National Institute for Transportation & Communities
Round 3 Request for Proposals

For more information, visit: **www.otrec.us/nitc**

1 Overview

The **National Institute for Transportation and Communities (NITC)** invites proposals for research, education, and technology transfer projects. This grant is part of the University Transportation Center (UTC) program funded by the U.S. Department of Transportation's (USDOT) Research and Innovative Technology Administration (RITA), and is a partnership between Portland State University (PSU), the University of Oregon (UO), the Oregon Institute of Technology (Oregon Tech), and the University of Utah (UU). The mission of the UTC program is to advance U.S. technology and expertise in the many disciplines comprising transportation through the mechanisms of education, research, and technology transfer at university-based centers. (see utc.dot.gov for more information).

NITC is focused on contributing to transportation projects that support innovations in:

livability, incorporating safety and environmental sustainability

We will award at least $750,000 to research, education and technology transfer projects that support NITC's theme. Projects should range from $30,000 to $150,000. Projects can focus on research, education, or technology transfer. All projects submitted for this RFP will undergo peer review. All awards require one-to-one non-federal match in the form of cash or in-kind services from project partners—to include universities, transportation and other public agencies, industry, and nonprofit organizations. Projects awarded under this RFP may start as soon as August 1, 2014 and must be completed by December 31, 2015, including the final report.

Successful research proposals will fit the NITC theme, linking to articulated USDOT priorities specifically livability, environmental sustainability and safety. Successful education proposals will enhance, develop, or promote undergraduate or graduate transportation education with sustained outcomes or support continuing education for practitioners. Technology transfer proposals should support the application of transportation research to practice, including dissemination of research results, continuing education, and training.

1.1 Key dates

March 2014	**Abstracts due March 15**
April 2014	**Proposals due April 15**
May 2014	Peer Reviews
June-July 2014	Project selection, Awards and Task Orders
August 2014	Projects begin

2 Theme

The NITC theme connects directly with the U.S. DOT strategic goal of livability, incorporating safety and environmental sustainability. All proposals must be consistent with this theme, as defined below:

- **Improve health and safety for all users:** Research should address both a key outcome of a livable community—improved physical and mental health—and an essential input—a safe transportation system. Safety research should focus on understanding how design, operations and users affect safety outcomes. It embraces the *U.S. DOT Strategic Plan*'s strategy to "increase safe, convenient, and attractive facilities for non-motorists."
- **Increase the efficiency and understanding of bicycle, pedestrian and transit modes:** Research that examines the behavioral decisions behind walking, bicycling, and transit use. An emphasis on a multidisciplinary approach—that includes urban planning and design, economics, modeling, and engineering—is critical in including and integrating non-auto modes and transit. This research complements the *U.S. DOT Strategic Plan*'s Livable Communities strategies for improved public transit experience and improving networks to integrate pedestrians and bicycles.
- **Make the best use of data, performance measures, analytical tools and new technologies:** MAP-21's Declaration of Policy states that "Performance management will transform the Federal-aid highway program and provide a means to the most efficient investment." In support of this goal, projects should aim to fill the gap and lead development in multimodal performance metrics, data and tools that will allow decision makers to create more livable transportation systems.
- **Integrate multimodal transportation and land use:** *U.S. DOT's Strategic Plan* clearly outlines a coordinated approach to livable communities that integrates transportation and housing while considering environmental concerns. NITC projects should focus on the nexus of multimodal transportation (passenger and freight) and land use that is the heart of creating sustainable, prosperous and safe communities.
- **Take long-term action on transportation emissions and climate change:** The *U.S. DOT Strategic Plan* recognizes the need to transform our transportation system into one that burns less oil and emits less carbon, another key aspect of livable communities. Recognizing the importance of both mitigating and adapting to climate change, projects should focus on modeling and program evaluation of new technologies (electric/alternatively-fueled vehicles and Intelligent Transportation Systems (ITS)), infrastructure, demand management and land use strategies.

3 Priorities

All proposals must contribute to the NITC theme of livability, incorporating safety and environmental sustainability as detailed in Section 2. Projects must focus on transportation. If you have any questions about whether your proposal topic is appropriate, please contact your university's Executive Committee member or NITC staff in advance. Proposals can address NITC's research, education or technology transfer objectives and priorities.

3.1 Research Projects

NITC is looking for research proposals that show strong potential to move transportation research into practice, inform other researchers, shape national and international conversations on transportation research, and respond to the needs of practitioners and policymakers. Research grants typically range between $60,000 to $150,000 per project. Priority is given to projects that are collaborative, multi-disciplinary, and multi-campus. Proposals that specifically respond to the NITC Advisory Board and transportation data priorities below will be given preference for funding.

The NITC Advisory Board has identified several priority areas to focus near-term research. These include:

- What are the economics of livability? In particular, what are the economic benefits of active transportation and transit-related improvements?
- How do you measure safety of all modes as it relates to livability?
- What is the relationship between infrastructure and the effect on travel behavior (with an emphasis on walking and cycling)? For example, what changes travel behavior? How might a new facility change active transportation demand over time? What pedestrian/biking infrastructure change results in the most new (e.g., nontraditional users, women biking, etc.) users? What are international best practices related to modal shift strategies?
- How do changing demographics impact transportation needs? For example, what can transportation agencies do now to adapt to the changing needs of an aging population?
- New technology (ITS and transit). How does technology affect demand? Resiliency scenario planning especially as it relates to extreme weather events.
- Data and performance measures. Explore ways to maximize the use of existing data for livability and develop new ways to measure/track transportation behavior.

3.1.1 Research on Transportation Data for Livable Communities

A specific objective of NITC is to support research projects that will create a model for data collection, management and dissemination that will foster the wider, national use of data resources collected on a local level. NITC will give preference scoring to grants for projects that develop models and pooling of information for data collection (surveys, pedestrian/bicycle counts, real-time transit information, GPS and other technologies, etc.); fostering collaboration with nationally recognized organizations (other UTCs, DOTs and agencies) responsible for collecting and disseminating data collection; and through innovative education projects in which students collect and analyze data at a national scale.

3.2 Education Projects

One of NITC's goals is to support a multidisciplinary transportation workforce. We therefore encourage and fund educational programs and experiential learning across disciplines in the transportation field. NITC is looking for education projects (grants typically range between $30,000 to $60,000) with broad, replicable and sustained outcomes. For example, this may be the development of new curricula that is shared with faculty or replicated beyond the PI's university. Education grants are also intended to provide seed funding that will support new classes, curricula, and activities that could be supported and adopted by the University in subsequent years. Education projects must have an appropriate final product that will be of use to the broader transportation education community, e.g. model curricula, program materials, lessons learned, etc.

Other education projects may focus on attracting more students to transportation as a profession, or support continued education for those already in the field, preferably with measurable outcomes. Education programs that encourage coordination of curricula, sharing of courses in person and via distance learning, exchanges among students and faculty at our Oregon and Utah campuses, and with other national and international universities are also preferred. Examples include:

- Summer workshops on topical areas for undergraduate, graduates, and professionals.
- Community-based transportation education programs aimed at middle and high-school students (pre-college, summer and hand-on interactive school programs, etc.).
- Efforts to increase the diversity of transportation students in Oregon and Utah, to recruit and support women and minorities (students who receive NITC grants, fellowships and other non-compensation financial support must be U.S. citizens or permanent residents of the U.S.).

One of the inspiring aspects of the transportation field is that it impacts every community member. With some basic understanding of how transportation decisions are made, there is an opportunity to better harness natural community leadership to get more engaged in transportation decision-making. NITC will give preference scoring to education projects that specifically target creating community leaders among the general public (not university students) and where community members are the primary objective, not a secondary or complementary objective to a larger research project.

3.3 Technology Transfer Projects

Technology transfer is a key component of NITC activities. These projects should focus on making research results available to potential users in a form that can be directly implemented, utilized, or otherwise applied. Proposals will be accepted that support an expanded and coordinated program of transportation outreach involving accessible communication of research results, continuing education and training courses for transportation professionals at all levels and at all stages of their careers, and in a variety of formats. Proposals should address transportation agency, industry, and community needs, as well as appeal to a larger national and/or international audience. Technology transfer grants typically range from $30,000 to $65,000 per project. Examples of technology transfer proposals include:

- Developing guidebooks or research syntheses that can aid agencies and practitioners in understanding, applying, or implementing specific research results.
- Efforts to improve transportation planning, such as developing transportation training modules for new city managers, planners, planning commissioners, and legislators throughout various regions across the United States.
- Expansion of existing short courses and training programs.

4 Eligibility

Faculty members and research faculty eligible to serve as PIs at Portland State University, the University of Oregon, the Oregon Institute of Technology, or the University of Utah may submit proposals. Pre-approved Faculty Associates are eligible to submit proposals as Principal Investigators. However, the cap on projects led by Faculty Associates is $64,000 per project. There is no funding cap on projects on which Faculty Associates partner with NITC faculty, where a NITC faculty member is the PI.

Proposals may include multiple investigators, and collaborative projects across disciplinary and campus boundaries are encouraged. Proposals including multiple investigators must identify one lead PI contact responsible for reporting and associated administrative tasks. PIs may submit more than one proposal. NITC Executive Committee members are allowed to submit proposals, but are not allowed to be involved during deliberations and decisions related to their proposals.

5 Criteria for Evaluation

All proposals will be reviewed externally by at least three peer-reviewers, including at least one practitioner from the public or private sector. Education and technology transfer projects will be reviewed by academics or practitioners with appropriate expertise (e.g. in curriculum development, etc.). Proposals are also scored by NITC staff using the programmatic criteria (Section 5.2). The external peer-review and programmatic numerical scores are then used in the proposal selection process. The Executive Committee selects the final slate of proposals via consensus.

5.1 Peer Review Criteria

Peer reviews are single-blind and reviewers will remain anonymous. Reviewers are selected from universities, local, regional, and national agencies, private sector practitioners, and other university transportation centers. An established procedure for reviewer conflict of interest is followed. Peer-reviewers assess the proposals based on intellectual merit, broader impacts, relevance to NITC's theme and the national transportation research agenda. The specific peer-review criteria include:

- **Intellectual merit.** What is the intellectual merit of the proposed activity? How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields? How well qualified is the proposer (individual or team) to conduct the project? To what extent does the proposed activity suggest and explore creative and original concepts? How well conceived and organized is the proposed activity? Is there sufficient access to resources?
- **Broad Impacts.** Does the proposed activity have broad impacts? How well does the activity advance discovery and understanding while promoting teaching, training, and learning? How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, modal, etc.)? To what extent will it enhance the infrastructure for research, education and technology transfer, such as partnerships or activities beyond the funded project that will live on past the life of the specific project and further NITC's objectives? Will the results be disseminated broadly to enhance scientific and technological understanding?
- **Budget.** Is the project budget reasonable given the tasks proposed?
- **Overall Rating.**
    - Excellent: Outstanding proposal in all respects; deserves highest priority for support
    - Very Good: High quality in nearly all respects; should be supported if at all possible
    - Good: A quality proposal worthy of support
    - Fair: Proposal lacking in one or more critical aspects; key issues need to be addressed
    - Poor: Proposal has serious deficiencies

5.2 Programmatic Criteria

Each proposal is also scored by NITC staff using programmatic criteria. These criteria are:

- **To what extent does the proposal support and mentor students?** Priority will be given to projects that demonstrate meaningful student involvement in the project. Examples include being research assistants, co-authoring publications, and making presentations.
- **To what extent does the proposal leverage matching funds?** Priority will be given to external cash match and active in-kind match (e.g., active participation of partners in the research project).
- **Does the proposal support untenured tenure track (junior) faculty?** Additional priority will be given to core transportation junior faculty. For example, faculty who teach transportation classes and/or whose research agenda focuses on transportation.
- **To what extent does this project support substantive and meaningful collaboration?** Collaboration include more than one discipline; external agency, nonprofits, private industry, or other state/country, etc. Priority will be given to demonstrated collaboration. Collaborative proposals should clearly describe the structure of the collaboration, the management and decision-making process, and justify the need for collaboration on the proposed research.
- **What is the PIs past performance on other UTC projects (on time reporting, etc.), likelihood of successful completion, potential for technology transfer?** NITC will not accept proposals from PIs or co-PIs with incomplete projects and outstanding final reports.
- **Does the proposal fit the NITC theme?** See Section 2 for a description of the theme.

- **Does the proposal support equity and diversity?** Priority will be given to projects that demonstrate the potential to increase access to resources and opportunities for historically underserved populations.
- ***Education proposals only*:** To what extent does the educational activity support community engagement? Priority will be given to projects that specifically address engagement of community leaders.

6 Project Requirements

PIs will be asked periodically to provide progress reports and performance metrics related to their funded research for federal reporting. Adequate progress and performance on previously funded research is an overriding consideration for the funding of future grants, including this RFP. Those that have not submitted progress reports or final reports will not be considered for funding and risk having funds withheld from current grants. Similar restrictions will apply to any future NITC funding opportunities.

6.1 Progress Reports

Progress reports are required according to NITC's funding requirements. These reports will support NITC's federal reporting responsibilities. Reports will be submitted on-line and include: accomplishments, dissemination activities, products (e.g. submitted publications, conference presentations, websites, etc.), detailed information on project participants, including faculty, students, and partners, impact of the project, and changes/problems. As part of the each progress report, we will also require information regarding undergraduate and graduate students participating in the research, and information relating to publications and presentations presented at academic/professional meetings resulting from the funded research.

6.2 Publications and Presentations

PIs and students who are funded by NITC will be expected to prepare articles based on research findings for publication in refereed journals and make presentations at national conferences. Through these venues, researchers and students will receive additional peer-review feedback on their work and should incorporate this into their projects. Electronic copies of all papers submitted to journals or conferences that are based on the project research should be provided to NITC. NITC support should be acknowledged in all work that results from NITC funding. Student contributions to research should be acknowledged in publications via acknowledgement, footnote or co-authorship. Travel funds in the amount of $2500 per proposal will be provided by NITC for sharing and presenting results at conferences or similar opportunities. Each project must provide matching funds for these travel funds.

6.3 Final Reports/Products

6.3.1 Research Projects

Research projects will produce a final report that will be peer-reviewed externally. For proposals for this RFP, PIs should plan on submitting a draft report conforming to style guidelines (templates will be available on the web) no later than one month prior to the project end date. Final invoices will only be paid once the draft report is submitted. The report should document the research project in total, including a complete description of the problem, objectives, approach, methodology, findings, conclusions, and recommendations. The report should document all data gathered, analyses performed, and results achieved.

The draft report will be peer-reviewed during a two-month review process. We will send the draft research report to at least two peer-reviewers. As applicable, at least one representative of the matching/partner entity will be asked to provide a review. PIs are responsible for incorporating peer-review comments into the final report. Before publishing, final reports that incorporate peer review comments will be reviewed by an editor to ensure standard formatting requirements are met. When a report is produced as part of a joint effort, NITC will work with the matching/sponsoring entity to ensure that one report will meet the requirements of all partners. All final reports will be produced as part of a numbered report series, and will include the RITA disclaimer and NITC funding attribution. All final reports will be posted on-line. More details about project requirements can be found in the "*Principal Investigator's Guide to Sponsored Activities*" posted online.

6.3.2 Education and Technology Transfer Projects

NITC requires two products from education and technology transfer projects. The first is a short internal report to NITC describing how the project was carried out. The second is a product that can be shared with the larger transportation community. This product will vary depending upon the project. **The PI must describe their intended final product in their proposal.** Examples would include model curricula, classroom materials, lessons learned, and/or a website, among others. These products will be posted on the NITC website. PIs should plan on submitting a draft product **no later than one month prior to the project end date**.

NITC will not conduct a blind peer-review of these products at the end of the project. Instead, the PI should incorporate some form of external review that feeds into the final product during the timeline of the project. For example, the PI could ask 2-3 faculty members at other campuses to review their curricula before finalizing it to produce the final product. Feedback from participants in the projects (e.g. practitioners attending a continuing education course) could also be used as feedback to improve the final product. **For these proposals, PIs must describe appropriate feedback and input will be collected on the final product.** The process must also be described in the final, short internal report.

7 Budget

Applicants must use the NITC Budget Form. Proposal budgets should be conservative and cost-effective, and should be primarily directed at new and original work. Funds should be spent in a manner that provides publishable results. In general, faculty salary (summer or academic year), student support, and tuition/fee reimbursement are allowable expenses. An appropriate amount of funding for travel for data collection purposes and materials and supplies may be included, provided that they are a direct expense related to completing the work. Please provide a narrative of how these research travel funds planned to be used. *The project budget should not include travel funds to present project results at conferences.* Instead, each funded proposal will be awarded a separate travel budget of $2,500. This travel budget will be administered separately and will be available to PIs to support presentations of project results. Funding for students is expected in all projects, such as research assistant tuition and salary. Federal indirect costs (overhead) specific to each NITC university and OPE (fringe benefits) should also be included in the budget. *Tuition charges are not subject to indirect costs.* Equipment purchases (equipment is generally defined as items over $5,000) and international travel are not permitted unless specific justification is provided and *prior* approval is obtained from NITC and the US DOT. Budget for expenses normally considered part of university F&A (phones, facilities, regular office supplies, computers, etc.) should not be included.

Funding for salary that goes beyond normal academic or summer compensation will not be allowed. In the case of joint projects with faculty from other NITC universities, the second university activity should be budgeted as a separate budget for that university. In addition:

- Projects should be budgeted to begin on or after August 1st, 2014 and completed by December 31st, 2015. Please plan to submit the draft final report no later than one month prior to the project end date.
- New awards to prior investigators will depend on successful completion of previously-funded projects and timeliness of research progress and reporting.
- NITC reserves the right to request reductions or other changes to budgets of submitted proposals. Budgets should be justified and cost-effective, and should follow all budget guidelines for indirect cost rates, allowable expenditures, etc.
- Awards are cost-reimbursable.

7.1 Matching Funds

All awards require 100% match. Budgets should include $3700 fixed-project expenses (conference travel, copy editing and peer review, $2500 for education and technology transfer projects) from non-federal sources. In addition, match funding is a good indication of local partner commitment to the project and will be considered in the programmatic review. Some federal funds will qualify as match: specifically funds under U.S.C. Title 23, Sections 503, 504(b), or 505, which refer to technology deployment, local technical assistance, state planning and research (SPR) programs and national cooperative highway research program (NCHRP) managed by the Transportation Research Board. PIs should use the Budget Form to indicate match commitment. Letters of intent or other documentation of match commitment, signed by an institutional official authorized to obligate cost share, should be included with the Proposal Form; *awards will not be finalized without confirmation of the match commitment*. Sample match commitment letters can be found on the website. NITC follows the rules set forth in OMB Circular A-110 (www.whitehouse.gov/omb/circulars/a110/a110.html#23) for the use of in-kind and cash contributions as matching funds. The start date of matching funds is August 1st, 2014.

8 How to Apply

8.1 Project Abstracts

All proposers must first submit a proposal abstract online (otrec.us/for_researchers/rfp). The abstract should consist of 1-2 paragraphs describing the project objectives and proposed methods. The abstract should also briefly explain how it fits the NITC theme. NITC will only accept proposals for projects for which the PI has submitted an abstract on-line. The abstract is used for two purposes: to make sure that the project fits the NITC theme; and to aid staff in identifying potential peer reviewers. NITC and the Executive Committee will identify abstracts that may not closely fit the NITC theme (see Section 2). A PI may decide for other reasons not to submit a proposal after submitting an abstract. However, a PI may not submit a proposal for which an abstract was not submitted. Abstracts are due **March 15th at 5:00 PM PDT**.

8.2 Project Proposals and Budgets

Complete the **Proposal Form (pdf)** and **Budget Form** (Excel spreadsheet) and submit on-line (otrec.us/for_researchers/rfp). Proposals are typically 10 to 12 pages long. Do not use prior year forms. **Proposals are due April 15, 2014 at 5:00 PM PDT.** Incomplete or late proposals will not be considered.

Proposals and budgets must be approved by the PI's home university research office prior to submission and ***will not be considered without their approval.*** PIs must follow their university's requirements for approval of proposals, including match commitment and use of human subjects (if applicable). Further questions regarding university approval should be directed to the home university research administration office or the home university Executive Committee member:

- **PSU**: Proposal Internal Approval Form (PIAF): https://sites.google.com/a/pdx.edu/research/lifecycle/proposal/psu-proposal-approval *Note that an additional NITC-specific form will also be required* and sent to PIs after they submit their projects abstracts.
- **UO**: Apply through Electronic Proposal Clearance System (E-PCS) and Office of Research Services and Administration: http://orsa.uoregon.edu/
- **UU**: UU Office of Sponsored Project: http://www.osp.utah.edu/
- **OIT**: Office of Strategic Partnerships: http://www.oit.edu/office-of-strategic-partnerships Preliminary approval form:

9 Contact Information

For questions about research proposals, please contact Susan Peithman, Research and Education Program Administrator, 503-725-2838, peithman@pdx.edu. . Each campus has a representative on NITC's Executive Committee who can discuss the process:

- Marc Schlossberg, University of Oregon, 541-346-2046, schlossb@uoregon.edu
- Keith Bartholomew, University of Utah, 801-585-8944, bartholomew@arch.utah.edu
- Roger Lindgren, Oregon Institute of Technology, 541-885-1947, roger.lindgren@oit.edu
- Miguel Figliozzi, Portland State University, 503-725-2836, figliozzi@pdx.edu

For other questions, please contact Hau Hagedorn, NITC Research Program Manager, 503-725-2833, hagedorn@pdx.edu.

For more information, visit www.otrec.us/nitc.