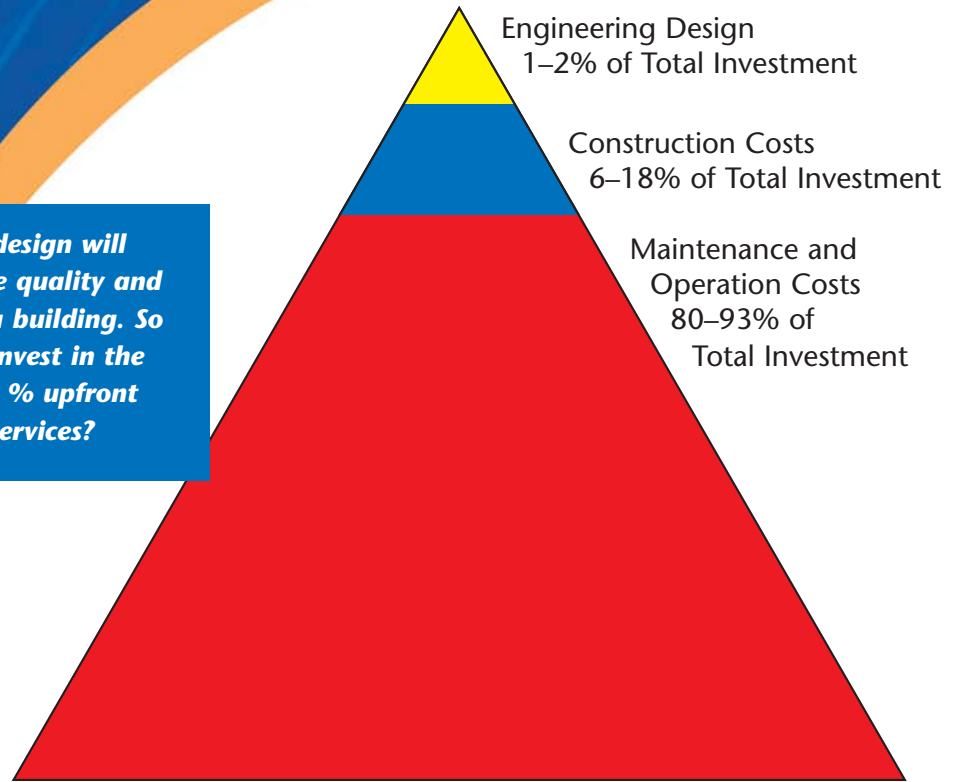


# concept

## Engineering Canada's Future

*The right design will determine the quality and longevity of a building. So why under-invest in the vital 1 to 2 % upfront design services?*



### Typical Life-Cycle Cost of a Building or Infrastructure Facility

## When Building Canada, Choose Quality and Avoid False Economies

To ensure the quality, reliability and safety of Canada's infrastructure, consulting engineers, who are involved in virtually all of its design, need to be chosen based on qualifications and not on low price bidding. While the more knowledgeable owners of buildings and infrastructure facilities understand the merits of Qualifications-Based Selection (QBS), there are others, most notably in the public sector, who believe that price should be the governing factor in selecting professional designers such as engineers. This misconceived notion of value can have many negative results for us all, including higher life cycle costs, unnecessary litigation, and projects that are simply lacking in imagination, aesthetics,

performance, and are ultimately unacceptable to the owners and the public.

### *Qualifications-Based Selection (QBS) Means Quality and Savings*

In building anything, making the right decision at the design stage is vital. That is why it is essential for governments to adopt a system like QBS that works in ensuring that the right design team is chosen and that the appropriate technology is employed. Essentially, QBS places the emphasis on quality, which means getting the right design team, fostering innovation and generating real savings. Engineering fees are generally only 1-2%

**The Association of Consulting Engineers of Canada (ACEC)** represents the private sector engineering companies in Canada. Consulting engineering is a \$10 billion industry in Canada, with 30% of revenue coming from international work. The industry employs over 50,000 people.



# ACEC Elects New Chairman



The Association of Consulting Engineers of Canada elected its 2005/2006 Chairman, Norm Huggins, P. Eng., at the 2005 ACEC Summit and Convention in Jasper, Alberta.

Mr. Huggins began work as a structural engineer at Gore and Storrie Ltd. in 1969, and stayed with them, progressing into management. In 1996, Gore and Storrie merged with CH2M Hill, now known as CH2M Hill Canada. Mr. Huggins is now a Vice-President of CH2M Hill and since 1998 has managed the firm's northern Ontario business, international business procurement management, communications and client service management policies. He has also acted as project director on several large infrastructure projects throughout Ontario and Canada.

Mr. Huggins, a past President of the Consulting Engineers of Ontario, has outlined his goal as ACEC Chairman to be to foster an appreciation of the business of consulting engineering among graduating engineers with the goal of reinforcing and building upon our industry's intellectual reserves.

"ACEC's government relations programs will continue to be a priority of the ACEC Board as we respond to business opportunities and responsible procurement of our services through Qualifications Based Selection," he said.

of the total life-cycle cost of a structure, yet if this 1-2% is wisely invested on design, governments can save significantly on construction and maintenance costs, which make up the remaining 98-99% of the life-cycle costs.

## QBS vs Cost-Based Selection

To ensure that clients who use engineering services receive the best design expertise, talent and innovation as well as the most appropriate technology, the most responsible and reliable way of choosing an engineer is **Qualifications-Based Selection (QBS)**

### Benefits of (QBS)

- A) Results in appropriate and wise investment at design stage which:
  - Fosters creativity
  - Selects best design team and most appropriate technology
  - Provides long-term value by reducing construction and life-cycle maintenance costs
- B) Places emphasis on the client's objectives and expectations of quality, well adapted to current conditions and future trends.
- C) Provides a transparent selection system that focuses on competence, creativity and proven performance.

### Dangers of low-bid selection

- A) Results in low investment at design stage which:
  - Discourages innovation and evaluation of alternative approaches
  - Results in use of less experienced personnel and fewer resources devoted to the project
  - Leads to missed opportunities for savings in construction and life-cycle maintenance costs
- B) Places emphasis on acceptable standards instead of expected quality.
- C) Selection focuses on lowest possible effort and lowest call on intellectual, conceptual and design resources.

### QBS is the Law in the U.S.—What about Canada?

In the United States, the federal government has enshrined the principles of QBS in the Brooks Act and 44 state legislatures have adopted the principles. Here in Canada, we were delighted to learn that even the Federal Public Works and Government Services Minister, the Honourable Scott Brison, has been stressing the importance of getting the right design. At the launch of Environment Week 2005, the Minister spoke of the need to ensure that government buildings and facilities were part of the environment solution. The Minister said: "We have also begun to develop a life-cycle assessment system for major building projects. That will allow us to design



Claude Paul Boivin  
President

innovative and energy efficient buildings even when it costs more up front." Coming from such a senior key policy maker, those are indeed encouraging words.

### Recommendation

Given that consulting engineers provide professional design services that can have an impact on the health and safety of Canadians and that employing the right design team and appropriate technology is vital to the success of each infrastructure project, **ACEC strongly recommends that the Government of Canada adopt legislation requiring that Qualifications-Based Selection (QBS) be used for federal procurement of engineering services.**

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