

Vermont Agency of Transportation – Research Proposal

*Please remove all the Italicized text and replace it with desired content. Proposals should be a maximum of 10 pages, and INCLUDE any title information, each of the elements in this template, and figures/graphs, budget/schedule information, and investigator details. Pages should have 0.5 inch margins and use 11 point font. Tables and figures may use 9 point font as necessary. Full proposals are **due at 4pm ET on Friday, March 6**. Collaboration is encouraged with the project's VTrans Champion, to ensure that the proposal fits VTrans' needs. The Champion will give a quick summary of the research project and articulate the benefits to VTrans when they present this project to the Bureau Directors for selection. Parts of the proposal may repeat what was in the Statement of Interest submitted in early January to VTrans but the proposals should stand alone in addressing the project.*

Project Information

Title:

Provide the Title of the Project

VTrans Champion:

List the VTrans Champion

Principal Investigators:

List the PI/Co-PI's

Project Description

Use this space to describe the problem, background, related prior research it draws from. Do not only repeat the Problem Statement; expand on it, and demonstrate insight on the proposed project.

Objectives

Outline the objectives of the project. Technology transfer, benefit quantification, and guidelines for implementation should be included as an objective.

- 1. Objective 1*
- 2. Objective 2*

Methodology and Tasks

Describe how the objectives will be achieved through a complete and logical plan. Include figures as appropriate. Specifically identify the tasks that will be performed, and how each task works toward the project objectives. Certain tasks and deliverables may contribute towards multiple objectives. This section should include a numerical listing of tasks, for example:

- Objective 1*
 - Task 1 and methodology*
 - Task 2 and methodology*
 - Deliverable 1*
- Objective 2*
 - Task 3 and methodology*
 - Task 4 and methodology*
 - Deliverable 2*

The tasks identified will make up some of the deliverables for this project, so keep in mind how deliverables will be scheduled for completion by quarter (Jan-Mar, Apr-Jun, Jul-Sep, Oct-Dec).

Describe any assistance that may be required from VTrans and the timeframe in which it would occur. This should be discussed with the project Champion prior to submission.

Anticipated Results and Benefits

*The proposal should include specific statements describing anticipated research results, and how they could benefit the agency. **When the Champions present this project to the Bureau Directors for their selection, they will emphasize the results and benefits to VTrans of the project.***

VTrans Research is interested in identifying potential benefits expected from research, and which benefits are quantifiable. The quantification of benefits will be an important part of the final reporting. Some possible benefits are: cost savings (both VTrans and the affected public), increased safety, improved service, improved procedures.

Please provide:

- *The potential benefits of this project*
- *Describe how they help VTrans*
- *How the benefits could be quantified*

Strategic Alignment

Identify how this project aligns with VTrans Strategic Goals, <https://vtrans.vermont.gov/about/mission-and-vision>.

Facilities and Equipment

Describe the facilities and equipment needed for this project. If equipment or supplies needs to be purchased and are valued at more than \$300, explain the need in this section.

Implementation Plan

Implementation is the transition of the project from research to application. VTrans research is interested in developing plans for implementation of research results. While the plan may change as the research progresses, at a minimum the proposal should indicate:

- *The product expected from the research*
- *The stakeholders or intended audience that will most likely be impacted by the research results*
- *On what different scales can it be implemented*
- *Potential impediments to implementation*
- *Activities necessary for successful implementation*

Project Deliverables and Schedule

Projects are documented and paid through project deliverables and deliverables-based invoicing. The tasks identified will make up some of the deliverables for this project, so keep in mind how deliverables will be scheduled for completion by quarter (Jan-Mar, Apr-Jun, Jul-Sep, Oct-Dec).

Technology Transfer related deliverables include posters and fact sheets for the annual symposiums, a final report, a final poster and fact sheet, and a presentation of the final results to the Technical Advisory Committee. Benefit quantification and an implementation plan should be sections in the final report.

Reporting is required on a quarterly basis, documenting the progress of the project, with reports due by April 15th (Jan-Mar), July 15th (Apr-Jun), October 15th (Jul-Sep), and January 15th (Oct-Dec). A completed deliverable that is documented on the quarterly report is then eligible to be invoiced. It is anticipated that each deliverable will be made up of one or more tasks as outlined in the Methodology and Tasks section. The Quarterly Report will be accompanied by a memo documenting any deliverables completed that quarter. A Quarterly Report Template will be provided.

*Ultimately, the task agreement for the selected projects will include something like the table below. The proposal should include the expected start and end dates of the project. Projects may be up to 24 months long and must start by **January 1, 2021**. All projects will be guided by the Champion, Research Staff, and a Technical Advisory Committee (TAC). The*

researchers should plan on a Kickoff Meeting, 2-4 project update meetings a year, and a final presentation of the Draft Final Report. Meetings will be held during business hours at VTrans facilities in Montpelier/Berlin/Barre.

Deliverables-based invoices are independent of salaries and wages (of any faculty, researcher, or student), fringe benefits, travel (for field tests or paper presentations), lab supplies or equipment costs, other materials and costs, and indirect costs. It may be helpful to prepare a budget that covers expected expenses, but in the proposal the costs must be translated into a deliverables-based table similar to that shown below. Use as many deliverables as needed.

Table 1: Project Deliverables

Deliverables	Scheduled Quarter of Completion	Invoice Amount	% Budget
1. Deliverable 1 –			
2. Deliverable 2 –			
3. Deliverable 3 –			
4. Deliverable 4 – <i>The final quarter should include Technology Transfer deliverables: draft final report including benefits quantification and implementation guidelines, final poster and fact sheet, final presentation to the TAC, and final report including any TAC comments.</i>			
Total	X months	\$X	100%

References

List all references used in the proposal.

Investigator Details

Please describe the qualifications of the research team to complete this research. A paragraph here may be appropriate or up to two pages of resume/CV. These details count as part of the 10 page maximum for the proposal. Text can be repeated from the Statement of Interest.