



Consulting Engineers of Alberta

Best Practice for Procurement of Consulting Engineering Services

A Quick Summary

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Table of Contents

1.0	Why Procurement Is Important	1
2.0	The Recommended Best Practice	1
3.0	How the Best Practice works	1
3.1	What is Qualifications Based Selection (QBS)?	1
3.2	Selecting the right team for the right project at the right price	1
4.0	Benefit to Albertans.....	2
4.1	Better value to taxpayers	2
4.2	Significant life-cycle savings	2
4.3	A transparent and competitive process	2
4.4	What's wrong with the lowest price?	2
4.5	New West Partnership Trade Agreement	2
5.0	Who Supports QBS?.....	3
5.1	Consulting Engineers	3
5.2	The Government of Alberta	3
5.3	Progressive Canadian Municipalities	3
5.4	US Federal and State Governments	3
5.5	The Canadian Standards Association	3
5.6	Standing Committee on Government Operations	3
5.7	Leading Industry and Professional Associations	4
6.0	Contact Information.....	4

APPENDICES

Appendix A 21 Benefits of Qualifications Based Selection

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1.0 Why Procurement Is Important

Supporting Canada's infrastructure represents a significant investment of tax dollars. Upfront procurement decisions have a significant impact on not only the cost and quality of the design and construction phase, but on operations and maintenance of infrastructure assets over their entire design life.

In order to ensure the best possible outcome and the best possible value to taxpayers, eligibility for infrastructure funding should be conditional upon use of best practices for procurement.

2.0 The Recommended Best Practice

In order to ensure the best possible outcome and the best possible value to taxpayers, eligibility for infrastructure funding should be conditional upon recipients adopting a Qualifications Based Selection process (QBS). One developed by the public sector and the Canadian Federation of Municipalities Selecting a Professional Consultant, the best practice, was developed in 2006. It was called the National Guide to Sustainable Municipal Infrastructure (InfraGuide). This guide was developed by the public sector for the public sector.

3.0 How the Best Practice works

3.1 What is Qualifications Based Selection (QBS)?

QBS is a procurement process whereby the first considerations of the procuring agency are the qualifications of the potential consulting engineering firm chosen for the project.

Step 1 involves issuing an RFQ (request for qualifications). Firms interested in the project review the broad project parameters and submit their statement of qualifications.

Step 2 involves the project owner's evaluation of the qualifications of the responding firms and creation of a short list of three firms. The project owner may choose to interview the top three firms as part of the selection process. From the three firms one is chosen.

Step 3 involves creating a working partnership with the chosen firm to determine the appropriate scope of work, innovation options, life-cycle costs and other factors that may determine the design and completion of a successful project. Once scope discussions are completed the chosen firm and the project owner negotiate a fair price for the work. If a suitable price arrangement cannot be achieved, negotiations are undertaken with the second place firm on the list.

3.2 Selecting the right team for the right project at the right price

The *Best Practice* by InfraGuide recommends a competitive Qualifications Based Selection (QBS) model. QBS encourages the selection of the most qualified team to work with the project owner to jointly develop the required scope of services and the appropriate schedule and fees. QBS is similar to hiring people – identifying the candidate who will provide the most value to the organization and help the organization achieve its objectives, and then negotiate terms of employment. If the owner and the preferred team cannot come to terms on scope and fees (e.g. project budget), the client is free to proceed to the next-preferred team.

4.0 Benefit to Albertans

4.1 Better value to taxpayers

QBS encourages innovation and provides better value to Alberta taxpayers on their infrastructure investments because both the selected engineering firm and the project owner sit down to discuss scope and options for the project. It also provides accountability by ensuring that fees will directly correspond to the level of service and the value of deliverables to be provided. QBS also results in more realistic and predictable budgets and schedules for capital expenditures.

4.2 Significant life-cycle savings

QBS maximizes the value of the engineer's contribution to a project while reducing the project's life cycle costs. Design engineering typically accounts for only about 2% of the life cycle cost of infrastructure, but dramatically impacts the cost and quality of the remaining 98%. A recent American Public Works Association study shows that using QBS for engineering reduces construction cost overruns from an average of 10% to less than 3% - equivalent to a savings of up to \$700K on a \$10M capital project. (These savings are often greater than the original design fees!)

QBS emphasizes quality, fosters innovation, and generates real savings in construction, operations and maintenance, saving taxpayer dollars while optimizing public safety and welfare.

4.3 A transparent and competitive process

QBS is a competitive process – the cost of engineering services is a factor in the procurement, but it is finalized after the most suitable firm for the project has been selected.

4.4 What's wrong with the lowest price?

If public infrastructure development is based on the lowest possible fee, there are potential long-term consequences to both the economy (higher costs to the taxpayer) and public safety. Selecting the lowest fee creates pressure to expend the least amount of resources necessary to meet the bare minimum requirements of the project – losing an opportunity to optimize the design, reduce lifecycle costs and enhance safety. Often projects that are awarded based upon the lowest price result in high cost-overruns because the price is set for the bare minimum scope of work. Lowest price selection also discourages innovation and effectively penalizes proponents that anticipate potential complexities or who wish to propose value-added solutions all to save tax payers money. The results of this will be felt in the years to come.

There may be a tendency for designs to be pushed to the limit of what is safe or acceptable in order to get the most from a limited budget. There also may be increased need for increased supervision to ensure there is no difference between what is designed and what exactly is constructed (something that is often difficult for clients to do). Potentially low-cost may increase life-cycle management costs because of under-design or lower level construction.

4.5 New West Partnership Trade Agreement

A comprehensive legal review has shown that the use of QBS is not contrary to the New West Partnership Trade Agreement and in fact will enhance the agreement by clarifying procurement of professional engineering services.

5.0 Who Supports QBS?

5.1 Consulting Engineers

The QBS selection process is supported by all Consulting Engineering Association across Canada. It has strong support in the provinces which are involved in the New West Partnership Trade Agreement (NWPTA)

National Guide to Sustainable Municipal Infrastructure
InfraGuide is a collaboration of the Federation of Canadian Municipalities; the National Research Council; and Infrastructure Canada.

5.2 The Government of Alberta

The Consulting Engineers of Alberta (CEA) have worked with the Government of Alberta for over 3 years to improve the procurement process and adopt QBS. At this time Alberta Transportation are planning a QBS pilot project. Further, CEA is working with Alberta Government MLA's to have use of QBS legislated for procurement of professional engineering services by the public sector.

Alberta Municipal Affairs paid for a pilot infrastructure assessment project for the Town of Elk Point and the Village of Boyle. A key component was Qualifications Based Selection of the engineering consultants who would undertake the work. The project was extremely successful and is now a model for other municipalities.

5.3 Progressive Canadian Municipalities

Some Canadian municipalities, such as Calgary and London, Ontario use QBS for selecting engineering firms for public works projects. Calgary has been using a Qualification Based Selection process for procurement of consulting engineering services since the 1970s

5.4 US Federal and State Governments

5.5 The Canadian Standards Association

The Canadian Standards Association, under its Infrastructure Solutions Program, has developed training tools for the implementation of QBS and will be available for all levels of government shortly.

5.6 Standing Committee on Government Operations

In 2009, a report of the House of Commons Standing Committee on Government Operations recommended that QBS should be investigated and considered for Federal Government procurement of professional services.

5.7 Leading Industry and Professional Associations

- Consulting Engineers of Alberta
- Association of Professional Engineers and Geoscientists of Alberta (APEGA)
- Alberta Association of Consulting Architects
- Alberta Construction Association
- Alberta Roadbuilders and Heavy Construction Association
- Edmonton Chamber of Commerce
- All Consulting Engineering Association across Canada
- Association of Consulting Engineers of Canada (ACEC)
- Engineers Canada
- Royal Architectural Institute of Canada
- International Federation of Consulting Engineers (FIDIC)
- American Public Works Association

We have also presented to the Alberta Association of Municipal Districts and Counties and the Alberta Urban Municipalities Association to make them aware our intentions and provide an understanding of Qualifications Based Selection.

6.0 Contact Information

For more information, please contact:

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Appendix A 

Benefits

1. QBS appropriately engages the best consulting engineering firm for the project resulting in maximum benefits for the client.
2. Price remains a critical component of the selection process but it is not the initial or only criteria.
3. During the price negotiations the consulting engineering firm offers advice and clarifies all the project's specifics. The net result is a reduction or elimination of cost-overruns that typically result from unclear or misunderstood project scope.
4. When price is the major determining factor on engineering consultant selection, public interest becomes an issue as designs can be pushed to the limit of what is safe or acceptable in order to design within a limited fee.
5. QBS simplifies the procurement of consulting engineering services resulting in reduction of costs for the project's proponent.
6. The consulting engineering industry benefits because under the prevailing procurement system firms often spend tens of thousands of dollars responding to RFPs with only one firm being awarded a contract. On large project proposals, responding to RFPs can cost the consulting industry as a whole hundreds of thousands of dollars (something that really hurts the industry particularly in a poor economy.)
7. QBS develops mutual trust between a project owner and a professional service provider so that responsibilities and risks are understood and budgets, planning and an owner's project expectations are respected.
8. QBS enables the total project value over the project's life cycle to be maximized because of a project-focussed consultant selection rather than solely a price-based selection.
9. QBS minimizes under-design and inferior construction because of the teamwork approach to QBS project management involving both the engineering consultant and the client.
10. QBS fully supports the owner's preferred model of construction. (open tendering, design build, P3's or best value models)
11. A close owner and engineering consultant relationship fostered by QBS encourages creative and innovation solutions in solving complex project challenges.
12. When price is the only determining factor of a consultant selection, the project proponent may have difficulty supervising to ensure what is designed is what is exactly constructed and often the project proponent is ill-equipped to do the supervisory job that is required. The teamwork approach of QBS minimizes those challenges.
13. The QBS process is recommended by Infraguide (a municipal guide to infrastructure developed by the Federation of Canadian Municipalities).
14. QBS recognizes the public interest by being based upon the professional obligations of consulting engineers as established by law. (APEGA Code of Conduct)
15. QBS conforms to the NWPTA (New West Partnership Trade Agreement) by establishing an open and transparent selection process for professional consulting engineering services.

16. QBS mitigates liability issues for the project owner. (A recent BC Court of Appeal ruling assessed liability on the basis of a municipality's failure to appropriately consider the qualifications of all prime and sub-consultants engaged in a project).
17. QBS reduces potential for litigation between a project owner and service provider and thus reduces overall costs for insurance for both parties by reducing potential for insurance claims.
18. QBS was established by law in the United States in 1972 through The Brooks Act. It applies to selection of engineering consultants for most federal government projects as well as for most projects in the individual states. Reviews have shown lower overall costs and higher levels of engineering excellence through QBS.
19. QBS is supported by all professional engineering societies and professional engineering regulatory bodies across Canada (including NWPTA partners Saskatchewan and British Columbia)
20. QBS is supported by the Alberta Construction Association, the Alberta Road Builders and Heavy Construction Association, and the Alberta Association of Consulting Architects
21. The Province of Quebec has instituted QBS for procurement of consulting engineering services for public projects in that province following the procurement scandals that plagued the province.
22. The QBS process prevents price rigging which can occur when price is the only consideration as was the case in Quebec prior to implementation of QBS.
23. QBS promotes high standards and engineering excellence which has the added benefit of creating a positive environment to attract the brightest minds that graduate from our schools of engineering to the consulting engineering profession.
24. QBS ensures that the consulting engineering profession is a trusted and respected advisor and can attract exceptional talent to the industry.
25. QBS ensures that there will be a strong local consulting engineering industry that supports the economic and social well-being of the province.