Greetings from your Local Technical Assistance Program for Transportation Agencies—the Alabama Technology Transfer Center. Our primary purpose is helping to meet the training needs for transportation professionals in Alabama. An important input in our planning process is our Advisory Committee, which is comprised of transportation professionals from cities, counties, metropolitan planning organizations, and ALDOT. This committee meets annually to discuss directions for the center and help select seminar topics for the coming year.

We continue to diversify the types of training and education opportunities that we offer. In June, we offered a series of one-and-a-half day workshops entitled “ADA and Public Works: Designing and Modifying the Public Right-of-Way for Accessibility”. These workshops included a field component—with a wheelchair and other items used by persons with disabilities—in which course participants were able to see firsthand the perspective of persons with disabilities, beyond what can easily be demonstrated in the classroom. The course was taught by Ron Eck, who has taught similar courses for many LTAP Centers. Also, in conjunction with ALDOT’s Office of Safety Operations, we are planning the Second Annual Rural Road Safety Conference, to be held at Lake Guntersville State Park, October 7–9. Stay tuned for more information on this event and others to come.

I welcome your comments on the center; please feel free to contact me at rodturochy@auburn.edu or at (334) 844-6271.

Yours truly,
Rod Turochy
Providing Facilities for Bicyclists and Pedestrians

The increasing attention being paid to providing transportation facilities for non-motorized users is evident almost everywhere in our profession over the last decade or two. This trend can be seen in the shift in the focus areas of ITE and the content in the monthly ITE Journal. For example, ITE has been an active partner in the Complete Streets Coalition and is even reorganizing its member councils in a similar way. The transportation professional may find it useful to understand the forces at work here and the increasing range of technical resources available to advise in planning, design and operations decisions.

While no single event is responsible for these trends, a few items do stand out. From a legislative perspective, passage of the transportation authorization bill ISTEA (Intermodal Surface Transportation Efficiency Act) in 1991 raised the profile of bicyclists and pedestrians in federal transportation planning and design processes. The Americans with Disabilities Act of 1990 elevated the responsibilities of transportation agencies in designing and maintaining pedestrian facilities in an acceptable manner for all users as never before. Phrases such as "due consideration" and "presumptive accommodation" became part of the language of management of transportation systems, and state transportation agencies were required to designate coordinators for bicycle and pedestrian activities. Over the next several years, movements and organizations began to form, for which a key premise was addressing the needs of all transportation modes. Examples include the National Association of City Transportation Officials (NACTO), formed in 1996, and the Complete Streets Coalition in 2005.

With these shifts in organizational priorities and development of new initiatives, new resources were developed to address the management of the transportation system. Historically, the key guidance for planning and design of transportation facilities has been the "Green Book" (Policy on Geometric Design of Highways and Streets) which provides a relatively small amount of guidance for pedestrians and bicycle facilities. Since then, AASHTO has developed the Guide for the Development of Bicycle Facilities (4th Edition, 2012) and the Guide for the Planning, Design, and Operation of Pedestrian Facilities (1st Edition, 2004). However, other organizations have also released guidance publications in recent years. For example, ITE released its Designing Walkable Urban Thoroughfares: A Context Sensitive Approach in 2010; this publication superseded a similarly named one released four years earlier. NACTO has developed resources reflecting its stance on the role that bicycles and streets play in large cities. The Urban Bikeway Design Guide was published in 2011, and two years later, its Urban Street Design Guide was released.

Today there are many more perspectives and resources on accommodating pedestrians and bicyclists than there were 20 or even 10 years ago. This change reflects the growing diversity in voices on the topic and an increasing interest in walking and cycling among the general public. For transportation agencies, these changes mean that more attention is being paid, from a growing number of constituent groups, to how transportation systems are planned, designed, and operated. As agencies examine or (reexamine) their policies and practices, transportation professionals must rise to the challenge of meeting the needs of diverse and engaged groups of system users. At the same time, the decisions that we make still need the support of agency heads and local governing bodies as well. While this may make our work both exciting and challenging, many resources now exist to provide guidance on how to do this.
Alabama Deploys Transportation Innovations to Make Every Day Count

Alabama is pursuing eight of the 11 innovations in round three of Every Day Counts, the Federal Highway Administration’s initiative to collaborate with transportation stakeholders to rapidly deploy new technologies and practices.

Launched in 2009, Every Day Counts encourages widespread adoption of innovative but proven approaches to accelerate project delivery and enhance the highway system. In 2015 and 2016, FHWA is working with transportation agencies and their partners to implement the EDC-3 innovations they choose to try in their states.

The name “Every Day Counts” captures the driving public’s expectations for better transportation facilities delivered faster. “These are market-ready technologies and practices that can help the transportation community shorten the project delivery process, enhance roadway safety and improve environmental sustainability,” said FHWA Acting Administrator Gregory Nadeau.

New innovation efforts
Alabama’s State Transportation Innovation Council (STIC), which brings together public and private stakeholders to identify innovations and spearhead their use, selected the EDC-3 innovations to deploy in the state over the next two years. Four are new to the state:

- **Improving transportation department and railroad coordination**, also a second Strategic Highway Research Program product, offers tools to help agencies and railroads streamline development of highway projects near railroad rights-of-way.

- The **smarter work zone** effort focuses on road project coordination and technology applications, such as queue and speed management, to minimize travel delays, ensure safety and save time.

- **Data-driven safety analysis** focuses on two approaches to making safety investment decisions: predictive to estimate an existing or proposed road’s safety performance and systemic to find and fix crash-related features throughout a roadway system.

- **Roadway reconfiguration**, or a road diet, is a low-cost strategy that reallocates the roadway cross-section to safely accommodate all users, increase mobility and access, reduce crashes and improve a community’s quality of life.

More progress on deployment
The Alabama STIC is continuing efforts to implement four innovations introduced in the second round of Every Day Counts in 2013 and 2014:

- The **improving collaboration and quality environmental documentation** strategy builds on the EDC-2 effort to produce effective environmental documents for highway projects by adding eNEPA, an online tool to enable collaborative, concurrent agency reviews of documents, saving time and money.

- Alabama intends to join the many states that use **3D engineered models** as a cost-effective way to accelerate design and construction of highway projects. EDC-3 focuses on expanding 3D applications by adding schedule (4D) and cost (5D) information to 3D models and using data to optimize roadway inventory and asset management processes.

- **Geosynthetic reinforced soil-integrated bridge systems**, which use layers of compacted granular fill and sheets of geotextile reinforcement to provide support for a bridge, are cost-effective and easy to build with common equipment and materials.

- **Stakeholder partnering** committees bring local, state and federal agency representatives together to improve and streamline processes for administering local projects under the Federal-Aid Highway Program.
Alabama Deploys Transportation Innovations to Make Every Day Count....continued

Innovation incentives
FHWA has assembled teams of experts to provide technical assistance and training to help the transportation community in Alabama and other states deploy innovations on the EDC-3 roster. FHWA also offers funding to kick-start innovation use through its State Transportation Innovation Council Incentive and Accelerated Innovation Deployment Demonstration programs.

STIC Incentive funds help states make innovations standard practices. In 2014, the Alabama Department of Transportation received a grant to further its efforts to apply 3D data to various stages of highway planning, design and construction. The agency is using the grant to develop procedures and best practices for using 3D data in surveys, design, visualization and clash detection analysis.

AID Demonstration grants offer incentives to use innovation for any aspect of highway transportation. The Alabama DOT received a grant to try slide-in bridge construction for the first time to reduce detoured traffic time during construction of the Ross Clark Circle Bridge over Beaver Creek near Dothan.

The project involves construction of two side-by-side bridges over an existing structurally deficient culvert. The agency is building the single-span bridges next to the road under live traffic. Once the super- and substructures are complete, the new bridges will be slid transversely into place.

The Alabama DOT and the city of Auburn received a grant to use prefabricated bridge elements and systems on the Moore’s Mill Road Bridge replacement project. The project is expected to give contractors experience on a larger-scale project that uses prefabricated elements built offsite and transported for quick installation, as well as to ensure a controlled environment for fabrication of the bridge’s aesthetically enhanced bent elements.

Article courtesy of Linda Guin, FHWA AL EDC Coordinator

Caption: After crews complete construction of the substructure for Alabama’s new Ross Clark Circle Bridge, they will use an innovative bridge slide technique to move the superstructures into place.
Credit: Paul Froede, P.E. Alabama Department of Transportation Bridge Bureau.
Alabama Safety Edge Demonstration

Alabama Technology Transfer Center (T²) Technical Assistance Coordinator Garry Havron worked with FHWA Alabama Division Safety Engineer Linda Guin to identify a suitable location for the open house and demonstration event. A site was selected in Lee County Alabama. The road was called Pierce Chapel Road, and it was to be the first Safety edge put down in Lee County.

The Alabama Technology Transfer Center sent an email announcement and invitation to participate in the Safety Edge demonstration event to hundreds of in-state contacts in mid May. Online registration quickly climbed to more than 40 participants, equaling the capacity of the meeting room at the Hampton Inn Suites in Opelika, AL. On the date of the event, 47 individuals were on-hand to participate in the event. This total included 13 local agency representatives, 21 state agency representatives, 10 private sector representatives, 1 federal agency representative, and 2 (T²) representatives. This diverse group includes not only the local agency officials who comprise the primary target audience for the event, but also a mix of engineering consultants, contractors, state transportation officials, and FHWA staff members whose work will be vital to increasing the overall use, availability, and acceptance of the Safety Edge in Alabama.

Participants were welcomed at the beginning of the open house portion of the event by Alabama (T²) Administrator Garry Havron. The first presentation was made by FHWA Alabama Division Safety Engineer Linda Guin. Ms. Guin’s presentation addressed the need for the Safety Edge and addressed several technical issues which are keys to successful implementation. A second presentation was made by Dr. Buzz Powell, The National Center for Asphalt Technology at Auburn University. Dr. Powell emphasized the research that has been done and its effects on the test track at The National Center for Asphalt Technology at Auburn University. Key messages from both presentations included:

- Roadway departure crashes are a significant problem on our nation's roadways. These crashes result in an average of one fatality every 29 minutes or 50 per day.

- The Safety Edge creates a 30-degree pavement edge profile that can be safely traversed by a wide variety of vehicles even with relatively high drop-offs.

- Several vendors offer commercial Safety Edge devices that can be added to existing paving equipment. Other agencies, including the North Carolina DOT, have developed in-house solutions that can be duplicated by other organizations. Commercial Safety Edge shoes range in cost from $700 to $3,000.

- When using the Safety Edge, shoulder clipping should be performed prior to paving to achieve optimal results.

- Use of the Safety Edge results in minimal project cost increases. The National Center for Asphalt Technology at Auburn University estimates that the Safety Edge requires only 0.1 percent more pavement material than conventional paving processes.

- The Safety Edge is not suitable for some pavements and roadways. Examples of unsuitable project characteristics include open-graded surface mixes, "mill and fill" operations where the shoulder is not repaved, and roadways with curb and gutter.

- The Safety Edge can be utilized on thin overlays. Lift thickness does not correlate with edge depth.

- The Safety Edge results in a more durable pavement edge because the shoe increases density by up to 2%.

- More than 40 states routinely evaluate the Safety Edge for use on paving projects.

Participants witnessed an up close demonstration of the safety edge being laid down in Lee County.
Richie Beyer Awarded NACE 2014 Rural County Engineer of the Year

Washington, D.C. – The National Association of County Engineers (NACE) awarded Walter “Richie” Beyer, IV, P.E., the 2014 Rural County Engineer of the Year during its 2015 Annual Expo & Conference held April 19-23 in Daytona Beach, Florida. Since 2003 Beyer has served as County Engineer for Elmore County, Alabama, with a population of near 81,000.

"It’s no surprise that Richie was selected as our Rural County Engineer of the Year,” said Brian Roberts, P.E., NACE Executive Director. “He has served as an incredible leader in Elmore County, NACE, and the Association of County Engineers of Alabama. Richie has saved his county’s taxpayers millions of dollars by reducing duplicated efforts and basing his decision making on metrics and safety."

Early in his career, Beyer was instrumental in the conversion of Elmore County from a district system, managed by individual elected commissioners, to a centralized unit system. He also initiated a paved road inventory, which provided the Commission with its first accurate measure of all the county maintained roads. Beyer instituted a pavement preservation program, which cut rehabilitation time and resources by up to 85%. Working with the county’s 8 municipalities, he administered the county’s first infrastructure plan. Beyer is also active in influencing federal and state legislative initiatives. Beyer manages 57 employees and an annual operating budget of approximately $5 million. His office maintains approximately 1000 miles of public roads, including 200 miles of rural unpaved roads; 127 bridges; and over 8000 drainage structures.

Formed in 1956, NACE is a nonprofit, nonpartisan professional association representing nearly 2,000 county engineers, road officials, and related professionals in the U.S. and Canada. NACE advocates for county road officials at the federal level, provides national educational forums, and connects county engineers to their local peers via its state affiliates. In the U.S., local roads account for about 75% of highways and roads, or 2.93 million miles. Counties manage 1.74 million miles of those roads while cities and townships account for another 1.19 million miles. Counties also own 231,000 bridges and operate one-third of the nation’s transit systems.

Richie has also been associated with the Alabama Technology Transfer Center for many years as an advisor and member of the Advisory Committee.

A portion of this article is courtesy of NACE.
The Alabama Rural Transit Assistance program held its annual Bus and Van Roadeo. That’s right, Roadeo! This is not a misspelling. The name Roadeo is used because this is a competition on the road that simulates what rural transit drivers go through on an average work day. The FY 2015 Statewide Bus and Paratransit Roadeo was an overwhelming success. Many thanks to the Alabama Technology Transfer Center for coordinating this event and to Taylor Rider and the many others for their support. Special thanks and kudos to Donta Frazier and the staff of the Pike Area Transit System for the fine hospitality that we all enjoyed.

Participation was increased from last year and the level of competition in this year’s Roadeo was phenomenal. In fact, only a few points separated the first and second place winners in the bus and van competition. The first place winners in both the van and bus categories represented Alabama at the national competition in Tampa, Florida on May 31, 2015. The results of the 2015 Community Transportation Association of America National Bus and Paratransit Roadeo Competition held in Tampa, Florida on Sunday, May 31, 2015 verified that Alabama is excelling on a national level. Congratulations to Keith Patterson, Cullman Area Rural Transit System (CARTS) on his second place finish in the Body on Chassis Division and also for being recognized as Rookie of the Year. Congratulations also to Jim Padgett, Baldwin Rural Area Transportation System (BRATS) on his third place finish in the Mini-Van Division. Other Alabama transit drivers performed very well also. The Alabama contestants finished 2nd and 8th in the Body-On-Chassis division, and 8th in the Minivan Division. Once again Alabama had a very strong presence in the National Roadeo.

Prepared by Joe Nix, ALDOT and Garry Havron, Alabama T² Center. Photos provided by Jim Rathburn, Mobility Manager, Wiregrass Transit Authority.
Upcoming T² Seminars

Access Management
Mobile, AL..................July 29, 2015
Montgomery, AL........July 30, 2015

Countermeasures to Reduce Red Light Running
Mobile, AL..................August 11, 2015
Montgomery, AL........August 12, 2015
Huntsville, AL...........August 18, 2015
Pelham, AL..............August 19, 2015

Roadside Design
Mobile, AL..............September 1, 2015
Montgomery, AL........September 2, 2015
Huntsville, AL...........September 3, 2015
Pelham, AL.............September 4, 2015

Introduction to Roundabouts & the ALDOT Roundabout Manual
Huntsville, AL...........September 22, 2015
Pelham, AL.............September 24, 2015
Mobile, AL..............September 29, 2015
Montgomery, AL.........October 1, 2015

2nd Annual Alabama Rural Road Safety Conference
Guntersville, AL........October 6-8, 2015

Calendar of Events


October 29, 2015: Fall Meeting of the Alabama Section of the Institute of Transportation Engineers, Montgomery Marriott Prattville Hotel & Conference Center at Capitol Hill, Prattville. See www.alsite.org for more details.
58th Annual Alabama Transportation Conference

The Alabama T² Center is one of the sponsors of the Annual Transportation Conference. The 58th Conference was held in Montgomery on February 9-10, 2015 and was attended by over 900 people. At the Conference there were 35 technical presentations covering all aspects of transportation. Speakers were given the opportunity to provide us an electronic copy of their presentation for distribution. As a result, 31 of the conference presentations are now available on the Alabama T² website <www.alabamat2.org> and can be accessed by clicking on “Transportation Conference Presentation”. The presentation topics and authors are identified below.

Traffic Operations
- Diverging Diamond Interchanges—Key Operational Considerations—Mark Doctor
- Flashing Yellow Arrows—The New Way to Turn Left in Georgia—Alan Davis
- Yellow and Red Change Interval—It’s Just a Matter of Time—Hugh McGee

Pavements
- Advances in Pavement Design—David Timm
- Pavement Preservation in Practice—Douglas Gransberg
- Using Ground Penetrating Radar to Access Pavement Delamination—Michael Heitzman

Construction
- Construction Safety Culture: Mission Zero—Jerral Wyer
- Birmingham Northern Beltline Project—Mark Dison

Highway Safety
- Driving Toward Zero Fatalities—Robert Hull
- Alabama is on the Move Toward Zero Fatalities—Susan Herbel
- Effects of Pavement Widening and Rumble Strips on Two-Lane Rural Highways—Luana Ozelim

Environmental & Stormwater Runoff Issues
- The Art of Managing Stormwater—Barry Fagan
- Effects of Culverts on the Natural Conditions of Streams in the Coastal Plain Physiographic Province of Alabama—Scott Hedgecock
- Impacts of Climate Change on Transportation in Mobile, AL: Climate and Weather Risk Management Tools and Findings—Robert Hyman

Innovation in Steel and Concrete Bridges
- Bridge Research with the Virginia Center for Transportation Innovation and Research—Tommy Cousins
- Fabrication Procedures for Structural Steel Bridges—A Virtual Tour—John O’Quinn
- Innovations in the Pre-stressed Concrete Industry—Dwain Hamby

Prioritizing Design Projects
- Congest-shun: An SEC Rival Discusses Urban Mobility—Tim Lomax
- Transportation System Health Analyses—Stephanie Amoaning-Yankson
- Prioritizing Complete Street Projects—Norman Steinman

Continued on next page
58th Annual Alabama Transportation Conference

(Continued from page 10, 58th Annual Alabama Transportation Conference)

Geo-Construction and Remediation
● Vibration Analysis During Pile Driving—John Cleary
● Spanish Fort Mudslide on US 98—Nate Beard
● Electrical Density Gage—Dennis Anderson

Multimodal Transportation
● Intermodal Flat Decks—An Innovative Alternative to Moving Industrial Freight Using the Intermodal Rail Network—Buck Buchanan
● Economic Development and the Growth of Intermodal Facilities—Marty Lipinski
● How Have Long Distance Trips Changed Over the Past Decade? Experience from Alabama, Vermont and California—Jeff LaMondia

Money Matters
● Investing in Infrastructure Improvements—Carlos Cruz-Casas
● Alabama Transportation Rehabilitation and Improvement Program—Ed Austin
● Innovative Financing of FDOT Infrastructure—Leon Corbett

Advanced Technologies
● Using Unmanned Aerial Vehicles (UAVs) to Conduct Site Inspections of Erosion and Sediment Control—Michael Perez
● Automated Vehicles and Vehicle-to-Vehicle Communications—Richard Bishop
● Connecting with Driver Through New Media and Google Waze—Alicia Torrez

Preserving & Maintaining Roads and Bridges
● Report from the Coalition Against Bigger Trucks—Rick Cowan
● Drop Lanes vs. Lane Reductions—Kerry NeSmith
● New Bridge Management System—Eric Christie