



Vermont Transportation Research Collaborative



August 11, 2015

INVITATION TO SUBMIT A RESEARCH PROPOSAL

The UVM Transportation Research Center invites proposals for the following research projects:

- V-TRC 16-1: [Calculating the Economic Benefits of Transportation Investments](#)
- V-TRC 16-2: [Network level assessment of Vermont bridges for improving resiliency under extreme events](#)
- V-TRC 16-3: [Monitoring Condition of Structural Elements During Accelerated Bridge Construction](#)
- V-TRC 16-4: [Quantifying changes in high intensity precipitation events to better characterize the vulnerability of Vermont's transportation infrastructure](#)
- V-TRC 16-5: [Assessing VTrans employee retention: who stays, who leaves and what to do about it](#)
- V-TRC 16-6: [Enhanced transportation consequence analysis in emergency situations](#)
- V-TRC 16-7: [Filling the Safety Data Gaps for Vulnerable Transportation Users](#)
- V-TRC 16-8: [Spatial and Temporal Analysis of Highway Crashes in Vermont Involving Tractor Trailers](#)

The Vermont Transportation Research Collaborative is a cooperative effort of the Vermont Agency of Transportation and the UVM Transportation Research Center. The focus of research initiatives funded in this initiative is to align research efforts and outcomes with the strategic goals of VTrans.

For more information on V-TRC, visit our web site: <http://www.uvm.edu/trc/vttransresearchcollaboration/>

This Request for Proposals is being sent to interested faculty and researchers at UVM and key contacts at other Vermont institutions of higher education. Faculty and researchers are eligible to submit proposals individually or as members of teams. Proposals should be focused on the specifics listed in the problem statement (see links) and be prepared in the format shown in the Proposal Preparation Guidelines (see Attached). Any researcher can submit a proposal addressing any problem statement. All proposals must demonstrate participation and commitment of VTrans staff, and a direct and specific association with addressing VTrans' strategic goals and objectives.

One (1) original hard copy proposal, and one submitted electronically in ADOBE™ PDF should be returned to the V-TRC Coordinator, so as to be received no later than 5pm on September 11, 2015:

**Glenn McRae, PhD, University of Vermont - Transportation Research Center
110 Farrell Hall, 210 Colchester Avenue, Burlington, VT 05405 (glenn.mcrae@uvm.edu)**

Proposals will be sent for external review and then submitted to the VTrans V-TRC Steering Committee. PI's will be invited to make presentations before the committee in advance of their final review and ranking of the proposals to form the final research grant to the TRC, that will be ratified by the VTrans Executive staff. Please contact me if you have any questions.

Sincerely,

Glenn McRae, Ph.D.

Vermont Transportation Research Collaborative Coordinator

Attachments: Proposal Preparation Guidelines; Proposal Evaluation Guidelines; Schedule for Processing Proposals;
V-TRC Budget Sheet



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VERMONT TRANSPORTATION RESEARCH COLLABORATIVE (V-TRC) PROPOSAL PREPARATION GUIDELINES

The proposal should be a well thought-out document that establishes in clear, concise terms the necessity of the research undertaking, definite project objectives, and a systematic work plan designed to attain the project objectives. The proposal should contain, but is not limited to, the following:

- 1. Problem Statement Identification:** The Problem Statement number, title and name or names of the principal investigator(s) [P.I.(s)]. Resumes of the principal investigator(s), including a description of the P.I.'s related research and publications, should be included as an appendix to the proposal.
- 2. Significance of the Problem:** A clear definitive statement of the problem and its significance.
- 3. Relation to VTrans Strategic goal(s) and objective(s):** A clear and concise statement of how the problem statement and the research will inform and address one or more strategic goals.
- 4. Objectives of the Research:** In clear, concise terms, state the objectives of the proposed work.
- 5. Methodology:** A description of the major tasks that will be undertaken to complete the proposed work. A number and title should be assigned to each task followed by a description of the methodology to be used in carrying out the task.
NOTE: Since V-TRC recognizes that research results are not automatically put into practice upon completion of the research and that implementation is more likely when researchers and user agencies collaborate to plan for implementation) V-TRC requires that all research proposals include a technology transfer and implementation plan for incorporating the research results/products into practice. This will require direct and active collaboration in proposal formation with key VTrans staff collaborators.
- 6. Schedule of Major Activities:** To allow for flexibility in the project start date, the schedule should be generic and not refer to particular months or a particular year. The schedule should show, in terms of elapsed time (number of months or weeks) from the start of the project, the planned start and completion of each of the major tasks described in the methodology as well as the following tasks:
 - **Submission of Quarterly Progress Report to Coordinator:** Quarterly Progress reports are to be submitted electronically to the V-TRC Coordinator no later than three (3) working days after the end of each calendar quarter. QR's will identify specific benchmarks and progress toward project objectives.
 - **Submission of Draft Final Report for Review:** Sixty (60) days are to be allowed for completion of the review of the Draft Final Report and resolution of review comments.
 - **Preparation of Final Report:** Ninety (90) days following completion of the review of the Draft Final Report are to be allowed for preparation of the final report and submittal to the V-TRC Coordinator.
 - **Presentation of Final Results and Findings, as well as implications for incorporation into practice at VTrans:** After submission of the final report a presentation date will be set.
- 7. Budget and Total Cost:** A detailed budget, in alignment with research tasks and the schedule of activities, will be developed. Proposals, if selected, will be awarded from the total TRC research program budget. Research proposals should not be routed through UVM Sponsored Projects Administration. (See V-TRC Budget Sheet)
- 8. Qualifications of the Research Team, Facilities, Technology and Tools**

LENGTH: Proposals should be no longer than **10 pages** (1 inch margins, 12 point Times Roman) to address number 1-6 above. Additional technical details can be attached as an appendix, but should be explained and referenced in the main body.



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VERMONT TRANSPORTATION RESEARCH COLLABORATIVE PROPOSAL EVALUATION GUIDELINES (2015)

- 1. Understanding of the Problem:** A clear and succinct statement and understanding of the problem and the research objectives is desired. A review of the present state-of-the-art and a description of how the proposed work will create new knowledge and benefit the VTrans operations, planning and management should be presented, with direct reference to the Strategic Goals and Objectives it addresses and specifically how it relates to them. (Alignment & Apparent value in regard to VTrans strategic goals). Specific VTrans staff should be engaged in the project development and noted in the proposal.
- 2. Research Approach:** The evaluation of the research approach will consider consistency with the objectives and the scientific and practical aspects of the research methodology. This evaluation will include such items as the approach to data collection, cooperative features, innovative concepts, and reliability of equipment proposed for use. Consideration will also be given to whether or not the approach is sufficiently detailed, both in terms of work and budget allocations by tasks. (Appropriateness: How appropriate is the problem statement to the V-TRC program for funding?)
- 3. Application of Results:** The evaluation will include a realistic appraisal of the prospects for successful accomplishment of project objectives. The evaluation will consider the statements in the proposal indicating the manner in which the anticipated results would be reported and how they could be used to improve transportation engineering or transportation evaluation practices; e.g., mathematical models, design techniques, field or laboratory test procedures, changes in highway specifications, impact methodologies, etc. Consideration will also be given to whether or not there might be any financial or institutional barriers to implementation of products from the research. Having the support and contributions of VTrans personnel to the project effort will be an important factor to be considered. (Applicability: To what extent does the problem statement apply and contribute to VTrans objectives, including policy-making, cost savings, improved quality and implementation of research?)
- 4. Qualifications of Principal Investigator(s):** Proposals are desired from individuals having demonstrated capability and expertise in the subject problem area. The evaluation will be based on the evidence contained in the proposal pertaining to both the experience and the indicated amount of effort by the principal investigator(s).
- 5. Facilities and Equipment:** The evaluation will be based on the evidence contained in the proposal. It is important to consider whether facilities and equipment are actually available or are proposed to be purchased or built. The proposal budget often provides some insight into this situation.



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**VERMONT TRANSPORTATION RESEARCH COLLABORATIVE
PROPOSAL EVALUATION & SELECTION SCHEDULE (2015)**

	August	September	October	November	December	January	February
RFP Released							
Proposals Due		11th					
External Review							
Submission to VTrans Steering Committee							
Proposal Presentations & prioritization							
Review and ratification by VTrans Executive Staff							
Final V-TRC research agenda and budget finalized							
Announcement							

**VERMONT TRANSPORTATION RESEARCH COLLABORATIVE
Budget Work Sheet**

See the attached excel sheet. This is a work sheet, not a routing sheet. All project teams should consult with Jacob Leopold (TRC) for assistance in finalizing the budget document.

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