ACEC RESEARCH INSTITUTE

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NEW RESEARCH SHOWS ENGINEERING PROJECTS SAVE TIME & MONEY BY SELECTING FIRMS BASED ON QUALIFICATIONS AND EXPERIENCE

ACEC Research Institute Releases Comprehensive Study on use of Qualifications-Based Selection (QBS) for Engineering and Design Projects

Washington, DC - The ACEC Research Institute released a comprehensive study today that found federal and state policies that select engineering services based on the design team's qualifications and experience had lower project costs and better on-time delivery versus selecting firms based on the cheapest bid.

The study, conducted jointly by Paul S. Chinowsky of the University of Colorado Boulder and Gordon Kingsley of the Georgia Institute of Technology, builds upon previous research which found similar benefits in the use of Qualifications-Based Selection (QBS) by government agencies in terms of cost savings and project success.

KEY FINDINGS

- QBS saves money – projects where QBS was used to procure engineering services experienced less cost growth (3 percent) versus the national average (6 percent).
- QBS saves time – QBS projects perform better in terms of project delivery time, experiencing less schedule growth versus the national average (7 percent with QBS versus 10 percent without).
- QBS produces higher levels of client satisfaction – (89% of QBS projects receiving "high" or "very high" satisfaction ratings from project owners).
- QBS promotes innovation -- Projects incorporating QBS have a greater likelihood of producing innovative solutions.

IN-DEPTH ANALYSIS

The new Updated Analysis of QBS in the Procurement of Engineering Services finds that QBS provides direct benefits in both the design and construction phases of a wide variety of public and private sector projects. From direct cost and schedule benefits to indirect benefits of reduced management issues and increased innovation, QBS demonstrates a clear benefit when applied across a host of project types, sizes, and geographic regions.

"The clarity and simplicity of the process when QBS is used enhances project outcomes and owner satisfaction, while other methods such as low bid procurement can lead to unintended consequences

including cost overruns and longer timelines," said Paul Chinowsky, University of Colorado Boulder. "Our research shows that using QBS helps address challenges faced by procurement professionals, including the reduction in trained staff in smaller jurisdictions, the lack of education on appropriate procurement policy, and misperceptions due to confusing marketing campaigns by alternative procurement groups."

The report comes at a critical time as federal and state agencies embark on a new effort to allocate billions of dollars in new investment in the nation's critical infrastructure. The study provides key recommendations on the role of hiring the right engineering design team to deliver successful project outcomes. More experienced teams bring enhanced innovation and can help to simplify complexity. Case study examples demonstrating each of these findings are included in the report.

"We are encouraged to see that QBS is continuing to be the primary method by which selections are being made across a range of projects, and that projects using QBS are outperforming the national average by staying on schedule and on budget," said Daphne Bryant, executive director, ACEC Research Institute. "QBS is the responsible approach for procurement and is demonstrating tangible value to governments, taxpayers and owners."

To access the full study, visit https://program.acec.org/qbs-resources-portal

About QBS

Qualifications-Based Selection (QBS) is a procurement process that has firms compete for work based on experience and technical expertise, rather than competing for the lowest cost bid. Under QBS, firms are evaluated and shortlisted based on their qualifications, the top-ranked firm is selected for price negotiations. Ideally, a fair and reasonable price is reached based on a detailed scope of the project. If an agreement on price cannot be reached with the most qualified firm, negotiations move to the second most qualified firm. In most cases, the top-ranked firm is selected at a price that fits the client's budget.

About the ACEC Research Institute

The ACEC Research Institute is the research arm of the American Council of Engineering Companies (ACEC) - the business association of the nation's engineering industry. The ACEC Research Institute's mission is to deliver knowledge and business strategies that guide and elevate the engineering industry and to be the leading source of knowledge and thought leadership for creating a more sustainable, safe, secure, and technically advanced built environment.

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Benefits of QBS

How does Qualifications-Based Selection work?

The contracting agency or company invites interested architectural or engineering firms to submit information about their experience and qualifications to provide services for a particular project. The submissions are evaluated and reduced to a "short list" of the three to five most qualified firms. Personal interviews usually are conducted with these firms to discuss each firm's qualifications, philosophies, and overall approach to the project. Once these interviews are completed, the agency or company ranks the firms. The top-ranked firm is invited to negotiate a formal agreement, which includes a discussion of project concepts and goals, the alternatives that might be considered, a specific scope of work, the general approach of the firm to the scope of work, and the firm's compensation for the project.

What does QBS evaluate?

The QBS process evaluates a firm's experience, expertise, training, availability, and references. This simple and competitive process matches the right firm for the project based on qualitative factors over cost alone.

Why is QBS preferred over other methods of selection, particularly for public projects?

At the beginning of a project, the scope of work for architectural and engineering services is often unclear. As a result, competing firms are unable to provide definitive pricing. Project owners and agencies must evaluate qualifications, competence, availability, and other factors to determine the best candidate for the job. For public projects, this is especially important for balancing complicated social factors and providing quality service and value to taxpayers. In a review of 76 design-build projects in the United States, QBS was found to have the lowest cost growth and the fastest construction speed when compared to sole source, best value, and low bid procurement methods.

Why should price not be the primary factor in selection?

Project owners focused on qualifications over price ensure that the architectural and engineering partners selected for the work will have the technical ability and professional judgment to turn a vision into an efficient, effective, and economical reality.

QBS sounds like it takes much longer than soliciting bids. What if I am on a tight timeframe?

QBS actually saves time. QBS procurements result in fewer project delays and improve the likelihood of owner satisfaction with the overall project. It is worthwhile to spend time at the beginning of the process to find the right partner in order to save time during the overall project. Research shows QBS outperforms the national average by keeping projects on schedule.

How does QBS benefit the client or the public?

QBS promotes collaboration and innovation, often lowering overall costs and reducing construction change orders. Recent research shows that overall growth of QBS projects is 3% compared to the national average of 6%. Similarly, 48% of QBS projects met all construction milestones compared to 32% of non-QBS projects. Research also shows there is a strong association between the use of QBS and the quality of construction documents developed by the design team, the final cost, and schedule performance.

Does QBS help or inhibit competition?

Because QBS focuses on the most meaningful factors, including qualifications, competence, previous performance, and availability, the process aids the competitive process so that it is not based primarily on a single factor, such as price. This is especially important for complex projects that can require community involvement, political sensitivities, and other social factors that call for experienced teams with broad knowledge and understanding.

Does QBS increase project cost?

No. QBS outperforms the national average by keeping projects on budget. Investing more design effort has been shown to reduce a project's final cost from early estimates by solving construction problems during the design phase when the costs are lower instead of after construction has commenced. A 2022 study found that QBS performed better in terms of cost when compared to best value procurement in 160 design/build projects between 2008-2019.

Learn More at: program.acec.org/qbs-resources-portal