Ward, Research Associate. M.P.A., Public Administration, University of Birmingham; B.A., Psychology, Vassar College. Research interests: transportation demand management, transportation policy and analysis, specialized transportation services, coordinated transportation systems.

Stacey Bricka, Research Technician. M.A., Economics, University of South Florida; B.A., Economics, Eckerd College.

Steve Maas, Research Technician. M.A., Urban Anthropology, University of South Florida; B.A., History, University of Nebraska-Lincoln.

Cindy Wooten, Administrative Manager. B.A., Accounting, University of South Florida.

STAFF
Patricia Baptiste, Project Secretary
Donna Contino, Clerk
Joy Eaton, Clerk
Sylvia Holder, Project Secretary
Elsie Kennedy, Senior Secretary
Elizabeth Manning, Receptionist

Terri Oates, Project Assistant
Ken Patterson, Clerk
Kevin Toso, Assistant to Administrative Manager
Patricia Turner, Project Assistant
Vicki Zambito, Project Assistant
Associated Faculty

CIVIL ENGINEERING


J. Thomas Franques, P.E. Ph.D., Louisiana State University. Specialties: hydraulics, drainage, water resources, transportation surveying, and systems analysis.

Alan R. Kaub. Ph.D., University of Wisconsin. Specialties: highway and bridge design, computerized timing and traffic simulation plans, transportation planning, surveying, signal design, and budgeting.

Stanley C. Kranc, P.E. specializes in bridges, flue combustion, aerodynamics, fluid dynamics.

Larry W. Oline. P.E. Ph.D., Georgia Institute of Technology. Specialties: bridge inspection, shock and vibration, computer aided design of structures.


Alberto A. Sagues. P.E. Ph.D., Case Western Reserve University. Specialties: metallic and high temperature corrosion, mechanical wear, embrittlement of alloys, aqueous environments.


ELECTRICAL ENGINEERING

Earl Claire. Ph.D., University of Florida. Specialties: Communications, microelectronics, signal processing.


Paris H. Wiley, P.E. Ph.D., Virginia Polytechnic Institute and State University. Specialties: biomedical instrumentation, satellite communications.

INDUSTRIAL ENGINEERING

Paul Givens. Ph.D., University of Texas-Arlington. Specialties: manufacturing systems, engineering management, small business development, productivity and quality enhancement, packaging engineering.

S. K. Khator. P.E. Ph.D., Purdue University. Specialties: simulation, computer applications, facilities design.

COMMUNICATIONS


PUBLIC ADMINISTRATION

Susan MacManus. Ph.D., Florida State University. Specialties: public administration, political science.

ARCHITECTURE


ECONOMICS
Joseph DeSalvo.  Ph.D., Northwestern University.  Specialties: urban and regional economic analysis, economic perspective of regional transportation.


GEOGRAPHY

ANTHROPOLOGY

Affiliated University Faculty

Ron Goldsmith, Florida State University.  Ph.D., University of Alabama.  Specialties: consumer behavior, marketing research and strategy.

D. Scot Leftwich, University of Central Florida.  Ph.D., North Carolina State University.  Specialty: urban transportation modeling.

Tim Lynch, Florida State University.  Ph.D., Florida State University.  Specialties: transportation economics, high speed ground transportation economics, public transportation economics.

W. Virgil Ping, Florida State University.  Ph.D., University of Texas at Austin.  Specialties: transportation engineering, materials engineering, highway engineering.

E. Assam Radwan, University of Central Florida.  Ph.D., Purdue University.  Specialty: traffic operations.

David Shen, Florida International University.  Ph.D., Clemson University.  Specialties: urban transit research, rapid rail, commuter rail, automated people movers.

Melvin Stith, Florida State University.  Ph.D., Syracuse University.  Specialties: marketing, management, social psychology.
Selected Presentations

"Evaluation of Alternative AVI Configurations at Toll Barriers," Third National Conference on Transportation Planning Methods and Applications, Dallas

"Implementing Transportation Demand Management Programs—Florida’s Approach," ASCE/ITE, Secaucus, NJ

"The Implications for State Policymakers of Suburban and Urban Mobility Enhancement Myths and Facts," National Conference on the State’s Role in Suburban and Urban Mobility Enhancement, Salt Lake City

"Florida’s Transportation Policy Issues," Florida Association of Counties Conference for Newly-Elected County Commissioners, Tallahassee

"Functional Classification of Roadways in Florida," Florida Section - ITE Annual Meeting, Jacksonville

"New Developments in Travel Demand Management," ITE, Orlando

"State of the Art of AVI Technology: Potential Applications to Florida’s Turnpike," ITE Annual Meeting, Milwaukee

"Analysis of AVI and Its Potential for Application to Florida’s Turnpike," ITE, FDOT, FTC, and Orlando-Orange County Expressway Authority

"Cross Border Leasing—Implementation Issues and Application," ASCE/ITE, Secaucus, NJ

"Transportation Disadvantaged Population Estimates," Transportation Disadvantaged Commission, Tallahassee

"Transportation Disadvantaged Demand Forecasts," Transportation Disadvantaged Commission, Tallahassee


"The Effectiveness of High-Occupancy Vehicle Facilities," Florida Transit Association Annual Meeting, Tampa

"Transit Alternatives Analysis for the University of South Florida-Tampa Campus," 70th Annual Meeting-TRB, Washington, D.C.

"Traffic Engineering Aspect of AVI Technology," Florida Section-ITE Annual Meeting (Past Presidents Competition), Jacksonville

"Weaving Section Length Analysis: A Planning-Design Approach," Federal Highway Administration/Florida Department of Transportation Highway Capacity Workshop, Tampa

"Alternative Pavement Management Systems," Port Orange

"Transportation Disadvantaged Demand and Funding: Trends and Projections," TD Commission, Tallahassee

"Recognizing the Link Between Transportation and Land Use: Let’s Get Beyond the Rhetoric," TRB 2nd Conference on Application of Transportation Planning Methods, Orlando

"Transportation in the Next Century," Society of Automotive Engineers, Tampa

"Projected Public Transportation Costs," Florida Senate Transportation Committee, Tallahassee

"Public/Private Partnerships in Ridesharing," Florida Rideshare Conference, Tampa

"Transportation Funding: A Fresh Approach," Bay Area Transportation Summit, Tampa

"Transportation in the 21st Century," Berkeley Preparatory School, Tampa

"The Value of Transportation Research and Planning," Bay Area Transportation Summit, Tampa

"The Future of Transportation in Florida," Visions 2000, Ocala

"Innovative Funding/Financing in the ’90s," Eastern Education and Training Conference ’91, Tampa

"Transportation Management Associations," Brevard County Metropolitan Planning Organization, Cocoa Beach; Brevard County Commission, Merritt Island; Southwest Florida Regional Planning Council, Ft. Myers; Lakeland/Winter Haven Metropolitan Planning Organization, Bartow

"Future of Transportation and Innovation," Florida Engineering Society Student Chapter, Tampa

"Factors Related to Transit Use," ITE Florida Section Annual Meeting, Orlando

"Transportation Demand Management for Quality Developments," ASCE, Orlando

"Transportation Demand Management," West Florida Regional Planning Council, Pensacola

"Rideshare Matching Systems," ACT National Conference, Long Beach, CA

"Transportation Demand Management/Air Quality," DER Conference on Air Quality, Clearwater

"Transportation Demand Management," Florida Department of Transportation, Bartow

"Implementation of the Tallahassee Transportation Management Association," Tallahassee-Leon County MPO

"TDM, Air Quality and Concurrency," City of Jacksonville; Metropolitan Planning Agency, Pensacola

"Marketing the TMA," Southeastern Association for Commuter Transportation, Atlanta

"The Role of the University Research Centers in State Transportation Programs," SEACT, Cocoa Beach

"Florida Experience with Performance Indicators: Statewide Review and New Directions," Multimodal Operations Planning Workshop, Miami
“Privatization—A Report Card,” Florida Transit Association, Daytona Beach
“Transportation Demand Management in Florida,” The Claremont Institute, Orlando
“Alternative Revenue Mechanisms,” University of Central Florida, Orlando
“The Evolving Practice of Planned Community Development,” Urban Land Institute, Reston, VA
“Maintenance Training,” Pinellas Technical Education Center, St. Petersburg
“Anti-Drug Education in Transit,” UMTA Annual Conference, Orlando
“Traffic Safety Alliance,” USAA Insurance, Tampa
“Commercial Driver Licensing,” Transportation Disadvantaged Commission, Clearwater
“Transit Performance Evaluation,” Florida Transit Association Planning and Scheduling Workshop, Ft. Lauderdale

Selected Publications

A Green Light for Mobility, CUTR, 1991.
Factors Related to Transit Use, CUTR, 1990.
MISSION

"Bring together the benefits of education and research to meet our changing transportation needs"
For more information, contact:

Gary L. Brosch, Director
Center for Urban Transportation Research
College of Engineering, ENG 118
University of South Florida
4202 E. Fowler Avenue
Tampa, Florida 33620-5350
(813) 974-3120  Fax (813) 974-5168