

LTRC GUIDE TO PROPOSAL DEVELOPMENT

PROPOSAL FORM AND CONTENT

This section provides the basic requirements for the form, sequence and content of the research proposal. The proposal is of paramount importance to both the researcher and LTRC because upon approval of a research project, the proposal comprises the major portion of the contract document. The proposal shall contain, but is not limited to, the following essential elements.

- A. **PART I – IDENTIFICATION** – The title sheet, which includes the amount of funding requested; duration of project in months with beginning and ending dates indicated; a concise descriptive title for the proposed study; the name and business address of the organization which will conduct the work; the major subdivision of that organization responsible for the research; the name, title, mailing address and telephone number of the principal investigator who is to bear the responsibility for the successful performance of the proposed work; and the name and title of the co-principal investigators, if applicable.
- B. **PART II – APPROVAL** – for LTRC use only in the process of modification and /or approval of the proposal.
- C. **PART III – AMOUNTS REQUESTED FOR PROJECT** – The part of the proposal requires an itemized list of the funds requested for the proposed research by type of expense and fiscal year (July 1 through June 30.)
 1. **PERSONNEL** – List the names, position and percentage of time (based on a 40-hour work week) to be spent on the project for all persons involved in the research, including principal investigators (PI), co-principal investigator (CoPI), and graduate students, if applicable. When the percent time spent on the project varies with a given period (e.g., spring, fall, summer) the individuals periods and appropriate percent time shall be listed separately for each. The amounts requested for each person listed must not exceed the proportion of total salary computed from the percent time spent of the project listed for that person. The salaries used as the basis for computing individual personnel costs shall be exclusive of the cost of employee benefits; however, that percentage used by the contracting agency to compute employee benefits shall be shown where indicated on the form and the costs computed and included in totals.
 2. **NON-EXPENDABLE EQUIPMENT** – Itemize non-expendable equipment, software or database which are to be purchased specifically for the performance of the study. Non-expendable equipment includes any item having a useful life of more than one year and an acquisition cost of more than \$300 per unit.
 3. **CONSUMABLE SUPPLIES** – This item includes the estimated cost of all expendable equipment, materials and supplies. Any item for which the cost exceeds \$300.00 must be listed individually.
 4. **TRAVEL** – Itemize expenses for trips to be made in connection with the research project and state the purpose of the trip. Expenses incurred for out-of-date travel should be listed separately from those for in-state travel. When travel expenses are requested for conferences, conventions and seminars in connection with the research, each instance must be separately identified and justified in terms of the work to be performed.
 5. **OTHER EXPENSES** – Itemize all miscellaneous expenses associated with the project, such as those required for reference materials, copying, computer time, photography, equipment maintenance, telephone usage, etc. All costs to be incurred for equipment rental or use of subcontractors/consultants associated with the project should be listed in this section.
 6. **TOTAL DIRECT COSTS** – The summation of total estimated costs for items (1) through (5).
 7. **TOTAL INDIRECT COSTS** – This item is intended to provide reimbursement for general and research administration and overhead expenses incurred by the contracting agency in the prosecution of the research project for which no charge is made elsewhere in the study. The total indirect costs shall not exceed 25 percent of the total direct costs, excluding employee benefits. The actual percentage used and method of application shall be described in Part VIII of the proposal and shall be verifiable through audits by the Department, the FHWA or their representatives.
 8. **TOTAL COSTS** – The summation of the total estimated costs for items (1) through (7).

D. PART IV – BIOGRAPHICAL SKETCHES – Provide brief sketches for the professional personnel who are indicated by Part III, Section (1) to be actively engaged in the study.

E. PART V – TITLE VI STATEMENT – This portion of the proposal shall include a statement that the agency or contractor will comply with the provisions contained in Title VI of the Civil Rights Act of 1964.

F. PART VI – PROBLEM STATEMENT – A brief statement of the problem to be solved through research.

G. PART VII – OBJECTIVES OF RESEARCH – A clear, concise and comprehensive itemization of the goals which are anticipated to be obtained through the proposed research.

H. PART VIII – SCOPE – A clear, concise and descriptive statement relating the degree to which the problem is to be addressed and the extent and range of the proposed research.

I. PART IX – RESEARCH WORK PLAN – The work plan is the basic guide to the study which contains the detailed description of the approach that the principal investigator intends to employ to complete the study and implement the results. It shall contain the following elements in the sequence indicated:

1. METHOD OF PROCEDURE – This section should describe the details of the researcher's approach to solving the problem:

(a) APPROACH – For each phase of the proposed research, discuss the tasks that are necessary in order to fulfill the specific aims given in (G) above. The discussion should include principles or theories to be used; devices, processes, materials or systems to be developed; possible solutions to the problems; critical experiments to test the applicability of the theory, the type and range of variables to be tested or considered; and the methods of data analysis to be used including statistical methods. The preparation of the final report should be acknowledged.

(b) WORK SCHEDULE – A time chart in the format shown in Figure 2-7 shall indicate the proposed time schedule for completion of each of the tasks (and subtasks when applicable) discussed in part (a). This should include preparation of progress, interim (if applicable) and final reports.

(c) DELIVERABLES – An itemized listing of all project deliverables and the associated completion date(s) for submission of each. Include in this listing all draft and final reports, software, manuals, specifications, programs and systems etc.

2. STAFFING PLAN – The responsibilities and time allocation of personnel to the required tasks should be briefly stated for each fiscal year for the duration of the project.

3. FACILITIES AVAILABLE – The general facilities at the disposal of the proposing agency which are relevant to the study should be described, along with major items of permanent equipment to be used.

4. SIGNIFICANCE OF RESEARCH – The importance of the proposed work should be explained in this section. The findings of the literature survey detailed in Part X should be discussed, and it should be demonstrated that previous work has not attempted to solve the problem using the same approach, or that the proposed study will extend, modify or refine the work of others. This section should support the researcher's approach and state why he believes it is the best.

5. IMPLEMENTATION – An assessment by the researcher of the areas of potential application of the anticipated research findings. The form in which the findings might be reported (mathematical model or formula, test procedure, specification, design procedure, etc.) should be described. The specific area of practice that would be changed by the findings and those organizations or groups that might benefit from the new technology should be identified. The responsibility for and means of technology transfer relative to the study should be proposed when possible.

J. PART X – SUPPORTING DATA – This section includes information required to support the research work program proposed in Part VII.

1. PREVIOUS WORK BY RESEARCHERS – The researchers should list and describe briefly any previous work they have done to date that is pertinent to the proposed study. Personal publications on the subject area or closely related work should be cited. (List no more than five.)

2. RESULTS OBTAINED BY OTHERS – Describe the results of a literature research for information relative to the findings of others which are pertinent to the proposed study. The findings available through HRIS are required for all Type A studies.

3. AMOUNTS REQUESTED – Provide justification for the itemized amounts shown in Part III for nonexpendable equipment, equipment rental, travel and other items. It is required that the

manner in which indirect costs are calculated and applied be stated.

K. PART XI – LIST OF REFERENCES – A numerical list of references used in the text of the proposal should be included, in the order referred to in the text.
