

STRIDE

Southeastern Transportation Research,
Innovation, Development and Education Center

2013 Solicitation for Pre-Proposals

Opening Date: Friday, February 22, 2013
Closing Date: Friday, March 29, 2013
by 5 pm, EST

**A Regional University Transportation Consortium in the Southeast
Managed by the University of Florida in partnership with:**
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

UF Transportation Institute
Gainesville, Florida 32611
<http://www.stride.ce.ufl.edu/>

Section A - Introduction

A grant by the Research and Innovative Technology Administration (RITA) of the U.S. Department of Transportation has been awarded to the Transportation Research Center (TRC) at the University of Florida. UF leads a consortium of universities within the established Federal Region 4 (Southeast). The consortium, also known as the Southeastern Transportation Research, Innovation, Development and Education Center (STRIDE) includes: Auburn University, Florida International University, Georgia Institute of Technology, Mississippi State University, North Carolina State University, University of Alabama at Birmingham, and the University of North Carolina at Chapel Hill. Projects selected from the STRIDE Center's first RFP in 2012 are posted at <http://www.stride.ce.ufl.edu/current-projects>. The center will receive an additional \$3,397,600 (federal Fiscal Year 2012 funds), and it is expected to obtain matching funds from non-federal sources in an amount at least equal to the U.S. DOT grant amount. This RFP solicits pre-proposals from STRIDE consortium members for allocation of these funds. Funds are available in the categories of research, education, workforce development, and technology transfer. U.S. DOT/RITA defines each area as:

Research: Basic and applied research, the products of which are judged by peers or other experts in the field of transportation to advance the body of knowledge in transportation.

Education and Workforce Development: An education program relating to transportation that includes multidisciplinary course work and participation in research, workforce development activities and programs to expand the workforce of transportation professionals

Technology Transfer: An ongoing program of technology transfer that makes transportation research results available to potential users in a form that can be implemented, utilized or otherwise applied.

This announcement invites pre-proposals in each of these categories for work to be conducted starting in the 2013 calendar year (expected start date is August 1, 2013). These pre-proposals require submission of a two-page statement of work along with an estimate of the proposed budget. If collaborative, the pre-proposal must include separate budgets from each participating institution. This document provides information on topics related to research, education, workforce development, and technology transfer that proposers should focus on, followed by instructions on how to apply.

Section B – Pre-proposal Categories

STRIDE has identified three major research areas critical to the needs of Region 4 within the federal objectives that pre-proposals should focus on: safety, livable communities, and economic competitiveness. STRIDE's Internal Steering Committee (ISC) has developed examples of problem statements in each of these areas. Education and workforce development, as well as technology transfer components could be built into the proposed research work. Pre-proposals specifically focusing on education, workforce development or technology transfer may also be submitted.

RESEARCH PROPOSALS

Safety

This is one of the highest priorities of the U.S. DOT. Safety studies focus on diverse topics regarding the relationships between the transportation environment, the vehicle and driver/passenger characteristics, and crashes or conflict occurrence. The STRIDE Center would like to examine several aspects of safety that reflect the regional and national needs and build on ongoing activities within the STRIDE consortium. These include, but are not limited to the following:

- Safety considerations for older drivers/children/special populations
- Pedestrian and bicycle safety
- Human factors research
- Development and application of the Highway Safety Manual and the Highways for Life Program
- Emergency evacuation procedures
- Connected vehicles and truck safety

Examples of specific research questions within the safety area to be addressed are:

1. What are the impacts of existing and under development vehicle-to-vehicle or vehicle-to-infrastructure communications technologies on safety?
2. What advanced vehicle and infrastructure technologies need to be developed to promote safety for all travelers?
3. What roadway features and infrastructure elements increase safety for all travelers?
4. How can we identify early signs of decline in visual, cognitive, and motor performance in drivers and use this information to promote safe driving?
5. What is the optimal use of the transportation network under an emergency evacuation?
6. How can the transportation system combined with advanced technologies and strategies be designed and used to improve the safety for freight transportation?
7. What are the best technologies or algorithms for rapid incident identification and response?
8. What additional measures (e.g. surrogate measures) may be utilized to allow for proactive, rather than reactive, identification of safety issues?

Livable Communities

Livable communities encompasses various aspects of the transportation system, including congestion management, livability-related performance measures, development of tools for supporting transportation decision making to enhance livability, and air quality considerations. The STRIDE regional center would like to focus on these and related areas by inviting proposals for funding from its consortium partners in the following areas:

- Congestion management strategies
- Development of livability performance measures
- Environmental quality assessment and modeling

- Land use planning and multimodal transportation
- Bicycle and pedestrian facilities evaluation and modeling
- Development of advanced vehicle and traffic control technologies for congestion mitigation

Examples of specific research questions within the area of livable communities to be addressed are:

1. What transportation system designs and urban land use networks promote activity participation by older, younger, and disadvantaged populations?
2. What are barriers and facilitators for the development of a multimodal transportation network?
3. What vehicle technologies and traffic management strategies are most effective in alleviating congestion?
4. How should livability be measured and evaluated?
5. How should decision support tools be designed such that they can best assist agencies in their goal to provide livable communities?

Economic Competitiveness

Economic competitiveness within a transportation context encompasses three broad areas of activity: A) improvement of transportation systems to create "smart" infrastructure essential for U.S. public and private sector entities to operate more profitably and/or cost-effectively; B) development of innovative transportation funding and finance strategies for supporting transportation investment; and C) creation of technology-based spinoff companies that will commercially develop new transportation related technologies and create jobs. The STRIDE Center will solicit research proposals that address the first two of these aspects of economic competitiveness. Research areas of particular interest to the STRIDE center include, but are not limited to the following:

- Costs and benefits of multimodal transportation components
- Freight and logistics
- Port operations
- Energy costs/competitiveness in the mega-region
- Funding mechanisms
- Economic competitiveness for the south – capitalizing in increasing presence of the automotive industry
- Materials

Examples of specific research questions within the area of economic competitiveness to be addressed are:

1. What is the best use of advanced technologies and strategies for increasing the productivity and reliability of freight transportation?
2. What are the best tools and data sources for agencies to be able to prioritize project selection considering factors such as safety and livability?
3. What is the best approach for developing public-private-partnerships (PPP)?
4. What are the strengths and weaknesses of various funding mechanisms for the transportation system?

EDUCATION PROPOSALS

Pre-proposals that aim to enhance the educational activities of the STRIDE Consortium as related to undergraduate and graduate students will be considered. Areas of interest include, but are not limited to:

- Course modules on topics related to safety, livability, and economic competitiveness. It is expected that the course modules will address topics of regional and national importance, building on the strengths of the consortium and can be incorporated into any transportation course and used by universities.
- Creation or enhancement of distance education courses for undergraduate or graduate transportation students.

A pre-proposal focusing on research, workforce development, or technology transfer may also have education-related components. In these cases, the educational components of the proposal should be clearly identified and explained, and there is no need for a separate “educational” proposal.

WORKFORCE DEVELOPMENT PROPOSALS

Pre-proposals that focus on developing new workforce development or enhancing existing programs will be considered. Areas of interest include, but are not limited to:

- K-12
- Undergraduate courses
- Distance education courses for transportation professionals
- Enhancement of existing courses and activities

A pre-proposal focusing on research, education, or technology transfer may also have workforce development components. In these cases, the workforce development components should be clearly identified and explained and there is no need for a separate “workforce development” proposal.

TECHNOLOGY TRANSFER PROPOSALS

Technology transfer is one of the main objectives of the U.S. DOT and of the STRIDE Consortium. Communicating and making available research results in a form that can be implemented, utilized and applied by the broader transportation community is vital. Pre-proposals may include the following:

- Webinars
- Workshops
- Short courses

A pre-proposal focusing on research, education, or workforce development may also have technology

transfer components. In these cases, these components should be clearly identified and explained.

Section C – Guidelines for Submitting a Pre-proposal

Eligibility:

Faculty and staff who are members of the STRIDE Consortium are eligible to submit pre-proposals and serve as Principal Investigators (PIs). Collaboration with researchers from two or more universities is highly encouraged. Proposals with multiple investigators must identify a lead PI; all others should be designated as “Other Significant Researchers.” Pre-proposals may involve an entity that is not part of the consortium, although preference will be given to proposals with consortium members. PIs may submit more than one pre-proposal. Only pre-proposals received by the deadline will be reviewed.

Pre-proposal Evaluation:

The pre-proposals will be evaluated by external reviewers knowledgeable in the subject matters of the pre-proposal who will be asked to evaluate the pre-proposals and provide STRIDE with their recommendations. Each pre-proposal will be evaluated by at least three reviewers. A subset of the pre-proposals will be selected and invitations for full proposals will be announced by April 26, 2013.

The reviewers will be asked to address the following when reviewing pre-proposals:

For research projects (100 points total):

- Relevance to the STRIDE themes and priorities 20
- Collaborative activities 15
- Innovation and originality 15
- Soundness of method 15
- Personnel, facilities, budget, and other resources 10
- Educational component 10
- Tech transfer component 10
- Work force development component 5

For educational projects (100 points total):

- Relevance to the STRIDE themes and priorities 20
- Collaborative activities 20
- Innovation and originality 20
- Soundness of method 15
- Personnel, facilities, budget, and other resources 10
- Transferability of results and products 10
- Work force development component 5

For technology transfer projects (100 points total):

- Relevance to the STRIDE themes and priorities 20
- Collaborative activities 20
- Innovation and originality 20
- Soundness of method 15
- Personnel, facilities, budget, and other resources 10
- Transferability of deliverables 10
- Educational component 5

For workforce development projects (100 points total):

- Relevance to the STRIDE themes and priorities 20
- Collaborative activities 20
- Innovation and originality 20
- Soundness of method 15
- Personnel, facilities, budget, and other resources 10

- Transferability of results and products 10
- Tech transfer component 5

Funding & Budget

Projects must be budgeted for up to seventeen months and are expected to begin on August 1, 2013. The project schedule should allow for at least three months for external review and revisions of the draft final report. The current STRIDE grant is scheduled to be completed by January 31, 2016. Therefore, we require all projects to be externally reviewed and completed, and a final report posted no later than December 31, 2015. Collaborative pre-proposals must include separate budgets from each participating institution. Total project funding should include each institution's federal indirect cost rate. Because of the broad scope of this announcement, STRIDE expects to fund projects at various levels.

Matching funds from non-federal sources are required. At the pre-proposal stage, the proposer should indicate the cost sharing source. A letter indicating the source and the cost-sharing amount will be required at the full proposal stage. The non-federal funds may include funds provided to a recipient under sections 503, 504(b), or 505 of Title 23, United States Code (the technology deployment, local technical assistance, and state planning and research programs managed by the Federal Highway Administration). The non-federal funds may be cash or in-kind, and must be used to accomplish program objectives.

Application Submittal Instructions:

DEADLINE - Friday, March 29, 2013, 5 pm EST

1. Complete the STRIDE Pre-proposal Submission Form and provide a two-page write-up of the project you are proposing.
2. Prepare an estimated budget total, including the institution(s) indirect cost rate, and a justification for the budgeted items. A separate budget should be provided for each participating university, if a collaborative pre-proposal.
3. Include the name of the source that you anticipate will provide matching funds. This must be included for each university, if a collaborative pre-proposal.
4. Submit the Pre-Proposal Form, the two page write-up, along with the budget(s) and justification via e-mail to STRIDE Research Coordinator (Ines Aviles-Spadoni) at iaviles@ce.ufl.edu by the published receipt deadline: Friday, March 29, 2013 by 5 pm EST. It is important to copy your STRIDE institutional representative (see page 9) in the email when submitting the pre-proposal.

Instructions for the full proposal submission process will be provided when invitations are made and will be posted on the STRIDE Center's website. The STRIDE Center Internal Steering Committee may decide to fund a project as proposed, fund with modifications to scope and/or budget, or not to fund at all.

Note: For budget-related questions, contact your institution's grants specialist or administrator.

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Section D – Contact Information

For questions related to this pre-proposal solicitation, contact the following STRIDE Center personnel:

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