As part of the planning process, the Office of Policy Planning (OPP) of the Florida Department of Transportation (FDOT) is responsible for analyzing transportation trends and conditions. CUTR has been involved in supporting this effort for more than a decade. The research analyzes the relationship between transportation and demographic, economic, land use, and other environmental factors that influence various types of transportation investments. Seeking to inform Florida’s transportation planning processes, the research strives to present the data, methods, and results of its analyses in a clear and accessible manner to the various stakeholders. The project involves several initiatives to gather and evaluate data that influence or are influenced by the transportation system.

Florida’s transportation system is a very complex and integrated system that changes over time depending on the travel demands of society, the funding and financing strategies, and the overall economic environment. To a large extent, the conditions of the overall system impact the daily lives of residents, tourists, and businesses in the state and, ultimately, the state’s economy at large. Hence, it is essential

continued on p.2
for policy and decision makers to understand and evaluate the system’s performance over time to identify feasible and socially-equitable transportation improvements.

This research is an ongoing effort that involves preparing and updating a series of research reports, creating an annual transportation “pocket guide,” publishing a monthly construction cost analysis for Florida, authoring special policy briefs, and maintaining a website that disseminates information on the transportation trends in Florida and the U.S. The objective of this research is to assist Florida’s transportation policymakers and planning organizations by identifying, analyzing, and disseminating information about the key factors and emerging issues that affect Florida’s ability to accomplish its transportation mission.

Research reports

The research reports fall into four major categories: 1) travel demand, 2) transportation system, 3) impact of transportation, and 4) transportation resources, expenditures, and costs. These categories are interrelated and influence one another.

The **travel demand reports** focus on a variety of elements that influence the need and frequency for travel, including population, tourism, socio-demographic and socio-economic characteristics, and freight movements. The population report reviews Florida’s population trends over time across race, gender, and other socio-economic categories and presents other factors that are relevant in terms of understanding travel demand such as employment and housing over time as well as a comparison of trends for Florida to other states and the U.S. The travel demand and behavior report analyzes Florida’s population at the disaggregate level across socio-demographics factors such as household income, vehicle ownership, and household location using a diverse set of national and regional data sources. Of note is the historical vehicle ownership trends in Florida compared to the U.S., indicating that only 66 of every 1,000 households in Florida do not own a vehicle, revealing high auto dependency in the state.

<table>
<thead>
<tr>
<th>Vehicle Availability Comparisons</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>0 Vehicles</td>
</tr>
<tr>
<td>1 Vehicle</td>
</tr>
<tr>
<td>2 Vehicles</td>
</tr>
<tr>
<td>3 or more Vehicles</td>
</tr>
<tr>
<td>Mean Vehicles</td>
</tr>
</tbody>
</table>

The **transportation system reports** examine the transportation infrastructure and the role of each transportation mode (roadway, aviation, seaport, rail facilities, transit and transportation disadvantaged, and walking and bicycling facilities) and present the current state and historical trends...
of these facilities. A report on pedestrian and bicycle trends recently was updated; the share of person trips by age group reveals a relatively high number of walk trips for people age 65 and older. This suggests that there may be increased demand for walk trips as our population continues to age.

The impact of transportation reports present how transportation impacts the environment, economy, land use, and safety and performance. The system performance report presents the condition of the system, its accessibility, and level of service for roadways, bike and walk, public transportation, aviation, seaports, and rail. One of the trends analyzed is the congestion on interstate, turnpike, and other Federal Interstate Highway System (FIHS) facilities.

The transportation resources, expenditures, and cost reports present a picture of transportation funding and spending on infrastructure and how it is obtained and spent. In its most recent update, the report identified a decline in transportation expenditures by households, attributable to the downturn in the economy and subsequent stress on revenue sources. The report also highlights the influence of higher gas prices and the moderation in vehicle spending. This trend also is anticipated to affect the revenue for transportation infrastructure improvement, as tax from fuel consumption is a major source of highway trust funds.

The reports in the Trends and Conditions series present the intricacies of a transportation system in operation and its strong interrelationship with the economy and society. Every year, an annual “pocket guide” is compiled from the reports to highlight various aspects.
The research also includes policy briefs on the National Household Travel Survey, the American Community Survey, and the U.S. Census. One recent policy brief was on commuting trends in Florida using 2009 American Community Survey data and presents trends in travel-to-work across various modes for Florida, its counties, and metropolitan areas. This analysis identified that out of 15 counties studied in Florida, 11 have commute times above the national average.

**Commut Time Averages,**
**Florida Counties vs. U.S.**

<table>
<thead>
<tr>
<th>Florida Rank</th>
<th>County</th>
<th>Minutes</th>
<th>U.S. Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Osceola County</td>
<td>28.9</td>
<td>43</td>
</tr>
<tr>
<td>2</td>
<td>Pasco County</td>
<td>28.6</td>
<td>47</td>
</tr>
<tr>
<td>3</td>
<td>Miami-Dade County</td>
<td>27.3</td>
<td>67</td>
</tr>
<tr>
<td>4</td>
<td>Lake County</td>
<td>25.8</td>
<td>97</td>
</tr>
<tr>
<td>5</td>
<td>St. Lucie County</td>
<td>25.7</td>
<td>98</td>
</tr>
<tr>
<td>6</td>
<td>Orange County</td>
<td>25.6</td>
<td>99</td>
</tr>
<tr>
<td>7</td>
<td>Volusia County</td>
<td>25.4</td>
<td>105</td>
</tr>
<tr>
<td>8</td>
<td>Broward County</td>
<td>25</td>
<td>115</td>
</tr>
<tr>
<td>9</td>
<td>Polk County</td>
<td>24.6</td>
<td>123</td>
</tr>
<tr>
<td>10</td>
<td>Lee County</td>
<td>24.2</td>
<td>138</td>
</tr>
<tr>
<td>11</td>
<td>Marion County</td>
<td>24.2</td>
<td>139</td>
</tr>
<tr>
<td>12</td>
<td>Seminole County</td>
<td>24.1</td>
<td>142</td>
</tr>
<tr>
<td>13</td>
<td>St. Johns County</td>
<td>23.4</td>
<td>164</td>
</tr>
<tr>
<td>14</td>
<td>Charlotte County</td>
<td>23.2</td>
<td>167</td>
</tr>
<tr>
<td>15</td>
<td>Hillsborough County</td>
<td>23.2</td>
<td>169</td>
</tr>
<tr>
<td></td>
<td>United States</td>
<td>24.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Florida</td>
<td>24.1</td>
<td></td>
</tr>
</tbody>
</table>

The project also maintains a website, www.florida transportationindicators.org, which disseminates data that are important to understanding travel demand and impacts such as population trends, fuel prices, vehicle registration, and modal activities in Florida.

The Trends & Conditions reports and pocket guide are available via websites hosted by FDOT and CUTR:

- Special Reports: www.dot.state.fl.us/planning/trends/special/

For more information on this project, contact Dr. Steven Polzin, polzin@cutr.usf.edu, (813) 974-9748.
Senator Malcolm E. Beard has been selected to receive the 2011 CUTR Transportation Achievement Award. He was instrumental in the establishment of CUTR in 1988 and has been a strong and tireless advocate for transportation throughout his career.

Senator Beard served in the U.S. Navy in World War II and as Constable of Hillsborough County from 1957 until 1965 when he was elected Sheriff of Hillsborough County, serving until 1978. He was elected to and served in the Florida House of Representatives from 1978-1980 and the Florida Senate from 1980-1996.

During his tenure in the Florida Senate, Senator Beard served for 10 years as Chairman of the Senate Transportation Committee and co-chaired a committee that sponsored the most generous transportation funding bill in the history of Florida. His tireless efforts resulted in establishment of the Florida Transportation Commission and CUTR. He served on numerous committees and has been the recipient of numerous awards and honors. When he retired in 1996, he was President Pro Tempore of the Florida Senate and held in the highest regard by his peers and his constituents.

Senator Beard and his wife of 63 years, Mary Ellen, reside in Tampa and have two adult children, Thomas and Barbara. He attended the University of Tampa.

The CUTR Transportation Achievement Award will be presented to Senator Beard at a dinner in his honor on Wednesday, October 26, at the USF Marshall Student Center ballroom on the Tampa campus. For more information, contact CUTR at (813) 974-3120.

**New FDOT Secretary to keynote 2011 CUTR Dinner**

Ananth Prasad, the newly-appointed Secretary of the Florida Department of Transportation (FDOT), will be the keynote speaker at the 2011 CUTR Transportation Achievement Award Dinner on October 26. This year’s dinner will honor Senator Malcolm Beard, a long-time champion of transportation in Florida.

Prasad has a total of 20 years of experience in the transportation industry, including 18 years with FDOT where he previously held the positions of Assistant Secretary for Engineering and Operations, Chief Engineer, and Director of Construction. As Assistant Secretary, he was responsible for implementing various innovative contracting techniques, including public-private partnerships.

In 2008, Prasad left FDOT and joined construction firm HNTB as a vice president where he oversaw the construction, management, and engineering of projects across the state of Florida. In 2010, he returned to FDOT at the request of FDOT Secretary Stephanie Kopelousos.

Prasad serves on the External Advisory Board of the Center for Multimodal Solutions for Congestion Management at the University of Florida. He earned a master’s degree in civil engineering from the University of Florida and completed his undergraduate studies at Regional Engineering College in Rourkela, India.
Learn More. Travel Less.
CUTR’s new biweekly webcast series

The need to communicate research results and interact with transportation professionals and policy makers has grown exponentially as Florida faces complex problems and finite resources. At the same time, consumers of research often also must reduce travel costs and increase productivity. Traditional methods of transferring knowledge are insufficient in today’s fast-paced world.

Responding to these challenges, CUTR uses a variety of means for transferring the knowledge gained in sponsored research projects in addition to producing final reports, including publishing executive summaries and research papers, recording project summaries, promoting availability via listservs, social media, and websites, and making presentations at conferences. In October 2010, a new method of dissemination was added with the initiation of bi-weekly live CUTR webcasts.

Each webcast session begins with a 30- to 40-minute presentation by a principal investigator, followed by a question and answer period. The research projects presented include a wide variety of subjects, including ITS, traffic operations and safety, mobility policy, transit, BRT, planning and corridor management, TDM, and transportation program evaluation and economic analysis.

“The primary purpose of offering these biweekly webcasts is to make our research more accessible to Florida’s transportation professionals and policymakers,” said CUTR Acting Director Steve Reich. “We know travel restrictions are making it more difficult for many people to attend conferences to hear about our research projects. So we must bring the research results to them.”

The webcasts are held every other Thursday from 12 to 1 PM. Participation in the webcasts is free. As a provider of the Certification Maintenance (CM) program for the American Planning Association, CUTR offers some of the modules for one CM credit.

Upcoming 2011 webcasts are as follows:
- August 25: “Planning for Changing Travel Behavior,” Steven Polzin, Ph.D.
- September 8: “Motorcycle Crash Hot Spot Analysis for Ten High Priority Florida Counties,” Achilleas Kourtellis, Ph.D., and Pei-Sung Lin, Ph.D.
- October 20: “Observational Survey of Motorcyclist Behaviors,” Chanyoung Lee, Ph.D.
- November 3: “Safe Routes to School,” Jason Jackman

To join the webcasts, go to https://www.livemeeting.com/cc/cutr/join?id=CUTR+Webcast+Series&role=attend&pw=cutrcast. First-time users can check their system’s compatibility at http://www.cutr.usf.edu/events_news/webcast.shtml.

Computer audio is available at +1 (877) 536-4294, participant code 4705. If you cannot join the live webcast, a recording is available for on-demand streaming at http://www.cutr.usf.edu/events_news/webcast.shtml.

Subscribers to the CUTR Communications listserv will receive periodic emails on webcasts, publication releases, and training opportunities. For a free subscription to this listserv, go to http://www.cutr.usf.edu/about/about_subscribe.shtml.

For further information on CUTR’s webcasts and listserv, contact CUTR Program Director Phil Winters, winters@cutr.usf.edu.
Florida 511 (FL511) is Florida’s main system for public travel information. Despite extensive, live coverage of travel conditions on interstates, the FL511 website provides users only with links to transit system websites. Alerts, delivered via text message, email, or phone call, are sent for a few interstates and major roads in Florida, but they can be so numerous that useful information is lost, and accessing these messages while driving is hazardous. Researchers at USF investigated improving FL511, focusing on information delivery that is pertinent, timely, and customized to individual travel behavior.

CUTR researchers previously developed TRAC-IT, a software system that collects data about a user’s travel behavior and delivers real-time, location-based services using GPS-enabled mobile phones. This project enhanced TRAC-IT’s abilities by adding Path Prediction technology, which creates a profile of a traveler’s typical daily movements and provides travel information or alerts based on this profile. For example, TRAC-IT can anticipate that a traveler is likely to drive home after work and can provide a travel advisory for the typical route. TRAC-IT supports other modes, such as public transportation, walking, or biking.

A Fast GPS Clustering algorithm was designed that uses location data from GPS-enabled mobile phones to determine points-of-interest often visited by the traveler. This algorithm’s speed, compared to traditional hierarchical clustering, is critical for processing large volumes of GPS data. A Trip Segmentation (TS) algorithm divides GPS data into trips between points-of-interest to produce origin/destination models. A Naive Bayes classifier predicted probable driver destinations and departure times.

TRAC-IT’s abilities were expanded by accessing data from Hillsborough Area Regional Transit’s automatic vehicle location (AVL) system and showing how to combine FL511 with transit data to create a multimodal traveler information system. Having one application that informs users about both traffic congestion and public transit options may encourage travelers to use transportation alternatives.

Using the text-to-speech converter of the Android (Google, Inc.) smartphone operating system, a mobile application was produced, Traffic Text-to-Speech (TTS), that produced audible alerts without driver action, creating a safer interaction between the driver and the alert system. Traffic TTS tracks user speed and waits for a complete stop before notifying the user of pending alerts.

This project showed that Florida’s traveler information system can be extended to other data sources, including public transportation, and provide timely, personalized, and appropriate information. Future work can focus on extending FL511 to more roads, integrating more real-time transit information, and deploying project technologies to the public.

For more information, visit www.dot.state.fl.us/research-center or contact CUTR Research Associate Sean Barbeau, barbeau@cutr.usf.edu.

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CUTR is playing a critical role in advancing our nation’s airport research through active engagement with the National Research Council’s Airport Cooperative Research Program (ACRP).

Modeled after the National Cooperative Highway Research Program (NCHRP) and the Transit Cooperative Research Program (TCRP), the ACRP is an industry-driven, applied research program that develops near-term, practical solutions to problems faced by airport operators.

Since its inception in 2005, the ACRP has carried out applied research on a myriad of problems that are shared by airports and airport operating agencies and that are not being adequately addressed by existing federal research programs. The program has undertaken research and other technical activities and produced more than 200 publications that have helped airports of all sizes solve immediate problems in a variety of airport subject areas, including design, construction, maintenance, operations, safety, security, policy, planning, human resources, and administration.

The primary goal of any applied research program—including the ACRP—is to ensure that the most current information, industry practices, and tools are made available to industry practitioners. It is in the outreach and dissemination aspect of airport research findings that CUTR has played a significant role and added game-changing value to the ACRP.

In the summer of 2010, the ACRP engaged CUTR to produce a series of short articles that told the story of how various ACRP research findings were being used by airports across the United States. Collaborating with the ACRP Program Manager, Mike Salamone, and his colleague Sia Schatz, CUTR’s project team identified candidate airports that best demonstrated the application of ACRP research findings.

Once the target airports were selected, key executives were interviewed at those airports, resulting in three “Impacts on Practice” publications that ACRP posted on its website, emailed directly to hundreds of airport professionals, and featured in its 2010 annual report.

Based on the success of the Impacts on Practice publications, ACRP personnel requested CUTR’s assistance on two additional outreach and promotional tools: designing and producing a direct mail piece and developing a graphic design for a promotional USB flash drive. The mailer is designed to accommodate both traditional and electronic mail formats, and the USB tool incorporates “hot links” that will automatically direct viewers to specific pages of the ACRP website, further promoting the wide range of products and services the ACRP provides to airports, airport organizations, and airport stakeholders.

CUTR recently submitted a proposal to assist the ACRP with additional outreach and information dissemination activities and fully anticipates an expansive role in promoting the ACRP’s state-of-the-art airport research.
Florida’s Rural Transit Assistance Program

The Rural Transit Assistance Program (RTAP) is a federally-developed program that provides funding to assist in the design and implementation of training and technical assistance projects and other support services for transit operators in non-urbanized (rural) areas. RTAP funding is provided to each state, usually through its Department of Transportation, which may use RTAP funds to support non-urbanized transit activities in four categories: training, technical assistance, research, and related support services.

Florida’s RTAP allocation provides financial support for the state’s annual paratransit bus rodeo and for the annual training conference of the Florida Commission for the Transportation Disadvantaged. It also contracts with CUTR to administer and manage the Florida RTAP Program. CUTR’s Transit Training and Technical Assistance Team oversees the program, with the following primary objectives:

- Promote the safe and effective delivery of public transportation in non-urbanized (rural and small urban) areas and to make more efficient use of public and private resources.
- Foster the development of state and local capacity for addressing the training and technical assistance needs of rural and small-urban transportation communities.
- Improve the quality of information and technical assistance available through the development of training and technical assistance resource materials.
- Facilitate peer-to-peer self-help through the development of local networks of transit professionals.

To accomplish these goals, FDOT and CUTR a wide array of activities.

Florida RTAP training classes
The program delivers and coordinates a wide variety of professional development and instruction training opportunities. The classes are provided on-line, in person, and at regional and statewide workshops with a “train-the-trainer” focus directed toward developing local supervisors and instructors who can use the information at the local level.

Florida RTAP website
The Florida RTAP Web site, www.floridartap.org, is one of the program’s key tools for communicating and sharing information with stakeholders. Included are access to current and past newsletters, information on upcoming events and training opportunities, highlights of past RTAP paratransit rodeos, announcements and alerts, and access to the RTAP Resource Center.

Florida RTAP Bulletin
This quarterly electronic newsletter highlights upcoming events and opportunities, announces new training programs, and provides agency news and information.

Florida RTAP Resource Center
The Florida RTAP Resource Center provides a library of publications and videos related to rural transportation, made available at no cost to Florida public transportation providers.

For more information on the Florida RTAP program, contact Jay Goodwill at (813) 974-8755 or jaygoodwill@cutr.usf.edu, or log on to the Florida RTAP website at www.floridartap.org.
M ore than 325 transit professionals met in April in Tam- pa for the 2011 NTI Transit Trainers’ and FDOT/FPTA/CUTR Professional Development Workshop. The workshop was sponsored by CUTR and the Florida Department of Transportation (FDOT), the Florida Public Transportation Association (FPTA), and the National Transit Institute (NTI), with Hillsborough Area Regional Transit (HART) serving as the local transit host. HART offered workshop participants evening tours of its bus and streetcar services and facilities, including the award-win-
ning HART Marion Transit Center and the TECO Line Streetcar Barn. All five organizations collaborated in the planning and development of the event.

The goal of the workshop was to offer professional development and educational enrichment opportunities to public transit professionals. The one-stop-workshop offered public transit professionals an excellent opportunity to learn from industry experts, attend professional development training, learn about research updates, and network with their peers. Workshop attendees participated in educational training classes and general session discussions that stimulated new ideas and identified creative solutions to problem solving and strategic planning.

The workshop drew transit professionals from more than 35 states, with more than 150 registrants from Florida. The sessions focused on topics such as conflict management, substance abuse management, bus operator retention, ADA, transit threat and vulnerability, emergency management, maintenance, customer service, marketing, CDL, alternative mobility approaches, communication skills, strategic planning, transit operator distracted driving, and many train-the-trainer facilitation sessions.

Rich Foerch of the National Transit Institute led a session on “Crisis Communications” that focused on the roles of front-line transit employees who play an essential and irreplaceable role in minimizing confusion and protecting lives during an incident and who relay vital information to the command center to allow appropriate responses. An overview of the skills needed to successfully accomplish tasks as effectively and efficiently as possible during incidents was presented, and participants left the session able to identify who they need to communicate with during a crisis, what effects stress and fear may have on communication, and how to implement verbal and non-verbal communication strategies to help manage an incident.

Diane Quigley of FDOT provided information on the “Economics Benefits of Transit in Florida,” presenting the findings of two recently-completed Florida transit projects. One study
estimated transit’s health benefits (air quality, traffic safety, physical activity) and transit’s community benefits (energy conservation, greenhouse gas emissions, mobility of transportation disadvantaged population). The second examined the key plans for the future of transportation in five metropolitan regions in Florida based on the collaborative plans of a wide variety of partners in the development of regionally-integrated transit systems.

“Moving 20 Million People: Best Practices in Transit from Shanghai, China” was presented by Sarah Viola of the Capital District Transportation Authority, who introduced the best practices of the Shanghai transit system that keeps the city moving and its economy strong, including 1,100 routes, 250 miles of BRT lines, and 6 elevated busways. The subway soon will be the largest system in the world, with 20 lines and 345 stations.

“IM4Transit.org Campaign,” presented by Clear Light Communications, Inc., and the Florida Public Transportation Association, introduced a statewide public education campaign initiative of FPTA that focuses on galvanizing support for public transportation from all demographics and a variety of organizations and elected officials throughout Florida. The campaign emphasizes saving jobs, routes, and budgets.

In “Curbing Transit Operator Distracted Driving,” CUTR researchers Deborah Sapper and Amber Reep introduced participants to key concepts and highlights of the dangers of distracted driving, learning what it is and how it affects the public transportation industry and reviewing a recently-developed video- and computer-based training program. Throughout the workshop, participants were encouraged to network, ask questions, and integrate critical thinking skills to problem solve and learn new concepts and ideas. The fact that so many transit professionals participated in this workshop speaks to the dedication, commitment, and resolve of this industry to meet both current and future challenges.

Hilton Bayfront Hotel ■ St. Petersburg, Florida

CUTR’s National Center for Transit Research (NCTR) and URISA cordially invite you to attend the 6th National (2011) GIS in Public Transportation Conference, to be held September 13-15, 2011, at the Hilton Bayfront Hotel in St. Petersburg. The conference will provide an excellent opportunity to learn cutting-edge GIS techniques, network with industry experts, and discover new technological advances in transit.

Session topics include:

- GTFS Applications in Transit
- GPS Technology and Transit Efficiency
- Open Source Data and Multimodal Trip Planning
- Web-Based Mapping
- Integrated Systems Planning
- ITS/AVL
- FTA/U.S. Census Bureau Programs and Data

Industry experts and representatives from organizations such as the Federal Transit Administration, the U.S. Census Bureau, The Brookings Institution, Caliper Corporation, the Washington Metropolitan Area Transit Authority, and Hillsborough Area Regional Transit will be presenting at the conference.

For more information, visit the NCTR Transit GIS Clearinghouse website at www.transitgis.org and click on URISA/NCTR 2011 GIS in Public Transportation Conference.
Award Dinner table sponsorships available!

Please accept our invitation to become a table sponsor at the 2011 CUTR Transportation Achievement Award Dinner. Help us honor Senator Malcolm Beard and support the CUTR Transportation Scholarship with your tax-deductible sponsorship. Join your colleagues who already have signed up and will be well-represented at the dinner!

Florida Public Transportation Association
HNTB Corporation
Kimley-Horn and Associates, Inc.
PCL Civil Constructors, Inc.
PB Americas, Inc.
Veolia Transportation

For more information, call Damien Drayton, (813) 974-3120, or visit www.cutr.usf.edu/cutrdinner.