

Program Progress Performance Report for University Transportation Centers

U.S. Department of Transportation
Research and Innovative Technology Administration
Federal Grant No. DTRT12 G UTC04

Project Title: Southeastern Transportation, Research, Innovation Development and Education Center
(STRIDE)

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Reporting Term, Quarterly: PPPR #5



Signature of Submitting Official: _____

Lily Elefteriadou, Ph.D.

Accomplishments

What are the major goals of the program?

The STRIDE Center is devoting its energies to three major areas that are deemed critical in Region 4: safety, livable communities and economic competitiveness. More specifically, the major goals of the Center are:

- a) To develop, implement and maintain a comprehensive research program that addresses critical needs related to safety, livable communities and economic competitiveness
- b) To serve as the focal point for transportation research, education and outreach in the region
- c) To strengthen the collaboration between the partner universities as well as between the consortium and federal, state, and local agencies
- d) To develop ties with other University Transportation Centers (UTCs) and USDOT's research clusters to create opportunities for collaborative activities across centers
- e) To disseminate research results to government, academia and private sectors through publication in peer-reviewed journals, conference papers and presentations at transportation-related industry events
- f) To establish additional communication mechanisms, including the use of social media, by which important research findings are made available to researchers and others with an interest in transportation matters
- g) To utilize research activities to promote transportation-related education as well as careers and employment opportunities
- h) To support and encourage the identification, development, and implementation of inventions and discoveries with the potential to address challenges in the core focus areas.

What was accomplished under these goals?

Accomplishments are listed below under each of the program's major goals:

- a) To develop, implement and maintain a comprehensive research program that addresses critical needs related to safety, livable communities and economic competitiveness**

Accomplishments:

Several research, education, and workforce development projects awarded during the first year of the grant have been completed or are nearing completion. Ten projects from the first year (2012) are in various stages of completion. Of those, three projects have been completed and final reports have been posted on the STRIDE website <http://www.stride.ce.ufl.edu/completed-projects> (2012-028, Development of Pedestrian and Bicycle Transportation Course Modules; K-12 Transportation Workforce Development at UAB; K-12 Workforce Development in Transportation Engineering at UF). The other eight are under peer review. A total of 10 research and one workforce development/education projects have been approved for no-cost extensions. Quarterly reports received show satisfactory progress on all projects. The titles of all

projects along with short descriptions are posted on the STRIDE website at www.stride.ce.ufl.edu/current-projects. Research and workforce development projects awarded during the second call for proposals are currently underway and quarterly reports show satisfactory progress. Those projects began around October 1, 2013.

b) To serve as the focal point for transportation research, education and outreach in the region

Accomplishments:

Second Annual UTC Conference for the Southeastern Region: The second annual UTC Conference for the Southeastern Region was organized this year by one of the STRIDE consortium members, the National Center for Transportation Systems Productivity and Management (NCTSPM) at Georgia Tech. The conference was held in Atlanta, Ga., March 24-25, 2014. Approximately, 160 people attended the conference. There were 36 papers presented and 47 posters showcased during the conference. The conference also included a state DOT panel discussion with participation from five state DOTs (ALDOT, FDOT, GDOT, MSDOT, and NCDOT) on research results dissemination. Also, a panel discussion on “Sector Intersections: State Agencies and the Private Sector Discuss Transportation Challenges” was held, which included panelists from the public and private sectors in transportation (Toby Carr, Director of Planning, GDOT; Todd Long, PE, Deputy Commissioner, GDOT; and Randy Stashick, Global Vice President of Engineering for UPS). Co-sponsors of the conference included UTCs led by the following universities: FIU, FSU, GaTech, MSU, UCF, UF, USF, and UT. The conference brought together faculty, students, practitioners and public agencies to disseminate and showcase research, education and technology transfer activities of UTCs in the Southeast. The main goal of this annual conference is to enhance collaboration among the academic community as well as the private and public sector agencies in the Southeastern region. STRIDE led the efforts to develop this annual conference, and organized and hosted the first conference in March 2013. Plans for a third UTC conference are currently underway for 2015. This third conference will be co-hosted by Mississippi State University and The University of Alabama at Birmingham.

Educational Projects: Materials for the following completed STRIDE-funded educational projects have been posted at: <http://www.stride.ce.ufl.edu/course-materials-developed-by-stride>:

- ✓ A Transportation Safety Module for Undergraduate Students (STRIDE Projects Number 2012-085s) - ergo.research.ise.msstate.edu/stride-classroom-module
- ✓ Development of Pedestrian and Bicycle Transportation Course Modules (STRIDE Project Number 2012-028s) - www.pedbikeinfo.org/training/courses.cfm
- ✓ Developing a New Course for Public Transportation Education (STRIDE Project Number 2012-029s) - www.stride.ce.ufl.edu/public-transportation-course-modules

- ✓ Development of Graduate Level Course on Sustainable Asphalt Pavements (STRIDE Project Number 2012-049s) - www.stride.ce.ufl.edu/sustainable-pavements-course-modules

These completed projects have been and will be publicized using Constant Contact.

WTS Chapter Development in the Southeast: The STRIDE Center continues to work with WTS International to create additional student chapters in the Southeast and the partnership has accomplished the following milestones in the past 6 months: 1) The WTS UF Student Chapter was officially ratified during the WTS 2014 Annual Conference in Portland, Oregon and 2) STRIDE sent two students to the WTS 2014 Annual Conference (Kristen Schneider – former WTS student chapter chair, and Jessica Wallet, current WTS student chapter chair); 3) WTS International and the student chapter at FIU are working to ratify that chapter next; 4) WTS student chapters met at the UTC Conference for the Southeastern Region held in Atlanta, Ga., in March and voted to create a joint public service activity on the same day throughout the Southeast region. Plans are underway to create the event. Student chapters from both WTS and ITE representing GaTech, NCSU, FIU, USC, USF, UAB will participate in the event.

- c) **To strengthen the collaboration between the partner universities as well as between the consortium and federal, state, and local agencies**

Accomplishments:

STRIDE along with GaTech organized a panel discussion with State DOT representatives at the 2nd UTC Conference in Atlanta, Ga., in March 2014, with participation from the following: John Kirby, NCDOT; William Barstis, MDOT; Darryll Dockstader, FDOT; Jeffrey Brown, ALDOT; Georgine Geary, GDOT; Fouad H. Fouad, University of Alabama at Birmingham. The title of the session was “How can universities better assist state highway agencies with deployment of research results.” The STRIDE Center will continue to actively engage state and local agencies in discussions and potential collaborations, and is continuing to engage the State DOTs in the region to increase their participation and involvement.

- d) **To develop ties with other UTCs and USDOT’s research clusters to create opportunities for collaborative activities across centers.**

Accomplishments:

During this reporting period, STRIDE continued to engage state DOTs and other UTCs in the Southeastern region. In February, Dr. Mohammed Hadi of FIU, a STRIDE consortium member, was invited to speak at USDOT headquarters in Washington, D.C., on “Educating Students for ITS Careers: Are Universities Meeting the Challenge?” In March, FDOT Secretary Ananth Prasad came to the University of Florida to speak on “The Future of Transportation and Beyond: Autonomous and Connected Vehicles” to a live audience

and via live webcast. The 2nd Annual UTC Conference for the Southeastern Region was held March 24-25, 2014 in Atlanta, Ga and brought together representatives from a total of eight UTCs which represent 40 universities:

a. Accelerated Bridge Construction University Transportation Center

- Florida International University (lead)
- Iowa State University
- University of Nevada, Reno

b. Accessibility and Safety for an Aging Population

- Florida State University (lead)
- Florida A&M University
- University of North Florida

c. Electric Vehicle Transportation Center

- University of Central Florida (lead)
- Tuskegee University
- University of Hawaii

d. National Center for Intermodal Transportation for Economic Competitiveness

- Mississippi State University (lead)
- University of Denver
- University of Mississippi
- Hampton University
- Louisiana State University

e. National Center for Transit Research

- University of South Florida (lead)
- Florida International University
- North Dakota State University
- Texas A&M University
- University of Illinois, Chicago

f. National Center for Transportation Systems Productivity and Management

- Georgia Institute of Technology (lead)
- University of Alabama at Birmingham
- Florida International University
- University of Central Florida

g. Region 4 – University of Florida, Southeastern Transportation, Research, Innovation, Development, and Education Center (2012)

- University of Florida (lead)
- Auburn University
- Florida International University
- Georgia Institute of Technology
- Mississippi State University
- North Carolina State University
- University of Alabama at Birmingham
- University of North Carolina at Chapel Hill

h. Region 4 – University of Tennessee, Southeastern Transportation Center (2013)

- University of Tennessee (lead)
- Clemson University

- [North Carolina A&T State University](#)
- [University of Alabama, Birmingham](#)
- [University of Alabama, Tuscaloosa](#)
- [University of Central Florida](#)
- [University of Kentucky](#)
- [University of North Carolina](#)
- [University of South Florida](#)

e) To disseminate research results to government, academia and private sectors through publication in peer-reviewed journals, conference papers and presentations at transportation-related industry events

Accomplishments:

Faculty and students affiliated with the STRIDE consortium showcased their Center-funded projects during the 2nd Annual UTC Conference for the Southeastern Region at GaTech in Atlanta, Ga.

We are continuing to create workshops, webinars and conferences from completed CMS (Tier-1 UTC at UF) and STRIDE-funded projects and will continue this process as STRIDE projects are being completed.

f) To establish additional mechanisms, including the use of social media, by which important research findings are made available to researchers and others with an interest in transportation matters

Accomplishments:

We continue to use our website (stride.ce.ufl.edu), Facebook and Twitter pages to announce events, webinars, conference, completed projects and other important information related to STRIDE and other UTC activities.

The STRIDE Center has subscribed to Constant Contact, an online email marketing service to advertise annual reports, completed projects, events, and any other products produced by the Center.

g) To utilize research project activities to promote transportation-related careers and employment opportunities for education and workforce development

Accomplishments:

Four STRIDE interns have been selected work with researchers at STRIDE partner schools as part of the Transportation Research Internship Program (TRIP):

- ✓ Intern: Kory Harb, UF civil engineering
Adviser: Dr. Yafeng Yin, UF

Project: Developing agent-based simulation models to learn about the impact and implementation of real-time parking services via smartphone applications

✓ Megan McGinley (UF)

Adviser: Dr. Scott Washburn, Transportation Program, Civil Engineering, UF

Project: Analyzing a new Active Traffic Demand Management (ATDM) software

✓ Brian Pitman (UF)

Adviser: Dr. Scott Washburn, Transportation Program, Civil Engineering, UF

Project: Creating software to simulate emissions given off by cars using CORSIM

✓ William Woolery (Georgia Tech)

Adviser: Dr. Mike Hunter, School of Civil and Environmental Engineering,
Georgia Institute of Technology (GaTech)

Project: Working on research to identify changes in visual search patterns of drivers as environments around become more complex

Workforce development activities:

- ✓ Draft final reports for the first year contracts for workforce development were completed, peer reviewed and finalized. FIU will continue their efforts into the second year after utilizing matching funds the first year.
- ✓ In early 2014, the STRIDE Center awarded contracts to four partner institutions for K-12 workforce development (Georgia Tech, North Carolina State University, University of Alabama at Birmingham and the University of Florida). Georgia Tech's work focuses on interfacing with 5th grade students at Centennial Place Elementary School to introduce Engineering elements such as measurements, data collection, data analysis, presentation and group work, focusing on examples from topics in Transportation Engineering.
- ✓ North Carolina State University is continuing to use LEGO® Mindstorms NXT robots in eight outreach activities at two locations in North Carolina. These workshops provide a hands-on experience to encourage students to look at science, technology, engineering and math (STEM) topics in a new light and foster interest in transportation engineering as a career choice.
- ✓ The University of Alabama at Birmingham continues to use interactive activities, presentations, and workshops such as Family Engineering Night to introduce girls to engineering in hopes that these activities will spark an interest in considering Transportation Engineering as a career path.
- ✓ The University of Florida continues to offer the very successful K-12 activities initiated in the past year, including: the LEGO® Mindstorms NXT robots program, which teaches programming to middle school students; Transportation Career Day, which is designed for high school-aged students to introduce them to Transportation careers; Family Engineering Night, which actively engages elementary school children and their families in fun, hands-on engineering activities at local elementary schools; workshops for middle and high school girls, which introduce them to career opportunities in Engineering and Transportation (*Transportation You!*); and utilizing the computer game,

SimCity, to develop Transportation-specific modules for middle school students to foster interest in the transportation profession as a career choice.

- ✓ The faculty and students at FIU are developing a regional consortium-based model with K-12 pipeline, professional societies, industry, families that will capitalize on expertise and leverages existing partnerships and resources to systematically enhance the quality and excellence in STEM education.
- ✓ FIU and UF provided a demonstration of activities on transportation engineering during their individual 2014 Engineering EXPO's which took place in February.
- ✓ STRIDE colleagues collaborated on a poster presentation, "K-12 Transportation Workforce Development: A Collaborative Effort," 2014 University Transportation Center (UTC) Conference for the Southeastern Region, Atlanta, Georgia, March 24-25, 2014.
- ✓ UF presented a summary of the K-12 workforce develop efforts for STRIDE at the Region IV Local Technical Assistance Program in the Spring of 2014
- ✓ UAB began work organizing logistics for two events scheduled in Fall 2014
 - Kids in Engineering Day, a Family Engineering event targeting 4th and 5th graders), and
 - UAB Girls in Science and Engineering Day, an all-female event promoting STEM careers with hands on workshops for introducing middle school girls to engineering.
- ✓ The UF ITE, WTS and ASCE student chapters hosted a family engineering event at Kimball Wiles Elementary School on February 13, 2014 in Gainesville, FL, where UF students guided 158 students as well as their parents and care takers through hands-on activities.
- ✓ As part of the Transportation Career Day effort, 11 school students participated in a two-hour workshop, for transportation simulation exercise using CORSim on January 26, 2014 at the UF campus. The workshop was run by several transportation graduate students. Students set up and ran a traffic simulation of a signalized intersection where they experimented with various signal timing strategies to optimize the intersection performance. The workshop drew students from around the state of Florida with students from Marjory Stoneman Douglas High - Parkland, Eastlake High - Palm Harbor, Community School – Naples high schools in attendance. The workshop was held in conjunction with the UF Center for Pre-collegiate Education and Training.
- ✓ Also in partnership with the UF Center for Pre-collegiate Education and Training, on January 27th, a traffic signal lab tour was conducted for six visiting high school students by UF Ph.D. student Don Watson.
- ✓ UF started developing an outline for the SimCity modules for middle school students.
- ✓ UFTI staff provided a workshop on February 17th for 9 girls to learn more about careers in Transportation Engineering and LEGO® Robotic programming. The

girls watched videos and presentations, and worked through LEGO® Robot Vehicle Lesson Plans for Secondary Education.

- ✓ NCSU and UF continue their partnership for the *Engineering: It's for Girls, Too* project, which includes a series of one-day workshops targeted at girls in middle school and high school.
 - UF conducted five workshops. Three of the workshops incorporated the LEGO® Robotic program into the workshop. Two workshops were held in conjunction with a Girl Scout camp.
 - NCSU worked with NCDOT to co-sponsor three workshops held: one in Raleigh, NC on February 18, 2014 which hosted 30 girls; one in Winston-Salem, NC on February 20, 2014 which hosted 63 girls; and one in Greenville, NC on March 18, 2014 which hosted 41 girls.
 - NCSU also worked with WTS to co-sponsor a Transportation YOU event held in Raleigh on February 20, 2014. Thirteen girls heard the speaker, a pavement design engineer with the North Carolina Department of Transportation, talk about her day-to-day work.
- ✓ In May, GaTech successfully implemented the first of the four sessions to introduce students to Transportation Engineering by demonstrated mode choice modeling and analysis to a group of 82 students in 5th grade at Centennial Place Elementary School. The session comprised of a student presentation on “What’s transportation engineering”, three concurrent break-out sessions, and a close-out plenary session for discussion and Q&A.

How have results been disseminated?

Research results have been disseminated through the 2nd Annual UTC Conference for the Southeastern Region at GaTech in Atlanta as well as in refereed journals, conferences, publications such as the annual report and the STRIDE e-Newsletter. Also, some results have been posted on the STRIDE Facebook and Twitter pages, including a radio segment on *A Public Health Minute by Bill Latimer* for Dr. Despina Stravinou's work on distracted driving. Dr. Stravinou is working on a STRIDE funded project *A Naturalistic Driving Study across the Lifespan*

The LEGO® Robot Lesson Plans, created from a project funded by the CMS and incorporated into the STRIDE workforce development activities, have been downloaded 85 times as of June 2014. Agencies that have downloaded the lesson plans range from UTCs and other universities, to K-12 and after-school programs across the U.S. and as far away as Alaska and California.

What do you plan to do during the next reporting period to accomplish the goals?

1. Monitor the ongoing projects from STRIDE 1 (the portion of the grant that began January 2012) via quarterly reports to ensure they are progressing on schedule, and products and results are disseminated as expected.
2. Monitor the draft final reports from STRIDE 1 projects, the peer reviews of those reports and the process of receiving and editing the final reports for posting on the STRIDE website, reporting on RiP database as completed and link to completed PDF of projects sent to TRID database.

3. Monitor the newly selected STRIDE 2 projects (began October 2013) via quarterly reports to ensure they are on schedule.
4. Monitor the K-12 Workforce Development projects via quarterly reports.
5. Monitor the number of downloads of STRIDE products from our website.
6. Start gathering performance indicators for the Performance Indicators report due in January 2015.
7. Monitor the K-12 Workforce Development projects via quarterly reports. Continue efforts to provide Family Engineering Nights, Transportation Career Day and LEGO® Vehicle Lesson plans. NCSU and UF will continue to provide workshops for girls aged 13-18 to encourage and introduce them to careers in Transportation. GA Tech plans to implement the 2nd and 3rd sessions of their program
8. Begin planning the 3rd Annual UTC Conference for the Southeastern Region, which will be hosted by Mississippi State University and the University of Alabama at Birmingham. Organizers this year include Dr. Virginia Sisiopiku of UAB and Dr. Burak Eksioglu of Mississippi State University.
9. Continue to publish the STRIDE e-Newsletter twice a year (Spring and Fall), using Constant Contact.
10. Continue to engage in discussions with State DOTs in the region and nationwide for potential collaborations.
11. Continue to engage in discussions with WTS International to create student chapters in the region, and coordinate activities with these chapters as they are created.
12. Continue planning for technology transfer opportunities (including webinars and short courses) such as the events based on completed CMS and STRIDE research projects.
13. Continue posting events and products on the STRIDE website, Facebook, and via the use of Constant Contact email marketing tool to advertise the completion of final reports, events, etc.

Products

List any products resulting from the program during the reporting period

- UNC Chapel Hill and Auburn University have produced a final report, which has been posted at <http://www.stride.ce.ufl.edu/completed-projects> on educational modules that can be used in introductory Transportation courses for undergraduates in Civil Engineering, Planning and Policy: Pedestrian and Bicycle Data and Performance Analysis, Pedestrian and Bicycle Facilities, and Planning for Pedestrians and Bicycles (STRIDE Project Number 2012-028S). All modules are available at www.pedbikeinfo.org/training/courses.cfm.
- Researchers at UF and UAB have completed two K-12 Workforce Development projects. Final reports have been posted at <http://www.stride.ce.ufl.edu/completed-projects>.

Note: A list of papers and presentations for this reporting period will be provided in the January 2015 PPPR as this will coincide with the assembly of Performance Indicators due at that time.

Participants and Other Collaborating Organizations

What organizations have been involved as partners?

Organization Name	Location	Contribution
University of Florida	Gainesville, FL	Lead University
Auburn University	Auburn, AL	Partner University
Georgia Institute of Technology	Atlanta, GA	Partner University
Mississippi State University	Mississippi State Univ., MS	Partner University
North Carolina State University	Raleigh, NC	Partner University
University of Alabama at Birmingham	Birmingham, AL	Partner University
University of North Carolina	Chapel Hill, NC	Partner University
Florida Department of Transportation (FDOT)	Tallahassee, FL	Matching funds commitment
Alabama Department of Transportation (ALDOT)	Montgomery, AL	Matching funds commitment
Georgia Department of Transportation (GDOT)	Atlanta, GA	Matching funds commitment
Mississippi Department of Transportation (MDOT)	Jackson, MS	Matching funds commitment
North Carolina Department of Transportation (NCDOT)	Raleigh, NC	Matching funds commitment

Other collaborators

Organization Name	Location	Contribution	Comments
Town of Carrboro (Jeff Brubaker)	North Carolina	Collaboration	
Town of Chapel Hill (Council member Jim Ward)	North Carolina	Collaboration	
Durham-Chapel Hill-Carrboro MPO (Andrew Henry and other staff)	North Carolina	Collaboration	
University of North	North Carolina	Collaboration	

Carolina Facilities Planning			
Carrboro Bicycle Coalition (Seth Lajeneusse North Carolina and other staff)	North Carolina	Collaboration	
Triangle J Council of Governments (John Hodges Copple and other staff)	North Carolina	Collaboration	
Federal Highway Administration	Washington, DC	Collaboration	
Federal Transit Administration	Washington, DC	Collaboration	
Woman's Transportation Seminar (WTS) International	Washington, DC	Collaboration in the creation of new chapters in the Southeast	Various K-12 workforce development programs for STRIDE Project Number 2012-009S
WTS NC Triangle Chapter	Raleigh, NC	Collaboration	Various K-12 workforce development programs for STRIDE project Number 2012-009S
University of North Florida	Jacksonville, FL	Facilities, collaboration, personnel exchanges	K-12 workforce development program for STRIDE Project Number 2012-009S
21 st Century Community Learning Center of Alachua County	Gainesville, FL	Facilities, collaboration, personnel exchanges	Various K-12 workforce development programs for STRIDE project Number 2012-009S
North Florida WTS Chapter	Jacksonville, FL	Facilities, collaboration, personnel exchanges	Various K-12 workforce development programs for STRIDE Project Number 2012-009S
WTS Central Florida Chapter	Orlando, FL	Facilities, collaboration	Various K-12 workforce development programs for STRIDE Project Number 2012-009S
Center for Transportation and the Environment (CTE) at North Carolina State	Raleigh, NC	Facilities, Collaborative research Personnel exchanges	Various K-12 workforce development programs for STRIDE Project Number 2012-009S

University			
Highway Safety Research Center at North Carolina State University	Raleigh, NC	Facilities, Collaborative research personnel exchanges	For data extraction of injuries and crashes on STRIDE Project Number 2012-022S
Roybal Center for Translational Research on Aging and Mobility, University of Pennsylvania	Philadelphia, PA	Collaborative research, personnel exchanges	The director of the Roybal Center, Dr. Karlene Ball, is a member of the multidisciplinary Advisory Committee for STRIDE research project 2012-095 . The center has a vast expertise in cognitive research aimed to older adults
Safe Routes to School	Federal program, various states	Personnel exchanges, collaborative research on STRIDE project 2012-067S	Assisted in collecting sidewalk data for STRIDE Project Number 2012-067S
Atlanta Regional Commission	Atlanta, GA	Personnel exchanges, Facilities, collaborative research on STRIDE project 2012-067S	Transportation Division, bicycle and pedestrian planning for STRIDE Project Number 2012-067S
City of Atlanta	Atlanta, GA	Personnel exchanges, facilities, collaborative research on STRIDE project 2012-067S	Department of Public Works, Department of Planning and Community Development for STRIDE Project Number 2012-067S
Atlanta City Council Sidewalk Task Force	Atlanta, GA	Personnel exchanges, facilities, collaborative research on STRIDE project 2012-067S	Members of the research team on STRIDE Project Number 2013-067S participate in the Atlanta City Council Sidewalk Task Force, which involves attending general

			meetings and subcommittee meetings related to policy and funding for pedestrian facility maintenance. The full Sidewalk Task Force includes city staff from the department of Public Works and department of Planning, elected officials, and pedestrian advocates.
Atlanta Pedestrian Organization (PEDS)	Atlanta, GA	Personnel exchanges on STRIDE project 2012-0675	Staff and volunteers at PEDS participated in initial testing of the sidewalk survey instrument and provided feedback that was then incorporated into the instrument before full scale deployment.
Tulane University	New Orleans, LA	Personnel exchanges, collaborative research, financial support	Collaboration and as partial match for petroleum related releases
Cambridge Systematics	Tallahassee, Florida	Anita Vandervalk participates on the STRIDE External Advisory Board	
National Center for Transportation Systems Productivity and Management (NCTSPM), Georgia Institute of Technology	Atlanta, GA	Financial support	Co-sponsors for the UTC Conference for the Southeastern Region
National Center for Intermodal Transportation (NCITEC), Mississippi State University	Miss. State, MS	Financial support	Co-sponsors for the UTC Conference for the Southeastern Region

National Center for Transit Research (NCTR), University of South Florida,	Tampa, FL	Financial support	Co-sponsors for the UTC Conference for the Southeastern Region
Centennial Place Elementary School	Atlanta, GA	Facilitates	For K-12 activities
Girl Scouts of Gateway Council, Camp Kateri	Orange Springs, FL	Facilitates	For K-12 activities
Williams Elementary School	Gainesville, FL	Facilities	For K-12 activities
PK Yonge Research School	Gainesville, FL	Facilities	For K-12 activities
Lincoln Middle School	Gainesville, FL	Facilities	For K-12 activities
Mebane Middle School	Gainesville, FL	Facilities	For K-12 activities
Bishop Middle School	Gainesville, FL	Facilities	For K-12 activities
UF - Lawton Chiles Elementary School	Gainesville, FL	Facilities	For K-12 activities
Boone High School	Orlando, FL	Facilities	For K-12 activities
Arlington Middle School	Jacksonville, FL	Facilities	For K-12 activities
21st Century Community Learning Center, Alachua County Public Schools	Gainesville, FL	Facilities and Collaboration	For K-12 activities
MSU – St. Martins Middle School, Arthur Watson Elementary School; Jackson County Schools, Mississippi; St. Martins Elementary, Mississippi	Pascagoula, MS and St. Martins, MS.	Facilities	For K-12 activities at Mississippi State University
Centennial Campus Magnet Middle School	Raleigh, NC	Facilities	For K-12 activities at North Carolina State University
Cade Museum	Gainesville, FL	Facilities	For K-12 activities at UF
UF Center for Pre-collegiate Education and Training	Gainesville, FL	Facilities	For K-12 activities at UF

University of North Florida	Jacksonville, FL	Facilities and collaboration	STRIDE K-12 workforce development activities at UF and on STRIDE project 2012-009S
University of Florida LTAP	University of Florida, Gainesville, FL	Personnel exchanges, facilities, collaborative research on STRIDE project 2012-067S	STRIDE K-12 workforce development activities at UF and on STRIDE project 2012-009S
RPCGB - Darrell Howard, Deputy Director of Planning Franchesca Taylor, Active Transportation Planner	Birmingham, AL	Personnel exchanges	
North Carolina Local Technical Assistance Program (NC LTAP)	Raleigh, NC	Personnel exchanges	STRIDE K-12 workforce development activities at UF and on STRIDE project 2012-009S

Impact

What is the impact of the program? How has it contributed to transportation education, research, and technology transfer?

- What is the impact on the development of the principal discipline(s) of the program?*
Continued focus and increased emphasis on the safety, livability and economic competitiveness for the Southeast region of the U.S.; increased collaboration between the STRIDE partner universities; increased collaboration with the State DOTs in the region; production of educational materials related to the research focus areas; production and delivery of various educational and workforce development activities and programs.
- What is the impact on other disciplines?*
Interdisciplinary collaboration in research projects, education, workforce development and technology transfer. Collaboration between transportation researchers at the partner universities is likely to increase broader collaboration between the universities involved.
- What is the impact on transportation workforce development?*
Six of out of the eight STRIDE consortium member universities are participating in workforce development programs geared toward K-12 students, in multiple projects. For example, NCSU and UF offer the LEGO® Robot Vehicle Lesson Plans for Secondary Education. The LEGO® Robot Vehicle Lesson Plans have been downloaded from the STRIDE website 85 times by individuals and organizations across the U.S. Engineering outreach activities geared toward young girls have been held at UF and at NCSU at various local schools and in collaboration with WTS chapters. Family Engineering Nights are ongoing at MSU, UAB, FIU and UF. [GATech is developing a new series of teaching modules.](#)

- *What is the impact on physical, institutional, and information resources at the university or other partner institutions?*
There is increased emphasis and awareness of the importance and breadth of transportation at all partner institutions, as well as other collaborating institutions in the region and nationwide. Availability of various products and reports on our website and distribution through social media will enhance the flow of information.
- *What is the impact on technology transfer?*
A second UTC Conference for the Southeastern Region was organized, which brought together UTCs and State DOTs in the Southeast region in March 2014. A third UTC conference will be co-hosted by Mississippi State University and The University of Alabama at Birmingham in 2015.
- *What is the impact on society beyond science and technology?*
Increased collaboration between academic institutions; increased collaboration between academia, public and private sectors; development and implementation of the path from research to technology transfer; development and implementation of workforce development activities.

Changes/Problems

- *Changes in approach and reasons for change* – Nothing to report.
- *Actual or anticipated problems or delays and action or plans to resolve them* – Nothing to report.
- *Changes that have a significant impact on expenditures* – Nothing to report.
- *Significant changes in use or care of human subjects, vertebrate animals and/or biohazards* – Nothing to report.
- *Change of primary performance site location from that originally proposed* – Nothing to report.

Special Reporting Requirements

(Award-specific reporting requirements)

- Federal Financial Report – This report is prepared by the grants specialist at UF responsible for managing all STRIDE related financial duties.
- Federal Financial Accountability and Transparency Act (FFATA) Sub-award and Executive Compensation Reporting Requirement – This report is prepared by the College of Engineering contracts office.

List of Selected Projects and PIs (STRIDE 2013)

(The following projects were selected for funding)

Dynamic Traffic Control Interventions for Enhanced Mobility and Economic Competitiveness

PI: Nagui Rouphail, Ph.D., North Carolina State University
Co-PI: Mohamed Hadi, Ph.D., Florida International University
\$150,000

Signal Timing Optimization with Consideration of Environmental and Safety Impacts

PI: Mohamed Hadi, Ph.D., Florida International University
Co-PIs: Lily Elefteriadou, Ph.D., University of Florida
\$120,000

On-Board-Diagnostics (OBD) Data Integration into Traffic Microsimulation for Vehicle-Specific Fuel Use and Emissions Modeling and In-Vehicle App Testing

PI: Scott Washburn, Ph.D., University of Florida
Co-PIs: Christopher Frey, Ph.D., North Carolina State University; Nagui Rouphail, Ph.D., North Carolina State University
\$150,000

Using Crowdsourcing to Prioritize Bicycle Route Network Improvements

PI: Jeffrey J. LaMondia, Ph.D., Auburn University
Co-PI: Kari Watkins, Ph.D., Georgia Institute of Technology
\$100,000

Distracted Driving – It is not always a choice.

PI: Mike Hunter, Ph.D., Georgia Institute of Technology
Co-PI: Gregory M. Corso, Ph.D., Morehead State University
\$150,000

GIS-Based Instructional Tool for Crash Prediction Methods

PI: Ilir Bejleri, Ph.D., University of Florida
Co-PI: Siva Srinivasan, Ph.D., University of Florida
\$89,961

Investigating the Effect of Drivers' Body Motion on Traffic Safety

PI: Angelos Barmoutis, Ph.D., University of Florida
Co-PIs: Alexandra Kondyli, Ph.D., University of Florida; Virginia Sisiopiku, Ph.D., University of Alabama at Birmingham
\$132,972

Applying Livability Performance Measures to Transportation Plans and Projects

PI: Leigh Blackmon Lane, Ph.D., North Carolina State University
\$53,000

Engineers Change the World: A Hands-on workshop for 13- to 18-Year-Old Girls

PI: James Martin, Ph.D., North Carolina State University
Co-PI: Nina Barker, University of Florida
\$42,452

Teaching Schoolchildren Pedestrian Safety: A Pragmatic Trial Using Virtual Reality

PI: David Schwebel, Ph.D., University of Alabama at Birmingham

Co-PIs: Daniel Rodriguez, Ph.D., University of North Carolina at Chapel Hill; Virginia Sisiopiku, Ph.D., University of Alabama at Birmingham

\$150,000

School Transportation: Development of an Education Module

PI: Noreen McDonald, Ph.D., University of North Carolina at Chapel Hill

Co-PI: Ruth Steiner, Ph.D., University of Florida

\$71,000

List of Selected Projects and PIs (STRIDE 2012)

(The following projects were selected for funding)

Quantifying the Costs of School Transportation

PI: Noreen McDonald, Ph.D., University of North Carolina at Chapel Hill

Co-PIs: Ruth Steiner, Ph.D., University of Florida; Jeff Tsai, Ph.D., North Carolina State University

\$250,313

Empirically-Based Performance Assessment and Simulation of Pedestrian Behavior at Unsignalized Crossings

PI: Bastian Schroeder, Ph.D., North Carolina State University

Co-PIs: Lily Elefteriadou, Ph.D., University of Florida; Virginia Sisiopiku, University of Alabama at Birmingham

\$315,148

Comparative Analysis of Dynamic Pricing Strategies for Managed Lanes

PI: Jorge Laval, Ph.D., Georgia Institute of Technology

Co-PIs: Yafeng Yin, University of Florida; Yingyan Lou, University of Alabama

\$204,526

Signalized Intersection Simulation Program for Education

PI: Scott Washburn, Ph.D., University of Florida

\$34,212

Investigation of ATDM Strategies to Reduce the Probability of Breakdown

PI: Mohammed Hadi, Ph.D., Florida International University

Co-PI: Lily Elefteriadou, Ph.D., University of Florida

\$190,792

Engaging Engineering Students with Transportation Safety: An Educational Module

PI: Lesley Strawderman, Ph.D., Mississippi State University

\$2,610

A Naturalistic Driving Study across the Lifespan

Co-PIs: Despina Stavrinou, Ph.D. and Lesley Ross, Ph.D., University of Alabama at Birmingham

\$125,071

Development of Educational and Professional Training Modules on Green/Sustainability Design and Rating Systems for Neighborhood Development and Transportation

PI: Robert W. Peters, Ph.D., University of Alabama at Birmingham

Co-PI: Adjo Amekudzi, Ph.D., Georgia Institute of Technology

\$45,809

Developing a New Course for Public Transportation Education

PI: Kari Edison Watkins, Ph.D., Georgia Institute of Technology

Co-PI: Jeffrey LaMondia, Ph.D., Auburn University

\$70,000

Automated Sidewalk Quality and Safety Assessment System

PI: Randall Guensler, Ph.D., Georgia Institute of Technology

\$196,667

Development of Pedestrian and Bicycle Transportation Course Modules

PI: Daniel Rodriguez, Ph.D., University of North Carolina at Chapel Hill

Co-PI: Rod Turochy, Ph.D., Auburn University

\$25,750

Consequence Based Route Selection for Hazardous Material Cargo: GIS-Based Time Progression of Environmental Impact Radius of Accidental Spills

PI: Berrin Tansel, Ph.D., Florida International University

Co-PIs: Adjo Amekudzi, Ph.D., Georgia Institute of Technology; Nasim Uddin, University of Alabama at Birmingham

\$70,000

Analyzing the Impact of Carbon Regulatory Mechanisms on Supply Chain Management

PI: Sandra Eksioglu, Ph.D., Mississippi State University

Co-PI: Joseph Geunes, Ph.D., University of Florida

\$128,629

Engineering: It's for Girls, Too!

PI: James Martin, PE, North Carolina State University

Co-PI: Lily Elefteriadou, Ph.D., University of Florida

\$38,895

A Regional Land Use Transportation Decision Support Tool for Mississippi

PI: Brian Morton, Ph.D., University of North Carolina at Chapel Hill

Co-PIs: John Poros, Ph.D., Mississippi State University; Joe Huegy, Ph.D., North Carolina State University

\$120,380

Towards a Holistic Understanding of Quality of Life: An Analysis of Activity-Travel Patterns on Non-Mid-week Days

PI: Siva Srinivasan, Ph.D., University of Florida

Co-PI: Xia Jin, Ph.D., Florida International University

\$77,790

Development of Graduate Level Course on Sustainable Asphalt Pavements

PI: James Richard Willis, Ph.D., Auburn University

\$\$47,837

Emissions Modeling and Integration into Traffic Micro-simulation

PI: Scott Washburn, Ph.D., University of Florida

Co-PIs: Nagui Roupail, Ph.D., North Carolina State University; H. Christopher Frey, Ph.D., North Carolina State University

\$251,764

List of Cost Share Projects

Local Technical Assistance Program (LTAP) 2012

PIs: Nina Barker, M.S. and Kirk Hatfield, Ph.D., University of Florida

Safety Project Development Capacity for Small Communities in Coordination with Local Technical Assistance Program Center

PIs: Ilir Bejleri, Ph.D. and Siva Srinivasan, Ph.D., University of Florida

Comparison of Methods for Measuring Travel Time at Florida Freeways and Arterials

PI: Lily Elefteriadou, Ph.D., University of Florida

Estimation of Capacities of Florida Freeways

PI: Lily Elefteriadou, Ph.D., University of Florida

Modeling, Implementation, and Validation of Arterial Travel Time Reliability

PI: Lily Elefteriadou, Ph.D., University of Florida

Roundabouts and Access Management

PI: Ruth Steiner, Ph.D., University of Florida

Co-PIs: Scott Washburn, Ph.D., University of Florida; Albert Gan, Ph.D., Florida International University

Planning for Incorporating Ancillary Demands in the Next Generation FSUTMS

PI: Siva Srinivasan, Ph.D., University of Florida

Deployment Strategies of Managed Lanes on Arterials

PIs: Yafeng Yin, Ph.D. and Siriphong Lawphongpanich, Ph.D., University of Florida

Lifting HOV/HOT Lane Eligibility and Shoulder Use Restrictions for Traffic Incident Management

PIs: Yafeng Yin, Ph.D. and Lily Elefteriadou, Ph.D., University of Florida

Estimation of Capacities on Florida Freeways

PI: Lily Elefteriadou, Ph.D., University of Florida

Comparison of Methods for Measuring Travel Time at Florida Freeways and Arterials

PI: Lily Elefteriadou, Ph.D., University of Florida

Deployment Strategies of Managed Lanes on Arterials

PIs: Yafeng Yin, Ph.D., and Siriphong Lawphongpanich, Ph.D. (Team is from University of Florida)

Crash Prediction Methods for Freeway Facilities with High Occupancy Vehicle (HOV) and High Occupancy Toll (HOT) Lanes

PI: Siva Srinivasan, Ph.D., University of Florida

Policy Implications of Automated Vehicle Technology

PIs: Siva Srinivasan, Ph.D., Carl Crane, Ph.D., and Ruth Steiner, Ph.D. (Team is from University of Florida)

K-12 Workforce Development Projects

Florida International University, K-12 Workforce Development Activities, 2012

PI: Berrin Tansel, Ph.D.

Mississippi State University, K-12 Workforce Development Activities, 2012

PI Eric Heiselt, Ph.D.

North Carolina State University, K-12 Workforce Development Activities, 2012

PI: James Martin, P.E.

University of Alabama at Birmingham, K-12 Workforce Development Activities, 2012

PI: Virigina Sisiopiku, Ph.D.

University of Florida, K-12 Workforce Development Activities, 2012

PI:s Nina Barker, T2 Assistant Director and Leslie Washburn, P.E.

Georgia Institute of Technology, Engaging in Engineering Initiative with Centennial Elementary School, 2013

PIs: Yanzhi (Ann) Xu, Ph.D., and Alice Grossman (doctoral student)

North Carolina State University, K-12 Workforce Development Activities, 2013

PI: James Martin, P.E.

University of Alabama at Birmingham, K-12 Workforce Development Activities, 2013

PI: Virginia Sisiopiku, Ph.D.

University of Florida, K-12 Workforce Development Activities, 2013

PIs: Nina Barker, T2 Assistant Director and Leslie Washburn, P.E.