

IDAHO TRANSPORTATION DEPARTMENT – DIVISION OF HIGHWAYS QUALIFIED PRODUCTS LIST SOFTWARE UPDATE RESEARCH PROJECT

GENERAL INFORMATION, SUBMISSION OF PROPOSAL, EVALUATIONS, AND AWARD

SECTION 1 - GENERAL INFORMATION

A. Purpose

The Idaho Transportation Department (ITD) Qualified Products List (QPL) provides an avenue for manufacturers to submit proprietary products for evaluation, and if successful, receive approval to be listed for use on ITD projects. Products are categorized based on their use as defined in the ITD Standard Specification for Highway Construction (Standard Specifications). Evaluation consists of comparing ITD lab reports or published test results against category criteria published in our Standard Specifications. Evaluators are enabled to restrict usage by disapproval, or by granting provisional use, and/or adding restrictions as necessary.

B. Background

This program was designed to streamline the process for project managers to permit the use of proprietary products on our roadways based on their QPL status. QPL product approval does not replace project required quality assurance testing during construction.

The ITD QPL program consists of the following:

- Product database
- Internally facing program
 - Products categorized/sub-categorized by type
 - o Product evaluations result in one of the following status':
 - Approved
 - Provisionally Approved
 - Disapproved
 - Request more information
 - Search functions
 - Category
 - Manufacturer
 - Product Name
 - Externally facing Website
 - o Similar to internal program with limited information displayed

Developed in house, the QPL program application is written in VisualBasic 6 language. ITD's Enterprise Technology Services (ETS) reports that this language is outdated, making it difficult to maintain or upgrade the program.

The program was modern and labor saving for its time when developed in the 1990's, but by today's standards it is labor intensive. There are a few automated features of the exiting program:

- Automatic product evaluation requests to the Subject Matter Expert once new products are entered and categorized (includes a link to product status page)
- Automatic notification to the administrator when an evaluation is submitted (includes a link to product status page)

Most other functions are performed manually:

- Manufacture profile input and updates (cut and paste from application or update form)
- New product information (cut and paste from application)
- Product information requests from evaluators
- Product evaluation reminders (2 week evaluation reminders for evaluator and administrator through Outlook)
- Product evaluation status update requests from manufacturer requires a manual response
- Product recertification (every five years)
 - Notices to manufacturers are sent manually
 - o Updates are entered manually by administrator
- Category maintenance (no direct ties to Standard Specifications)

The proposed QPL program creates an opportunity to provide numerous updated features available with today's technology including, but not limited to:

- Manufacturer's web portal for submitting new products, updating and/or recertifying existing QPL products, and status updates
- Addition of a "Suspended" category for products not updated annually
- Automated letters to manufacturers
- Incorporate alternate evaluator capability (two to three evaluators for each category)
- Linking QPL specifications with the Department's Standard Specifications
- Providing capability to include innovative and non-specification products
- Enhanced search capabilities
- Improved serviceability by ETS
- Improved security

C. Funding

The use of SPR funds must comply with 23 CFR 420.121(j)

SECTION 2 – SUBMISSION OF PROPOSAL

A. Submission Contact

Proposals must be submitted electronically to the following:

Name: Ryan Blaine, Senior Buyer Email: Ryan.Blaine@itd.idaho.gov

B. Submission Response Deadline

Contractor response must be submitted no later than **February 26, 2021 by 5:00 PM (MST).** Submissions must be submitted to the Submission Contact listed above in order for your submission to be evaluated.

C. Inquiries

Questions regarding this request must be submitted to the Submission Contact listed above. Questions must be submitted no later than **February 5, 2021 by 5:00 PM (MST)**.

Responses to all questions will be compiled into one (1) list once the questions submission date has expired. All contractors who submit questions will receive a response from the Submission Contact after ITD has reviewed and addressed all submitted questions. Those Contractors who do not submit a question will not receive the final list, unless requested in writing from the Submission Contact listed above.

D. Response Content

Response must not exceed fifteen (15) pages (excluding resumes for proposed team members) and must be organized to include the following:

1. Cover Page - must Include the following information:

- a. Project Title (QPL Software Update Research Project)
- b. "Submitted by" section including name, institution, address, phone, fax #, and e-mail address
- c. "Submitted to" section indicating the proposal is being submitted to the Idaho Transportation Department, Research Program
- d. Proposal Date
- 2. Business Information Provide a profile of your business including business history, description of current service area, and customer base. Provide contact information for a minimum of three (3) references from customers who have received same or similar service.
- 3. Problem Statement Concisely express your understanding of the problem(s) presented in this solicitation. Do not just restate language in the research request, but instead articulate your own understanding of, and insight into, the problem(s).
- 4. Research Approach/Work Plan Describe the work that will be performed to complete the tasks and deliverables. Include each of the tasks listed in **Attachment 1 Scope of Work & Deliverables**, and describe in detail how each task will be performed. Identify any additional tasks you feel are needed and explain any deviations from the tasks required by ITD. Identify any obstacles you see to achieving the objectives and how you would propose overcoming them.

The research plan should be complete and logically organized. It should clearly articulate the researcher's approach to the problem and how the work done will contribute to accomplishment of the project tasks and deliverables. The response should include discussion of applicable principles and theories, the type and range of data needed, the data analysis methods to be employed, and how possible recommendations will be identified and developed.

- 5. Research History Explain types of research performed, and provide samples if allowed and not confidential, with same or similar to the scope of this project.
- 6. Communications Plan Describe the steps that will take to ensure regular communication occurs with ITD's PM throughout the project. Include your company's escalation process, with points of contact, in the event ITD will need to escalate concerns during the contract.
- 7. Schedule Identify the estimated start and completion dates for the project, as well as the completion dates for each task and deliverable. Each proposal should include a Gantt chart depicting the schedule for completing each task and deliverable. The schedule must indicate the number of months allocated to each task and deliverable.

Be sure to build sufficient time into your time schedule to complete the work outlined in your proposal. It is very important to ITD's Research Program that projects be completed on time. As a result, no time extensions will be allowed, and the project must be complete within twelve (12) months from the award date of the contract; this includes the kick-off meeting.

Example of a schedule:

| 10 ITD Initial Review of Report Draft 11 Revise Draft and Resubmit for Final Review | Month | | | | | | | | | | | |
|----------------------------------------------------------------------------------------|-------|---|---|---|---|---|---|---|---|----|----|----|
| 1 0 3 K | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1 Literature Review | | | | | | | | | | | | |
| 2 Field Survey | | | | | | | | | | | | |
| 3 Lab Study | | | | | | | | | | | | |
| 4 Develop Database | | | | | | | | | | | | |
| 5 Develop Recommendations | | | | | | | | | | | | |
| 6 Prepare Draft Final Report | | | | | | | | | | | | |
| 7 Peer Review of Draft Report | | | | | | | | | | | | |
| 8 Editorial Review of Draft Report | | | | | | | | | | | | |
| 9 Make Peer Review/Editorial Changes and Submit to ITD | | | | | | | | | | | | |
| 10 ITD Initial Review of Report Draft | | | | | | | | | | | | |
| 11 Revise Draft and Resubmit for Final Review | | | | | | | | | | | | |
| 12 Make Any Final Changes and Submit Final Report | | | | | | | | | | | | |

- 8. Staffing Include the following information:
 - a. Identify all members of the proposed research team and describe their role in the project.
 - b. Explain how team members' past academic, professional, and research experience relate to the work they will perform.
 - c. Provide information about other commitments the principal investigator(s) and research team will have during the project. This information must be sufficiently detailed to allow assessment of the researchers' experience, projects completed, and ability to complete the work within the required time schedule.
 - d. Identify the individuals who will perform quality control work on the project, including:
 - 1. An independent peer reviewer with sufficient expertise to assess the adequacy of the work performed and the conclusions reached by the project team, and
 - 2. A report editor responsible for ensuring project reports are clearly and concisely written and are prepared in accordance with ITD Research Program guidelines.
 - e. Provide a detailed breakdown of each team member's involvement in each task and deliverable.

Example of a detailed breakdown:

| Name of | Role in Study | Hourly | Task (Hours) | | | | | | | | | | | | |
|-----------------|------------------------------|-------------|--------------|-----|-----|-----|-----|-----|----|----|-----|----|----|----|-------|
| Person | | Rate | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | Total |
| Researcher A | Principal Investigator | 75 | 10 | 40 | | 40 | 40 | 40 | | | 20 | 20 | 10 | 10 | 230 |
| Researcher B | Co-Principal Investigator | 60 | 10 | | 40 | 40 | 40 | 40 | | | 20 | 20 | 10 | 10 | 230 |
| Subcontractor A | Field Testing | 35 | 25 | 200 | | 100 | 40 | 100 | | | 40 | 20 | 10 | 10 | 545 |
| Subcontractor B | Statistical Analysis | 50 | 25 | | 200 | 100 | 40 | 100 | | | 40 | 20 | 10 | 10 | 545 |
| Peer Reviewer | Technical Review | 50 | | | | | | | 40 | | | | | | 40 |
| Report Editor | Report Editing | 25 | | | | | | | | 40 | | | | | 40 |
| | 7 | Total Hours | 70 | 240 | 240 | 280 | 160 | 280 | 40 | 40 | 120 | 80 | 40 | 40 | 1630 |

- 9. Required ITD Involvement Describe any assistance required from ITD, such as:
 - a. Data collection
 - b. Access to ITD records or databases
- 10. Budget Provide a quote of the costs for the work outlined in your proposal using the format provided in the table below. The total cost for the project must not exceed \$50,000. This range is ITD's estimate of the level of funding necessary to complete the work. Contractor should set the scope and depth of the study accordingly.

Example of a quote:

| | | Hourly Rate | Benefit | Task Number | | | | | | | | | | | |
|-----------------------|-----------------------------|---------------|------------|-------------|---|---|---|---|---|---|---|-------|--|--|--|
| | | riourly nate | Percentage | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Total | | | |
| Salaries and Benefits | Research A | | | | | | | | | | | | | | |
| | Researcher B | | | | | | | | | | | | | | |
| | Researcher C | | | | | | | | | | | | | | |
| | Editor | | | | | | | | | | | | | | |
| | Total Salaries and Benefits | | | | | | | | | | | | | | |
| Other Costs | Flights | | | | | | | | | | | | | | |
| | Parking | | | | | | | | | | | | | | |
| | Rental Car | | | | | | | | | | | | | | |
| | Rental Car Gas | | | | | | | | | | | | | | |
| | Meals | | | | | | | | | | | | | | |
| | Lodging | | | | | | | | | | | | | | |
| | Lodging Tax | | | | | | | | | | | | | | |
| | Subcontractor Expenses | | | | | | | | | | | | | | |
| | Peer Review Costs | | | | | | | | | | | | | | |
| | Materials and Supplies | | | | | | | | | | | | | | |
| | Other Direct Expenses | | | | | | | | | | | | | | |
| | Total Other Costs | | | | | | | | | | | | | | |
| | Total Direct Costs | | | | | | | | | | | | | | |
| | | | Percent | | | | | | | | | | | | |
| Overhead | Applied to direct labor at: | | | | | | | | | | | | | | |
| Fixed Fee | Applied to overhead and dir | ect labor at: | | | | | | | | | | | | | |
| Total Budget | | | | | | | | | | | | | | | |

SECTION 3 – EVALUATIONS

A. Response Evaluation

ITD staff knowledgeable in the background section will evaluate proposals. Selection will be made in consideration of general criteria based on the vendor's response to the Scope of Work and as follows:

- 1. The expertise, capabilities, and technical competence of proposed team members to perform the proposed work
- 2. The research approach and methodology detailed in the proposal to meet the project tasks and deliverables
- 3. Resources available to perform the work, including any specialized services, within the specified time limits for the project
- 4. Record of past performance, including price and cost data from previous projects, quality of work, ability to meet schedules, cost control, and contract administration
- 5. Availability to the project locale
- 6. Familiarity with the project locale
- 7. Proposed project management techniques
- 8. Ability and proven history in handling special project constraints

SECTION 4 – AWARD

A. Professional Services and Consulting Agreement

The result of this request will be awarded as a Professional Services and Consulting Agreement (PSA).

B. Term

The resulting PSA shall commence on the date of the final signature provided by the Submission Contact listed above. Under no circumstances will the term of the PSA be greater than twelve (12) months, unless terminated earlier, in writing, in accordance with the PSA.

ATTACHMENT 1 – SCOPE OF WORK & DELIVERABLES

SECTION 1 – SCOPE OF WORK

The goal of this research project is to 1) examine the existing QPL program to establish and document software issues, core functions, workflows, and deliverables, 2) provide an analysis of process improvements and enhanced features beneficial to ITD, and 3) Investigate the options available for QPL program replacement software and make recommendations for the most suitable option based on serviceability, function, cost, and timeframe.

The following tasks are required for this project:

A. Task 1

Host and conduct a project kick-off meeting, via video or teleconference, with ITD's Project Manager (PM) to discuss:

- 1. Project tasks and deliverables
- 2. Project schedules and timelines
- 3. Data and information needs
- 4. Staff responsibilities and assignments (as applicable)
- 5. Proposed schedule for project meetings

B. Task 2

Analyze core program functions, examine workflows, and deliverables for ITD's current QPL system and process. Identify issues of the existing QPL program.

C. Task 3

Survey other states to learn what systems and processes are used for their QPL programs and compare to ITD program.

D. <u>Task 4</u>

Research available technology to automate many of the manual functions of the existing program, thereby reducing administration resource requirements. Anticipated improvements include, but are not limited to:

- 1. Product Manufacturer web portal
 - a. Manufacturer will maintain their company profile, and will be responsible to keep it updated
 - 1. Name
 - 2. Address
 - 3. Company Telephone number
 - 4. Website address
 - 5. Contact person
 - 6. Telephone number
 - 7. Email address
 - b. Manufacturer will enter new product information
 - 1. Complete application/product information
 - 2. Categorize product
 - 3. Obtain product evaluation status
 - 4. Receive product information requests
 - c. Manufacturer will update product information
 - 1. Product name changes
 - 2. Update design or composition changes
 - 3. Annual recertification product continues to be produced as evaluated (replacing current 5-year recertification)
 - 4. Discontinued products

- 2. Automated generation of letters and notices
 - a. Automatic product evaluation requests to the evaluators once new products are entered and categorized (includes a link to product status page) similar to current program
 - b. Automatic notification to the administrator when an evaluation is submitted (includes a link to product status page) similar to current program
 - c. Automatic evaluation reminders to evaluators and administrator currently two-week reminders set up in outlook
 - d. Automatic notification to manufacturer when additional information is requested currently done manually
 - e. Automatic letter (from template) to manufacturer when evaluation is complete currently done manually
- 3. Link QPL information to Standard Specifications
 - a. Automatically update QPL category information when Standard Specifications are updated
 - b. Send notification to Subject Matter Experts (SME) of changes need to check impact to previously approved products
- 4. Provide capability for alternate evaluators
 - a. Reduce the burden on individual Subject Matter Experts (SME)
 - b. Reduce evaluation time (alternate evaluators can step in when needed)

The credibility of any information-based QPL program is dependent on the quality of the information. Accurate, up-to-date information is critical. The improvements listed above will provide the greatest opportunity for success by providing the most current information available.

The following program features will also result from the deliverables of this project:

- 1. Serviceable
 - a. Maintenance
 - b. Updates to Department themes and guidelines to keep current
 - c. Expansion allow modification as the Department's needs change
- 2. Secure
 - a. Ability to upgrade security features to meet new threats as needed
- 3. Expanded functionality
 - a. Manufacturers
 - b. Program management
 - c. Evaluators
 - d. End users

E. <u>Task 5</u>

Examine QPL software options available to include, but not limited to:

- 1. Overhaul existing program/software
- 2. Purchase off-the-shelf software
- 3. Develop new software in house
- 4. State-pooled fund for AASHTO QPL software development (work with existing or start up)
- 5. Joint software development with University or Contractor
- 6. Integrate software used by other DOTs
- 7. Search for other suitable software options

*Note – all purchase options need to include research and consulting with ITD's purchasing unit. Idaho state agencies are required to adhere to procurement rules set forth by the state's Division of Purchasing (https://purchasing.idaho.gov/).

F. Task 6

Evaluate each software option as to:

- 1. Serviceability by ETS
- 2. Obsolescence Duration of service to the Department
- 3. Workflows
 - a. Similar to current program (familiarity)
- 4. Features
 - a. Ability for manufacturers/ITD/contractors and other end users to provide/access pertinent information
- 5. Filters
 - a. Limit external access to protect proprietary information
- 6. Ease of use
 - a. Searchable/Intuitive commands
 - b. By Manufactures, Evaluators and end users
- 7. Security features
- 8. Expandability
 - a. Ability to add features and modify or enhance program with minimal effort
- 9. Equipment resource requirements
 - a. Computer architecture
 - b. Storage requirements
- 10. Personnel requirements
 - a. Program management time expenditure by program administrator (automation)
 - b. Service requirements (maintenance)
 - c. Evaluator time expenditure
 - 1. Quick access to product information
 - 2. Ease of use to provide determination
 - 3. Ability to store product notes some for internal use only, some for all to see
 - 4. Ability to place restrictions of use for all to see
 - d. End user time expenditure
 - 1. Quick access to useful product information
- 11. Integration of existing QPL information 2,800+ products to transfer to new program
- 12. Cost
- 13. Timeframe to develop/implement

G. Task 7

Final Report

- 1. Document capabilities and limitations of existing program
- 2. Document advantages/disadvantages of each option
- 3. Document evaluation process
- 4. Recommend best solution
- 5. Define critical path for software development and implementation project (Phase II)
 - a. Establish Phase II milestones
 - 1. Develop program
 - 2. Integrate existing products
 - 3. Implement/troubleshoot
 - 4. Create user manual/train
 - 5. Completion deadline
- 6. Provide cost estimate for Phase II
- 7. Recommend Technical Group resources (ETS/Program Administrator/End Users) to provide oversight to Project Phase II

SECTION 2 - DELIVERABLES

Project deliverables must include the following:

A. Deliverable 1

The contractor must initiate a project kick-off meeting, via video or teleconference, with ITD's PM within ten (10) business days after contract award date and provide meeting minutes within seven (7) days following the kick-off meeting.

B. Deliverable 2

The contractor must provide working papers and technical documents documenting the research performed, methods used, and the resulting findings for each task outlined above.

C. Deliverable 3

The contractor must host and conduct monthly project status meetings with ITD's PM via video or teleconference. These meetings are designed to cover the progress of all working papers or technical documents being written. Meeting minutes must be taken and supplied to the ITD PM within seven (7) days after the meeting.

D. Deliverable 4

The contractor must provide ITD's PM with monthly project summary reports, using the ITD Form 0771: https://apps.itd.idaho.gov/Apps/FormFinder2DMZ/

E. Deliverable 5

The contractor must meet with ITD PM, during Task 6 but before drafting and presenting the final report, to discuss project findings, conclusions, and recommendations. Meeting minutes must be taken and supplied to the ITD PM within seven (7) calendar days after the meeting.

F. <u>Deliverable 6</u>

The contractor must provide a final report of work efforts, findings, and conclusions using ITD's Research Report Template. Report shall be consistent with ITD's Style Manual for Research Reports available in the Resources for Research section found at: https://itd.idaho.gov//alt-programs/?target=research-program&target=research-program. The Contractor must host and conduct a presentation, via video or teleconference, with ITD's Project Manager (PM) to discuss the final findings and recommendations.

- Draft final report A written report is required for each ITD supported research project. Prior to submitting a draft report to ITD, the draft report shall be reviewed by a qualified peer reviewer approved by ITD and be edited to ensure the report is clear, concise, and conforms with requirements in the ITD Research Program's Style Manual for Research Reports. The draft report must be prepared using ITD's Research Report template. The style manual and template are available in the "Resources for Researchers" section of the Research program website.
- 2. Final report The final report should be professionally done and comparable in quality to a published journal article or dissertation. The report must be written to be understandable to both the technical staff involved in the project (engineers, planners, etc.) and other likely readers (department management, board members, legislators, etc.).