

Qualifications Based Selection of Professional Engineers (PS 304)

ASCE Policy Statement 304

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Policy

The American Society of Civil Engineers (ASCE) believes that the selection of professional engineers as prime consultants and subconsultants should result from competition based on the qualifications best suited to complete the work successfully. Qualifications including the training, registration, experience, skills and availability of the proposed project personnel are paramount in engaging engineering services. Cost of engineering services, while important and meriting careful negotiations and performance accountability, is related to work to be performed which often is not clearly defined at the time the engineer is selected. Therefore, cost should be secondary to professional qualifications.

Accordingly, ASCE supports qualifications-based selection (QBS) procedures such as those specified by the 1972 Brooks Law (P.L. 92-582) 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.

Issue

Often an owner may believe that the pivotal issue in the selection of a professional engineer is the cost of engineering services and, likewise, that acceptance of the lowest bid to perform the work based on a unilaterally-prepared workscope produces the lowest total cost project. In this case the owner is necessarily of the opinion that the required engineering services are accurately described and the engineers' qualifications readily determined and equal. ASCE believes that it is virtually impossible to adequately describe the required scope of engineering services in this manner. When construction operations and maintenance are considered the resulting services will generally not produce the lowest total cost project. Further, when the procurement of engineering services is viewed as anything other than the procurement of highly specialized technical skills, it gives rise to the use of non-technical procurement officers and project managers in the selection of professional engineers.

Rationale

The QBS procedure is characterized by three basic steps: (1) the owner selects the professional engineer considered best qualified to perform the work at hand, excluding fee; (2) the owner and the professional engineer confer to determine the scope of work; 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.

When owners write the scope of work on their own, they deprive themselves of the counsel of the most qualified engineers at this most critical juncture - the definition of the work itself. Lacking specifics, each firm must, in order to be competitive, submit a price for the least work envisioned. Detailed analysis of the problem and the search for innovative solutions, or even the comparison of the obvious alternatives is precluded. This approach is likely to result in minimal engineering work and add to the overall cost of construction and 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 civil engineer's experience with engineering organizations and services rendered, coupled with appropriate training in procurement matters, provides the required knowledge, thereby enhancing the efficiency of the civil works process.

Note: See ASCE Manual No.45 "Consulting Engineering: A Guide for the Engagement of Engineering Services", and ASCE Manual of Professional Practice, "Quality in the Constructed Project: A Guideline for Owners, Designers and Constructors", for more detailed examination of this subject.

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