



VALUE THROUGH QUALITY

Choosing an Engineer Using Qualifications-Based Selection

Both Federal and Texas law provide for a method of selecting engineers and architects through a process known as qualifications-based selection, or QBS. QBS is a two-step competitive contracting process based on the evaluation of design firms' capabilities, experience and technical skills in relation to the needs of a particular project.

Professional Services Procurement Act; Section 2254.004, Texas Code

In procuring architectural or engineering services, a government entity shall:

- 1) first select the most highlyqualified provider of those services on the basis of demonstrated competence and qualifications; and*
- 2) then attempt to negotiate with that provider a contract at a fair and reasonable price.*

The Brooks Act; Section 902 [40 U.S.C. 542]

The Congress hereby declares it to be the policy of theFederal Government to publicly announce all requirements for architectural and engineering services, and to negotiate contracts for architectural and engineering services on the basis of demonstrated competence and qualification for the type of professional services required at fair and reasonable prices.

WHY QBS?

The typical QBS process has two phases. The first phase involves the selection of the firm most qualified to do the work. Initially, the owner or client publicly solicits services for a specified project. In response, interested firms submit statements of their qualifications and ability to design the project. The owner evaluates the respondents only on the basis of experience and qualifications – cost is not a factor – and typically develops a short-list of three competing firms. Usually, interviews are held with the short-listed firms. Finally, the firms are ranked in the order of most qualified.

The second phase involves the negotiation of the fee. The owner and the highest ranked firm attempt to describe the project, define the scope of services, and negotiate a fair and reasonable fee for the services to be performed. If negotiations are not successful, negotiations with that firm are terminated and the owner enters into negotiations with the next most highly rated firm, with the process continuing until a contract is agreed to.

WHY QBS?

QBS is the law, but why is it the law? After all, competitive bidding procedures apply to most procurement decisions in government. Why not professional design services?

- **Bidding Can Only Work When Detailed Specifications or a Detailed Scope of Services Are Known.** When commodities or services are procured by a governmental agency, one of the requirements is that each bidder will be bidding to provide the same commodity. Detailed specifications ensure that bidders have equal opportunities. Engineering and architectural services, however, are procured before the scope of work for a project is highly defined. Since the owner cannot possibly detail the precise services to be provided before the project is designed, fair competitive bidding is impossible.
- **QBS Encourages Technical Excellence and**

Innovation. A system that simply seeks the cheapest service will produce lower quality projects. A design firm's approach to a project must change when the fee becomes a major criterion in selection. Applying higher standards or technical excellence could render a response noncompetitive if another respondent applies lower standards. Advanced technologies or new features that could save money over the life of a project may not be added because another firm, not including these features, may offer a lower price. Instead, systems that are easy to design are selected. Less experienced personnel are used or fewer options are evaluated. QBS, on the other hand, encourages collaboration with the client to find the **best** solutions within budget constraints.

- **Quality Design is the Biggest Factor in Long-Term Cost.** In a typical project, design costs are usually less than one percent of overall life-cycle costs. However, the effort expended during design is the biggest single factor in determining life-cycle costs. Short cuts in design may be cheaper in the short-run, but it almost inevitably costs more later in terms of maintenance, rehabilitation, and operational costs. QBS promotes a long-term focus.
- **Quality Design Affects Construction Costs.** Short cuts in design can be penny-wise and pound-foolish. Firms competing on the basis of price rather than value can develop plans without evaluating options or with minimal details that often require much decision-making in the field by the contractor. On a structural project, a designer could design only the most heavily loaded members, then repeat the conservative member sizes throughout the structure, resulting in oversizing and higher construction costs. Since construction costs are typically 85-95 percent of project costs, expansion of these costs is much more significant than the cost of full design services.
- **The Essence of the Design Process is a Collaboration Between Designer and Client.** The critical element in the design process is collaboration between the owner and the architect and engineer. To a real extent, work on

a project begins when an owner and the most-qualified firm enter negotiations. To arrive at a price, client and designer must jointly establish goals and project scope, eliminate ambiguities, clarify assumptions, and set realistic expectations about schedule and budget. Bidding tends to eliminate this dialogue and gives professionals an incentive to work against their client from the beginning in order to get a leg up on the competition for a low price.

- **No Two Design Solutions Are the Same.** People often believe that design professionals practice an exact science, learning formulas and applying them similarly. Nothing could be further from the truth. Design is based on the application of education, experience, opinion and judgment. Not all design professionals have the same level of experience in every specialty or project type, and not all can bring that experience to bear on a project in a timely manner. Not all design professionals apply the same degree of creativity and ingenuity and not all have the same level of communication skills. Doctors, lawyers and accountants often differ in the application of their professional judgement; engineers and architects are no different.
- **QBS is Cost-Effective.** Although it is not a low-bid process, QBS does consider cost. An owner is under no requirement to accept the offered compensation of the highest-ranked firm. Owners can and do proceed to negotiate with other firms. At the same time, to get the best value owners should expect to pay reasonable fees for the services required. Negotiate the services required; negotiate the hours these services will require; then pay a reasonable fee for those hours. This approach is the most cost-effective over the life of the project.
- **QBS Encourages Competition.** The QBS process is based on a firm's ability to perform a job. Since each firm is reviewed with respect to the personnel that will actually work on a project, a small firm has the opportunity to match its design team's experience against a larger firm's team, since relative team size of experience is matched to the project. Also, the skills, experiences, and specialization of a firm and

individuals are considered, not merely the number of employees.