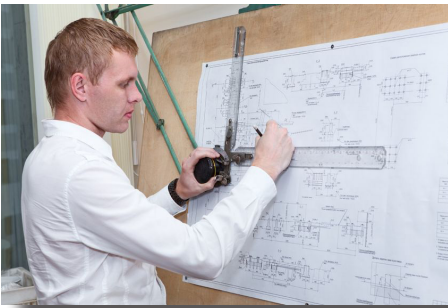




Idaho Department of Environmental Quality

How to Hire an Engineer for Public Water System and Wastewater System Design or Modification



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Introduction and Overview

This informational brochure provides assistance to communities or other entities in planning and designing new public water systems (PWS) and wastewater systems, or modifying existing systems. It is not intended to provide legal advice or answer legal questions that might arise when contracting with professional engineers (PE) but documents steps and procedures that may be followed in procuring their services.

For public agencies and political subdivisions, legal requirements for procuring PE services are found in Idaho Code 67-2320 “Professional Service Contracts with Design Professionals, Construction Managers and Professional Land Surveyors.” This procurement process is known as *qualifications-based selection* (QBS).

The QBS process of Idaho Code 67-2320 is mandatory for public agencies and political subdivisions for procurement of *any* contract with design professionals (engineers, architects, and landscape architects), construction managers, and professional land surveyors. The rules regarding the QBS process to follow along with important restrictions are outlined below:

- ✓ If the total professional service fee for the project is anticipated to exceed \$25,000, the *formal* QBS process outlined in paragraphs (a) through (g) of subsection (2) of Idaho Code 67-2320 must be followed.
- ✓ If the total professional service fee for the project is anticipated to be less than \$25,000, then an informal QBS process established by the public agency or political subdivision may be used in lieu of paragraphs (a) through (g) of subsection (2). This informal process should establish a method to select the firm based on qualifications and demonstrated competence and not based on fees. It is recommended the public agency or political subdivision document the process in writing.
- ✓ It is **illegal** for an owner to *break up* a single project into smaller projects to bypass the formal QBS process.
- ✓ It is **illegal** for an owner to request a bid for any QBS process. It is **illegal** for a PE or land surveyor to submit a bid for services in a QBS process.
- ✓ Once the formal QBS process has been used to determine the design professional, the design professional may be retained for future subsequent or phased work directly related to the original project.

In all circumstances, the selection should be based on demonstrated competence and qualifications to perform the type of services required and not on price for services rendered.

For nonpublic entities, such as homeowner associations, private schools, churches, recreation vehicle parks, and restaurants, the procedures described are not mandatory, but these entities may find the information useful when actively seeking professional services.

Hiring a Professional Engineer

The legal requirements in Idaho Code 54-1218 “Public Work” mandate using a PE. A PE is required to draft plans and specifications for constructing new PWS or public wastewater treatment systems, or for material modification or expansion to existing public systems as described in Idaho Code 39-118 “Review of Plans.” Additionally, these plans must be approved by the Idaho Department of Environmental Quality prior to beginning any construction.

Idaho Code 54-1218 states “it shall be unlawful for this state, or for any county, city, school district, irrigation district, drainage district, highway district, or other subdivision of the state, having power to levy taxes or assessments against property situated therein, to engage in the construction of any public work when the public health or safety is involved unless the plans and specifications and estimates have been prepared by, and the construction reviewed by a professional engineer.” Remember, selecting the design professional is the most important decision in the project’s overall success.

Scope of Work

The first step in procuring professional services is to decide the scope of work you want an engineer to perform. Perhaps your well has stopped producing sufficient water or has become contaminated. A recent sanitary survey may have uncovered health hazards or significant deficiencies. The scope of work might involve evaluating sources of water and treatment technologies for new systems or upgrades to existing systems in growing communities.

For wastewater, selecting an engineer should be based on experience relative to the project’s complexity. If the project involves permitting from state or federal agencies, direct experience in water reuse and/or regulatory permitting (e.g., National Pollutant Discharge Elimination System) should be sought. Project complexity can range from simple sewer line extensions or design of community septic systems, to full-scale wastewater treatment plants for subdivisions, municipalities, commercial facilities, or industry.

The scope of work is used to determine the estimated total professional service fee for the project. The budget fee will dictate either the *formal* QBS process (if above \$25,000 total fee) or optional *informal* QBS process (if below \$25,000 total fee). The *formal* process starts with developing a request for proposal (RFP); however, a detailed RFP is not typically issued for the *informal* process. A clear scope of work is a critical step in developing the RFP.

Developing an RFP

In the *formal* QBS process, an RFP is a published notification of the intent to secure professional engineering services. The completed RFP should list the scope of work and other technical requirements to be accomplished, the criteria and procedures for selection, and general information for prospective engineers. General qualifications and experience of the lead engineer, current workload, references, past clients, past experience with projects of the desired type, and details of staff planned for the project should be requested of potential respondents. Responding engineers should supply a general recommendation or statement of how they would approach the problem and how they would investigate potential alternatives. Include your selection criteria to let potential firms know what you will be looking for.

In the *informal* QBS process, develop a brief project description and include critical selection criteria. The description and selection criteria do not need to be published.

Firms may be contacted online, or through the Yellow Pages, recommendations of neighboring communities, or notices in local newspapers, journals, and trade publications. In the *formal* QBS process, the RFP must be published according to Idaho Code 67-2320. In the *informal* process, you can select qualified firms and send the information, or contact these firms based on your specific method.

Selection Process

Ranking Respondents

For the *formal* QBS process, include the ranking criteria in the RFP. For the *informal* QBS process, it is recommended that the ranking criteria are also included in your documentation. Maximum points can be assigned to various criteria depending on importance. Criteria may include qualifications and experience of the lead engineer in the requested type of project, current workload, proximity to the project site, and a demonstrated capability to meet time and budget constraints. Supplied references and past clients can be contacted and points assigned accordingly. Since the engineer must be licensed in the State of Idaho as a PE, the Idaho Board of Licensure of Professional Engineers and Professional Land Surveyors may be contacted about current standing and any past disciplinary actions. A review panel should be selected that reflects broad perspectives of the project needs and concerns. Both technical staff and policy-level reviewers can be on the committee to achieve this goal. Reviewers then rate and award points to each respondent equal to or less than the maximum points assigned for each criteria.

Generally, one way to rank respondents is for reviewers to rank each respondent as 1st, 2nd, 3rd, and so forth. The individual rankings by all reviewers for each respondent would then be added, (i.e., three 1st place votes and one 3rd place vote would add to up to 6 points), and respondents would be ranked according to the lowest overall score.

You may invite the highest-ranking respondents to a formal interview. It may be helpful during the selection process to interview potential engineers and visit their firms if you are unfamiliar with them or require additional information to make the selection. The interview results can be aggregated with the proposal score or may stand alone as the final selection criteria. Again, it is important to formally document the scoring and final decision by the selection committee.

Specific Questions For Potential Candidates During Interviews

1. *Does the candidate possess a current State of Idaho Professional Engineer License?* The lead engineer must possess a current Idaho PE license and business entities must have a certificate of authorization from the Board of Professional Engineers and Professional Land Surveyors to practice in Idaho. While other employees of a potential engineering firm, such as surveyors and drafters, may also be involved in the project, they must be under the direct supervision of the PE in charge of the project. If a project team is made up of a lead or primary consultant and several subconsultants, all consultants should be licensed and experienced in their area of expertise.

If you are unsure and would like to verify whether an engineer's license is current, check with the Idaho Board of Professional Engineers and Professional Land Surveyors at ipels.idaho.gov/ and

select “Search for Licenses.” Also check on any current disciplinary actions against the candidate that may affect the candidate’s future licensure. Contact the Board directly for this information; contact information is listed on the website.

2. *Does the candidate have experience designing your type and size of system?* An engineer must not only possess a valid Idaho PE license but should have experience with your particular type of system.
3. *How many years of experience do the candidate and any team members possess?* By obtaining an Idaho PE license, an engineer should already have 4 or more years of engineering experience.
4. *Does the candidate have references?* Ask for and verify all references.
5. *Can the candidate perform all of the requested tasks, services, and duties with current employees or will outside help be required?* The firm must be capable of performing all of the requested items. However, it may be appropriate for the firm to obtain additional expertise via subconsultants. Not having the ability to perform all needed services should not, on its own, be cause to remove the potential candidate from further consideration. It is recommended that to the extent practicable, all subconsultants needed to perform the scope of services should be indicated in a candidate’s proposal. The whole *team* should be the subject of the QBS process to the extent possible.
6. *Will the project team proposed by the candidate be able and available to perform the work for the duration of the project and is the candidate willing to commit to that during contract negotiations?* Verify that all team members or suitable alternates will be able to complete the project in the anticipated time frame.
7. *By contract, is the candidate going to act as an “agent” of the owner in performance of their services (i.e., able to bind a third party to the owner by contract)?* If so, the candidate must select any design professionals or professional surveying (not already listed in their proposal) on behalf of the owner by a QBS process.

Establish a List of Qualified Firms

Using the established criteria, select the persons or firms determined to be best qualified to provide the required services, ranked in order of preference.

Contract Negotiations

Negotiate with the highest-ranked person or firm for a contract or agreement to perform the requested services at a price determined to be reasonable and fair. The scope of work may be modified if conditions have changed or new information or technologies have been discovered.

Failed Negotiations

In the event that a satisfactory contract or agreement cannot be negotiated, formally terminate negotiations with the current firm and undertake negotiations with the next highest-ranked person or firm. As soon as the decision is made, verbally notify the current firm that you intend to terminate negotiations and follow up with a letter detailing an exact date of termination. Give the firm an amount of time to reconsider the unresolved issues that prompted the termination notification. You may need to negotiate with the third highest-ranked firm and so on until a satisfactory contract or agreement is reached.

The Qualifications-Based Selection Facilitator Council is a coalition of design and professional service volunteers formed to bring information about QBS to cities and counties in Idaho. For additional information, see idahobqbs.com/.

The following documents may also assist you in procuring services:

- Association of Idaho Cities, Purchasing, 2009
www.idahocities.org/DocumentCenter/Home/View/111
- Idaho Board of Licensure for Professional Engineers and Professional Land Surveyors, Guest Article on “Procurement of Professional Engineering and Land Surveying Services,” April 2012 Newsletter
ipels.idaho.gov/newsletters/NEWS49.pdf
- American Council of Engineering Companies, Owners Guide to QBS
netforum.acec.org/eweb/DynamicPage.aspx?Site=ACEC_STORE&WebCode=ACECproductDetail&prc_prd_key=79022e86-ee6a-4160-b12a-a71e4ff272d3