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Effective January 1, 2004, Florida Statutes required drivers 79 years or older to pass vision tests when renewing their six-year licenses. Several U.S. states have implemented similar mandates in recent years to enhance road safety. This action is one of many that acknowledge the impending boom in population of an age where driving risks are known to increase. Florida, a haven for many retirees, will retain its leading position as the state with the largest percentage of persons 65 years and older for the foreseeable future. Many older members will no longer be able to drive. Meeting the mobility needs of those for whom driving is no longer an option will be a challenge for Florida and, indeed, the rest of the nation. Determining an appropriate role for public transportation will be part of addressing this challenge.

CUTR’s National Center for Transit Research and the Florida Department of Transportation sponsored a study of the travel behavior changes of persons 55 years and older who lose their driving privileges. Researchers investigated subjects’ interest in and ability to use public transit, as well as their actual use of public transit, and explored opportunities and challenges for public transportation in meeting the travel needs of drivers who have ceased driving.

The primary location of baby boomers is in the suburbs, and the historic tendency has been for elders to retire in place. This suggests that the next generation of elders will be con-

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centrated in suburban locations where traditional fixed-route public transportation will less likely be in place to provide the quality of service that most of these customers will expect. Despite the strong growth of public transportation services in some of the western and southern areas that have experienced rapid population increases, the majority of the future elder population will not be very familiar with public transportation.

Driving cessation is a process where a senior driver gradually reduces his or her driving exposure until he or she eventually ceases from driving. Driving cessation can be voluntary (i.e., without legal intervention) or mandated (i.e., forced), stemming from the intervention by a third party such as a family member or court. Driving cessation differs from driving restriction; the latter is a process where individuals manage their impairment by driving at specific times of the day along familiar routes and/or avoiding left turns for example.

To provide additional insight into travel behavior changes for persons who lose their driving privileges, particularly their interest in using public transit, focus groups with seniors were held. These were designed to identify issues and concerns surrounding current and former drivers with respect to their views on and their potential use of public transportation as one of several transportation alternatives.

Five focus group discussions were conducted with 44 seniors ages 55 years and older at senior centers located in urban, semi-urban and semi-rural areas of Hillsborough County (Florida). A total of 40 percent of the participants (18 participants) had permanently stopped driving, and the remaining 60 percent (26 participants) were currently still driving but had reduced their driving exposure.

Focus group participants were asked why they had stopped or reduced their driving in recent years. Responses can be grouped into two broad categories: internal (i.e., personal) and external. Internal factors included personal health/well-being, wealth and lifestyle change, etc.; external factors were traffic volume, traffic congestion, and driver attitude.

**Consequences of driving cessation or reduction**

Lifestyle change is one of several factors that precipitated changes in driving behavior. Driving cessation or the process of driving reduction also precipitates further change. Sustaining mobility attempts to minimize the impact of lessened mobility and preclude the cyclical process of degenerating immobility and non-activity. Driving cessation elicited both positive and negative experiences.
Positive experiences

One benefit of driving cessation or reduced driving was the increase in time for doing other things, including getting more exercise. Driving cessation also brought physical and mental relief. Driving only when it was absolutely necessary saved on gas expenditures and perhaps insurance premiums, providing positive benefits. Another benefit of not driving was no longer facing the responsibility of being liable for causing harm to oneself or another road user due to their diminished driving ability.

Negative experiences

Negative experiences far outweighed positive experiences shared by the focus group participants. Lives had become “dull,” “terrible” or “boring” after driving cessation. At times, focus group participants expressed sadness at not being able to drive. Dependence on others for travel arrangements is one result of driving retirement that had the most profound impact on seniors. Lifestyle changes resulting from driving cessation not only makes an individual less mobile but can result in the individual becoming the receiver of travel assistance rather than the provider of travel assistance to others.

Focus group participants were asked, “Do you think that public transit is a viable option for you to use today?” Overall results (n = 42) indicated a 50:50 split, with 21 focus group participants indicating “yes” and 21 “no.” Breaking down these results by driver type (i.e., former and current drivers), the responses were as follows:

<table>
<thead>
<tr>
<th>Driving Status</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Drivers</td>
<td>11 (26%)</td>
<td>15 (36%)</td>
<td>26</td>
</tr>
<tr>
<td>Former Drivers</td>
<td>10 (24%)</td>
<td>6 (14%)</td>
<td>16</td>
</tr>
<tr>
<td>Total</td>
<td>21 (50%)</td>
<td>21 (50%)</td>
<td>42</td>
</tr>
</tbody>
</table>

These results indicate that, among current drivers, 15 (60%) of the 26 focus group participants who responded felt that public transportation is not a viable transportation option for them. This result may have been influenced by their non-use or limited use, non-availability, or negative perceptions held about public transportation. A similar percentage (62%) of former drivers (10 out of 16) responded positively. Interpretation of the viability of public transportation by focus group participants in meeting their transportation needs may not, in reality, result in the actual use of this mode. Older drivers may require a variety of interventions to be in place in order for them to use public transportation, some of which may be economically unviable for a transportation provider to implement for the market being served.

Perhaps the most important issue with regard to public transportation use will be the ability of seniors to rely upon family, household members, or friends as mobility providers. Indeed, focus groups revealed that the extent of family and friend support to meet mobility needs strongly influences how successfully elders who discontinue driving adapt. The presence of such support will be critical in determining the extent to which public transportation is desired or necessary. The focus groups addressed household relocation in order to have greater access to public transportation (which would impact transit demand) as an option for both elder drivers and those no longer able to drive. Proximity to public transportation does not appear to be a high-priority strategic consideration in household location.

Currently, transit plays a modest overall role, although it is very important to those who rely on it. Public transportation is not necessarily the logical successor to driving as a means of travel; it certainly is not the substitute of choice. Most often, the conditions that lead one to cease driving result in the person preferring to travel as an auto passenger, assuming someone or some entity can provide driving services. While seniors who have ceased driving are frequently reluctant to be burdensome to others, the practical reality remains
that few find themselves in a situation where fixed-route transit services are a viable option.

Among the strategies that can support improved mobility for persons no longer able to drive are the following:

• explore opportunities to provide mobility information through a single group or entity in an urban area, going beyond the current coordination of mobility providers towards a standardized information resource.

• continue adapting vehicles and facilities to more readily accommodate older travelers. Low floor vehicles, for example, are far more accessible for seniors.

• explore and support additional roles for the local transit providers in terms of meeting overall mobility needs of older travelers (e.g., hosting or coordinating ride sharing initiatives).

• monitor trends in driving cessation and senior mobility as part of local public transportation planning functions.

What we don’t know

In carrying out this research, it was observed that there was an extreme level of interest but a lack of quantitative information regarding certain aspects of driving cessation and elder travel. Most notable was the lack of robust data on the share of the population that goes through the driving cessation process. There is no rigorous mapping of which health conditions might preclude driving but would otherwise enable the individual to take advantage of fixed-route or curb-to-curb or door-to-door transit services. In many instances, the condition that precludes driving also precludes using fixed-route transit services and perhaps using any transit services.

Additional research also is needed to determine the most effective and efficient strategies for meeting elderly travel needs when they cannot be met by family. With fewer siblings, fewer children, and higher divorce rates, more of the future elderly population may be dependent on non-family resources for mobility. It is inevitable that social service agencies will continue to have a significant and perhaps growing role in meeting these travel needs. In light of the relatively high cost of customized services, it will be important to understand the most effective strategies, management plans, technologies, and policies to ensure that the most and best service possible can be delivered with the resources the public is willing to commit.

There is certainly political will to ensure safety-net services to provide for medical and sustenance trips for those in
need; yet, this level of service falls well short of providing quality-of-life enhancing services or increasing the prospect that high quality public transit services can begin to attract a larger share of trips from persons who might otherwise rely on family or friends for mobility. There is a strong desire to find more effective and cost-efficient ways to serve the travel needs of older persons, but there is far less consensus regarding the extent to which public resources and facilities should be applied or could be effective in attracting and accommodating the trips occasioned by driving cessation.

For further information on this study, contact CUTR Research Assistant Oliver Page at (813) 974-3120, page@cutr.usf.edu.

Students learn about transportation careers

For the sixth year, the Student Transportation Education Program (STEP) was held at CUTR during the summer. STEP is a four-day program designed to provide students with the opportunity to learn more about careers in the field of transportation through discussions with practicing professionals, hands-on activities, and field trips. The 2006 STEP class consisted of freshman and sophomore students in high schools from Hillsborough and Pinellas counties. The students were introduced to transportation career opportunities related to engineering, safety, operations, and planning, as well as many others.

Field trips included Tampa International Airport, the Tampa Port Authority, the Florida Department of Transportation I-4 widening project office, and the Hillsborough Area Regional Transit (HART) streetcar maintenance facility, where they observed technicians and supervisors at work, participated in a transit trip planning session, and traveled by streetcar and bus between the Port Authority and USF. For many of the students, it was their first time using public transportation.

Hands-on activities included an introduction to Geographic Information Systems (GIS) and the use of mapping software to accomplish transportation-related activities. Students also were introduced to transit by means of USF’s shuttle service, the Bull Runner. Information sessions included transportation and the environment, bus rapid transit, and bicycle and pedestrian safety.
Five years and growing: CUTR hosts 5th annual Professional Development Workshop

The 5th annual FDOT/FPTA/CUTR Professional Development Workshop was held August 8 – 10, 2006, at the Embassy Suites Hotel at the University of South Florida in Tampa, with more than 280 transit professionals in attendance. Sponsored in concert with the Florida Department of Transportation and the Florida Public Transportation Association, CUTR developed the workshop, which successfully combined structured training courses with project/program specific presentations, as well as roundtable topic-specific discussions and presentations in the areas of marketing, planning, operations, and transit maintenance.

Experts in the planning technical sessions discussed transit’s role in growth management and concurrency, transit development plans, state and federal transit grant programs, and mobility management strategies and tools for transit.

Safety and security sessions included presentations and discussions on critical issues such as substance abuse management, improving security at transit facilities and passenger stations, bus incident reporting, and system security plans.

The workshop also provided transit agency human resource professionals with sessions on sexual harassment and discrimination in the workplace and techniques for the investigation of those complaints/allegations. A marketing session aimed to improve participant’s skills in dealing with the media.

New to the 2006 workshop was a “leadership track” specifically designed for transit agency senior level management staff. The track included sessions on effective management, effective communications, conflict resolution, rapid organizational impact, and performance.

For more information on the annual FDOT/FPTA/CUTR Professional Development Workshop, contact CUTR Transit Training and Technical Assistance Program Director Lisa Staes, (813) 974-9787, staes@cutr.usf.edu.
Guidebook for start-up transit agencies developed

As Florida communities transition from rural to urbanized areas, the creation of new public transportation systems occurs more frequently. Quality of life, economic development, job access, community mobility needs, and traffic congestion concerns are among the numerous factors that compel communities to initiate new or expanded public transportation services.

The development of new transit services requires an understanding of myriad planning functions, rules, and regulations. Florida’s public transportation industry did not have a comprehensive and consolidated source of information available for local governments or other organizations to use in starting new public transit services. Without access to a single source of information, start-up transit agencies ran the risk of not taking advantage of all available resources and not fully complying with federal or state regulations.

With this backdrop, CUTR’s National Center for Transit Research developed the “Guidebook for Start-Up Transit Agencies” for use by agencies in the process of initiating first time transit systems, as well as for employees and policy makers new to the public transit industry. It is a consolidated source to inform agency personnel of various activities, procedures, and programs related to initiating and continuing to operate a public transit agency for use as a reference and tutorial for training transit personnel and policy makers new to the public transit industry.

Eight steps—Concept to implementation

The research examined the steps that a community must go through to take the concept of public transit services from initial consideration to implementation and reality. Based upon interviews with a variety of transit planners, FDOT transit staff, public transit agencies, and transit management firms who have experience initiating new public transit services, this research identified eight distinct steps—or stages—that a community needs to travel through from the initial identification of a need for public transportation to making that concept a reality.

Step #1: Vision development and identification of a local champion

The creation of new public transit systems requires the vision and dedication of a group of individuals willing to commit their time and energy to promote the need for the public transportation services and create the synergy to carry the concept through to implementation. These individuals or organizations must develop the vision for public transportation services and act as the “local champion” to sell the concept within the community and to gather the necessary local consensus.

Step #2: Feasibility analysis

The feasibility analysis is the preliminary examination of the community’s demographic and socio-economic conditions to determine if public transportation
services would be feasible. This analysis determines and assesses local need and support for public transportation services. It involves a planning effort that examines what areas of the community are best candidates for service, general service options, potential funding sources, and estimated associated expenses.

**Step #3: Transit conceptual plan**
The transit conceptual plan builds upon the feasibility analysis and provides system-level transit service planning and forecasts. A transit development plan (TDP) is one example of transit conceptual planning. Conceptual plans are used to justify transit funding and grant requests. Transit planning is done at a system planning level and does not address specific operational planning issues. Conceptual plans provide local policy makers with more detailed concepts and financial forecasts that can be used to make decisions as to whether or not service implementation should proceed.

**Step #4: Operations plan**
The transit operations plan takes the system level conceptual plan to a higher level by providing specific details for the operation and implementation of transit service. An operations plan should include:

- a detailed service plan
- specific financial details and requirements
- required data collection processes
- details related to vehicle requirements

At the completion of the operations plan, the community should have a blueprint of what the proposed public transit service will look like, who it will serve, routing plans, hours and days of service, the type, size and number of transit vehicles required, operating and capital expense requirements, and identified funding sources.

**Step #5: Organization and management structure**
This step, which could be done concurrently with the operations plan, requires a decision on how the transit service should be administered and managed (General Manager or transit management firm) following an inventory of available local resources. The organizational and management structure definition process should address:

- management firm versus in-house decision process
- required and available resources
- local roles and responsibilities

**Step #6A: Selection process for General Manager**
If the decision in Step 5 is to use agency staff, the first and most critical step is the hiring and selection process for the transit system’s General Manager. The hiring process for the General Manager starts with the development of a job description that details the minimum job requirements, preferred knowledge and abilities, desired attributes and experience, and the salary and benefits offered.

**Step #6B: Request for Proposal process**
If the decision in Step 5 is to take advantage of the expertise of a transit management firm, a Request for Proposals would be feasible. This analysis determines and assesses local need and support for public transportation services. It involves a planning effort that examines what areas of the community are best candidates for service, general service options, potential funding sources, and estimated associated expenses.
(RFP) for the acquisition of management services must be developed and processed. The RFP must be as detailed as possible, incorporate the decisions made in Steps 4 and 5, and include effective evaluation criteria. This step also involves contract negotiations. The RFP should contain an example of the contract document that the successful proposer will be expected to enter into with the agency, as well as the proposed contract length and renewal options.

**Step #7: Service implementation preparation**

After hiring the General Manager or issuing a Notice to Proceed to the management firm, a variety of actions must be carried out in a relatively short time period. These include:

- examination of the routes and schedules proposed in the operational planning stage to determine feasibility
- development of run cuts and driver assignments for the new service
- establishment of fare policies
- design of communication systems (bus radios, portable, etc.)
- determination of information system requirements (computers, telephones, faxes, etc.)
- adoption of proposed organizational structure
- recruitment and training of employees
- development of promotional and marketing programs
- development of Standard Operating Procedures (SOPs) for all areas of operation
- development of safety programs and accident reporting system
- design of maintenance plans and record-keeping systems
- conduct of Human Resource activities
- procurement of properly equipped transit vehicles

**Step #8: Start of service**

Following years of planning and myriad last minute activities, the long-awaited new transit service is launched with a clear eye toward success. It remains critical to continue to plan, evaluate and adjust transit services and procedures, as well as to comply with local, state, and federal grant requirements and regulations.

**Institutional framework and funding program overviews**

In addition to detailing the eight stages of transit system development, the research presents an overview of the institutional framework that public transportation professionals must understand and interact with at the local, state and federal level. At the local level, the various organizational structures that public transportation agencies take in terms of authority, accountability, and their relationship to the external environment are detailed.

In addition to the transit agencies themselves, the other local and regional agencies and organizations that will impact public transit agencies are summarized. Finally, overviews of both the Florida Department of Transportation and the U.S. Department of Transportation’s Federal Transit Administration are included.

The federal funding sources and regulations that support public transportation programs are detailed, including three sections: Federal Transit Administration (FTA) grant programs; the FTA Master Agreement and associated rules and regulations that come with the acceptance of FTA grants; and the reporting and administrative requirements with which grantees must comply. Similarly, the research provides a summary of the Florida Department of Transportation and the financial assistance programs provided through legislative formula or discretionary authority.

For further information or for a copy of the study, contact CUTR Senior Research Associates Ann Joslin at (813) 974-9183, joslin@cutr.usf.edu, or Jay Goodwill at (813) 974-8755, jaygoodwill@cutr.usf.edu.
The National BRT Institute (NBRTI) at CUTR was created in 2001 to offer technical assistance and resources to the Bus Rapid Transit (BRT) community, those U.S.-based transit agencies, consultants, government agencies that are planning, designing, engineering, building, and/or operating BRT systems in their communities. After successfully serving as staff to the Federal Transit Administration (FTA) and members of the BRT community in disseminating worldwide knowledge on BRT “lessons learned” through information sharing and research, NBRTI recently was awarded a grant of $7 million over four years from FTA to continue and expand the efforts of the program.

Clearinghouse

The National BRT Institute serves as a clearinghouse for all current BRT-related information, keeping up-to-date on Intelligent Transportation Systems (ITS) research and the status of BRT projects throughout the country and the world that may have application to the program. Through the clearinghouse, NBRTI helps interested users retrieve general BRT information and information on the progress of the BRT projects in the U.S. and worldwide. The clearinghouse also maintains up-to-date press clippings, technical reports, system evaluations, PowerPoint presentations, and other documents related to BRT on the NBRTI web site at www.nbrti.org.

The BRT Quarterly newsletter is a compilation of related research, status of BRT projects in the U.S. and throughout the world, upcoming events, guest articles, etc., and is distributed to the public transportation community to provide timely, useful information to those currently working on or exploring the possible implementation of BRT systems in their communities.

Technical assistance/support

NBRTI conducts activities in a number of areas directed as providing technical assistance and support.

Technical assistance/conference support

Staff of NBRTI often are called on to assist new systems considering BRT applications in their communities. Presentations are made to boards or other governmental agencies at both the local and regional levels and/or at meetings with agency staff to discuss technologies, options, implementation issues, etc. NBRTI develops and presents at regional and national BRT conferences in association with industry partners such as APTA, TRB, ITE, and ASCE.

BRT curriculum

A three-hour BRT module is being developed that provides an overview of BRT and its applications to augment engineering and urban planning classes at universities across the U.S. The module will consist of information materials (PowerPoint presentations, lesson plans, sample test questions) and will be updated annually to provide the latest information and images available.

BRT Peer-to-Peer Program

A BRT Peer-to-Peer program is being developed to provide short-term technical assistance regarding BRT planning, design, funding, and operations to the transportation industry. The program will sponsor travel, communications, and associated costs for BRT peer experts to provide or gain knowledge regarding BRT.

Scanning tours

Scanning tours of BRT systems in the U.S. and worldwide are organized for politicians, board members and transit professionals within the BRT community to provide them with hands-on experience and the opportunity to establish relationships for the continued sharing of knowledge. Dur-
ing these scanning tours and other site visits conducted by NBRTI staff, photo and video footage of BRT facilities and services are collected and maintained on the NBRTI website. Up to two international and four U.S. tours will be developed and offered each year.

**Visual simulations**
Generic visual simulations of BRT services and amenities will be developed for use as educational tools at public workshops and forums, including generic simulations of queue jumps, transit signal priority, precision docking, bus operations within different running ways (exclusive, mixed traffic, separated, etc.), ITS technologies, facilities, fare technologies, and other beneficial scenarios.

**Project evaluations**
The Institute conducts and/or assists in the evaluation of current and future BRT projects as they are completed through on-board surveys, performance evaluations, and development of “lessons learned” summaries. This includes assistance in developing and evaluating proposals and participation on technical advisory review committees.

**BRT research**
New research in areas related to BRT is being conducted, and “best practices” manuals and tools are being developed to assist BRT community members. Topic areas for the research come from FTA, committees of TRB or APTA, or directly from the BRT community. Current research is being conducted on the importance of image and perception in an effort to quantify the impact of different BRT system design elements on image and assess the extent of the relationship between positive image and ridership gain. Research regarding the impacts of BRT on surrounding land uses will provide a greater understanding of this relationship.

Two other recent activities include an update of FTA’s “Characteristics of Bus Rapid Transit for Decision-Making (CBRT),” first published in August 2004, and the development of a Bus Rapid Transit Planning Guide. Both resources will provide transportation planners and decision makers with the tools to help make investment decisions that best respond to local needs.

In 2005, NBRTI sponsored a delegation of U.S.-based BRT professionals who traveled to Bogotá to observe the operation of the TransMilenio Bus Rapid Transit system, attend the First International Mass Transport Conference, and meet with Colombian transportation officials. Earlier this year, a report was published that provided a detailed description of the TransMilenio system and its impacts and discussed its applicability to the U.S transit context. The report is available on the NBRTI website.

In 2006, at the request of FTA, NBRTI staff traveled to China to visit BRT systems and meet with organizations engaged in BRT planning or operations. By establishing initial contact with such organizations, a channel of communication was opened to exchange information and allow for future cooperation on common problems and programs. The report resulting from this research will summarize BRT developments in Chinese cities, and recommendations for future research cooperation and information exchange will be made. The report will be available on the NBRTI web site once complete.

For more information on the National BRT Institute and its activities, contact NBRTI Director Dennis Hinebaugh at (813) 974-9833, hinebaugh@cutr.usf.edu, or CUTR Senior Research Associate Alasdair Cain at (813) 974-5036, cain@cutr.usf.edu.
2006 CUTR Transportation Achievement Award honors Earl Durden

CUTR is pleased to announce that K. Earl Durden has been named recipient of the 2006 CUTR Transportation Achievement Award in recognition of his leadership in and dedication to transportation issues. Durden is Chairman, CEO and a Director of Rail Management Corporation and Durden Enterprises and Chairman, CEO and a Director of the Copper Basin Railway. He has been a member of the Florida Transportation Commission since 1999 and served two years as Chairman.

With over 30 years’ experience in the start-up and operation of short line railroads as an officer, director, and consultant, Durden has been active in transportation for many years. He is a Director of The Banc Corporation, served on the Committee of 100, and is past chairman of the Executive Committee of the American Short Line Regional Railroad Association and serves on its Legislative Policy Committee.

The 2006 CUTR Transportation Achievement Award Dinner, formally recognizing Commissioner Durden, will be held on Tuesday, October 24, 2006, at the Museum of Science & Industry in Tampa.

For further information on the event or to become a table sponsor, contact Patricia Ball at (813) 974-9759, pball@cutr.usf.edu.