

NEVADA DEPARTMENT OF TRANSPORTATION

RESEARCH PROPOSAL GUIDE

(Proposal Elements)

1. **TITLE:** State the title of the research study as you think it should be stated.
2. **PRINCIPAL INVESTIGATOR:** Provide the title(s) and name(s) of the Principal Investigator(s).
3. **PROBLEM STATEMENT:** Provide a clear, concise summary of the problem to be studied.
4. **BACKGROUND SUMMARY:** Include background information on the research topic. Summarize the finding of a preliminary literature search and state the relationship of the proposed study to prior research. The summary should reveal your understanding of underlying principles and should clearly indicate your appreciation of the problem. A comprehensive background summary ensures that all aspects of the research topic have been adequately considered so new research can build upon prior work rather than duplicate it.
5. **PROPOSED RESEARCH:** Provide a specific account of the research that should be conducted. Include the technical objectives upon which the staff will focus their attention, and upon which their efforts will converge. Fully describe the test methods to be used and specify how the study will be structured to address the problem statement. Information should also be provided regarding sampling plans, number of test sections, statistical analysis methods, use of existing models or development of new models, expected survey techniques, criteria which will be used to judge acceptability, etc.
6. **ANTICIPATED BENEFITS:** Provide an accounting of specific benefits anticipated as a result of this research. Include an estimate of the savings in terms of time, money, increased safety, improved service, or improved procedures. Explain how these benefits will be realized, and how they relate to solving the initial problem.
7. **PRODUCTS AND IMPLEMENTATION PLAN:** List the products which will be delivered during the research project: Reports, computer programs, manuals, etc.

Provide information pertinent to the following questions: Will the expected research findings be readily adoptable by the intended user? If not, will further work be necessary to develop or field test the findings? Will the findings be presented as a proposed specification, procedural manual or guide, etc.?

8. **DURATION/SCHEDULE:** Provide an estimate of total time to complete the project including a schedule for completion of major phases of the project, if applicable.
9. **FACILITIES:** Describe the facilities available to accomplish the research. Indicate equipment which is necessary for completion of the research and specify any restrictions on its use. Specify any equipment which is necessary but not currently on-hand. If additional equipment is to be purchased with project funds, identify it in the budget estimate.
10. **BUDGET:** Provide a summary tabulation showing the staffing plan, person-hours, and total cost broken down by year and by each phase of the study. The budget should include salaries, overhead, and indirect costs; travel; computer time; equipment (purchases and/or rental); and special services (where applicable).
11. **NDOT INVOLVEMENT (OTHER DIVISIONS):** Include the total amount of involvement that will be required from any NDOT division outside of the originating division. If extensive, include specifics.