

## Qualifications Based Selection of Professional Engineers

The American Society of Civil Engineers (ASCE) believes that the selection of Professional Engineers as prime consultants and subcontractors should be based on the qualifications of the engineering firm. Qualifications including education, training, experience, past-performance, capabilities, personnel and workloads should be evaluated when selecting an engineering firm.

Cost of engineering services, while important and meriting careful negotiations, is related to work to be performed which often is not clearly defined at the time the engineer is selected. Therefore, selecting consultants based on cost is not recommended.

Accordingly, ASCE supports qualifications-based selection (QBS) procedures such as those specified by the Brooks Architect-Engineers Act of 1972, 40 U.S.C. 1101 et seq., more than 40-mini Brooks Acts, and the American Bar Association's Model Procurement Code for State and Local Governments for the engagement of engineering services. ASCE recommends that the application of these procedures to the development of a scope of work and the selection, procurement and administration of contracts for engineering services be the responsibility of technically qualified staff of the project owner.

This position is established in [ASCE Policy Statement 304](#).

### Why It's Important to Civil Engineers:

Often a contracting entity "owner" may believe that the pivotal issue in the selection of a professional engineer is the cost of the necessary services. Also, an owner may perceive that accepting the low price to perform the work produces the project with the lowest total cost. In this case, the owner is of the belief that the required engineering services are completely described and the qualifications of all engineers are equal.

ASCE believes that it is impossible to completely describe the required scope of engineering services in this manner. When construction, operations, and maintenance are considered, the lowest cost engineering services generally will not produce the lowest total project costs. Further, ASCE believes that the owner should have an established policy for designating individuals to serve on the selection committee. The selection committee should contain at least one Professional Engineer and others who are familiar with the project requirements.

### Background:

The QBS procedure is characterized by three basic steps: (1) the owner selects the professional engineer believed best qualified to perform the required work without considering fee; (2) the owner and the selected professional engineer confer to determine and/or review the scope of work, including contract scheduling; and (3) a fee for engineering services is negotiated based upon the mutually developed scope of work. Thus, cost is addressed at the appropriate time after the scope of services has been fully defined. Pre-contract communication between the owner and engineer to jointly develop a scope of

work, as called for in step 2, is critical to the success of the project and ensures a mutual understanding of the owner's expectations for the work and the specific services the engineer will provide.

A poorly defined scope of services can result in numerous change orders. Lacking specifics, each firm may be compelled to, in order to be competitive, submit a price for the least amount of work reasonably envisioned. Detailed analysis of the problem and the search for innovative and sustainable solutions, or even the comparison of the obvious alternatives is precluded. This approach is likely to result in minimal engineering work that will not properly evaluate the overall cost of construction, operation, and maintenance of the project.

QBS procedures are most effective when administered by those who best understand the unique nature of the service being sought. The procurer's experience with engineering organizations and proposed services, coupled with appropriate training in procurement matters, provides the required knowledge, thereby enhancing the efficiency of the civil works process.

**State Activity:**

According to the American Council of Engineering Companies (ACEC), currently 47 states have some type of QBS law in place. In the current economic climate, some states have attempted to erode their QBS laws to allow for cost to be given priority consideration. During the 2011 legislative sessions, ASCE worked with Sections in Florida and Illinois to defeat proposals to weaken QBS. The Florida proposal would have allowed compensation to be a considering factor during the competitive selection process for architectural, engineering, and other professional services. In Illinois, a Senate proposal would have removed engineering services from the state's Qualifications-Based Selection Act and place those services within the Procurement Code for low bid selection. As states continue to face budget difficulties, it is likely additional states may consider these types of proposals in 2012.