

1996

Guide for Contracting, Selecting, and Managing Consultants



in Preconstruction Engineering

DEVELOPED BY THE
*AASHTO Task Force on Preconstruction
Engineering Management*

PUBLISHED BY THE
*American Association of State Highway
and Transportation Officials*



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and Transportation Officials***

444 North Capitol Street, N.W., Suite 249
Washington, D.C. 20001
(202) 624-5800

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Executive Summary

Over the past decade, the use of consultants by state transportation agencies has increased significantly. In recognition, AASHTO has seen a need to conduct a study, to develop this guide that discusses findings and presents methods, procedures, and suggested recommendations for making the most effective use of consultants. Agencies are continuing to be faced with dynamic programs which seem to have larger peaks and valleys. They are also facing significant changes in how business is to be conducted. In addition, staffing limitations, hiring freezes and other constraints are adding pressures to the expectations to deliver quality projects on time and within budget. Consultants have become a key resource and extension of an agency's professional workforce to deal with these dynamics and deliver the program. While not always less costly, the use of consultants to balance workforce with workload can be cost effective.

This guide is intended to be a reference for agencies to use in further developing their consultant program, organizing and training their staffs, selecting consultants, developing consultant contracts, and managing their consultant program and workforce. The primary objective of AASHTO and this task force was to provide a guide to assist transportation agencies.

As an initial step in the study and development of this guide, the task force circulated a questionnaire (early 1992) to all states to gather information and history on the status of consultant programs in state transportation agencies across the nation. In mid-1992, a second survey was sent to consultants to gather additional information germane to the development and management of these programs from the perspective and insight of the private sector. Both questionnaires, representing 49 of the 50 state transportation agencies and nearly 300 consultants, provided resource data for the task force effort. The surveys also reaffirmed the need to strengthen some existing procedures and methodologies and identified potential opportunities for improvement and change. The questionnaires included such topics as:

- Sizes and configurations of consultant programs
- Types of contracts and methods of payment
- The selection process
- Methods of managing consultants and consultant projects
- Types and methods of audits of consultant contracts
- Monitoring and evaluating projects and programs
- Training, liaison, and "team building" (another form of partnering)
- Suggestions, recommendations, thoughts, and concerns

Summaries of the questionnaire responses have been included in the appendix.

The underlying principle of this guide is that every step of the consultant contracting, selection and management process is directed towards producing a quality project. This guide covers a wide range of issues involved in selecting and managing consultants for preconstruction engineering. In this guide, the Task Force on Preconstruction Engineering Management identifies and discusses means to establish and manage consultant processes in

order to develop an efficient delivery of high quality products to the customers, the users of the nation's transportation facilities.

A major consideration for any agency in forming a new program or revamping an existing program is the organization of the staff needed to execute and manage the program. One of the considerations in this guide is recognition and accommodation for program variations in size and approach which exist across the nation. This guide provides a discussion about these important considerations along with options, alternatives, and effective organizational configurations.

Another consideration for an agency facing a new or modified program is the training of its staff to perform the various functions associated with the program. Due to large turnover within an agency, because of attrition and retirements, many agencies report they are facing the development of new program efforts with staff lacking experience and expertise. In some instances, the need is so great that special accelerated training programs are essential to bring the workforce up to the level of skill required to perform. Information found during this study also indicates that the consultant industry is facing much the same high levels of turnover and is in need of similar types of training. Some states have launched extensive training programs, working through their universities and other training organizations, to provide hands-on, pragmatic courses and workshops to meet the needs of both public and private sectors. Some states have also recognized the benefits of joint training (consultants and in-house staff) which develops with a focus on teamwork and partnering.

One of the most important steps in developing a consultant contract is the preparation of a comprehensive scope of services. This requires a dedication of substantial agency staff; however, a complete scope of services (work) will save a great deal of time and misunderstanding in the negotiation phase. The scope document must be clear and precise. It will serve as the foundation for the consultant's proposal and contract.

The consultant selection process, in many jurisdictions, is coming under increasing scrutiny. People outside the agency, as well as State Legislatures, are examining the process and questioning agency decisions. It is critically important that the agency have a clearly defined policy and procedure which demonstrates a fair and equitable selection process open for all. This guide outlines the processes that are in predominant use throughout the country.

Consultant contracts should clearly outline the terms and conditions under which the consultant is expected to function. In cases of dispute, the written word takes precedence over any oral understanding.

A fundamental precept in negotiating the contract is that the agency is willing to pay a fair price for the professional services the consultant provides. In return for providing the services and product, the consultant is entitled to a reasonable profit.

Many of the clauses and requirements do not vary with each individual contract. These should be standardized and approved by the agency's legal staff as well as the various technical units affected. This standardization can include such items as indemnity, insurance, dispute resolution, and bonding requirements. This standardization is frequently referred to as "boilerplate" language. However, even beyond this, many agencies develop model agreements. The use of model agreements significantly reduces processing and review time.

It is normal for unanticipated changes to become necessary during design. The basic contract must clearly state how contract modifications will be made and must spell out the manner in which compensation will be paid.

The use of subconsultants is frequently necessary. The contract between the agency and the prime consultant must clearly define the responsibility of the agency, the prime consultant, and the subconsultant. Normally, the agency will hold the prime consultant responsible for full performance, including that of the subconsultant.

There are several ways of structuring payments to consultants. The two most frequently used are “cost plus fixed fee” and “lump sum.”

Management of the consultant’s work, as well as management of the project, is extremely important. Many agencies designate one person as project manager and all direction to the consultant must be through that individual. This helps to simplify and clarify the lines of communication and responsibility. The project manager is responsible for approving the consultant’s invoices and must assure the agency that work is progressing on time and within budget.

In order to adequately manage the consultant program, project managers must be thoroughly experienced engineers and must be trained in contract management. Individuals who are selected to be consultant project managers should possess a solid technical background. In order to assure that the agency can provide people with this skill, a viable in-house design force is essential. It is only by learning design first-hand that a person will be able, later on, to effectively manage a consultant project. This means an adequate level of in-house work must be continued to train and perpetuate an experienced core of in-house personnel. No state can ever afford not to continue some level of in-house staff experienced in design, environmental, right of way, or construction engineering. It is recommended that a basic cadre experienced in research should also be maintained.

Consultant management is distinctly different from traditional project engineering. Agencies are encouraged to provide staff with formal training in management of consultants. In addition to management concepts, ethical considerations are often confronted by staff. Agency employees should receive instruction in an agency’s code of ethics.

Position Statement

AASHTO recognizes the use of consultants can be a cost-effective way to supplement agency staff in the performance of preconstruction engineering. AASHTO also recognizes that the success and quality of the consultant effort is dependent on the procedures, organization, and training policies of the agency.

Therefore, it is AASHTO's position that:

For those agencies utilizing consultants to perform preconstruction engineering, a pre-established procedure for procuring and managing consultants should be developed and consistently applied.

This guide was developed for that purpose.

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Chapter 1

INTRODUCTION—USING CONSULTANTS

The AASHTO Subcommittee on Design's Task Force on Preconstruction Engineering Management was assigned to study and prepare a guide for the procurement and management of engineering consultant services. The goals of the task force were threefold:

Survey existing state procedures concerning issues relating to procuring, managing, and using engineering consultants;

Develop an AASHTO position and recommend guidelines for effective management of consultants and the contract process;

Develop and distribute a publication that will provide guidance in organizing, developing, and effectively managing a consultant program for use by AASHTO members and related government agencies.

This *AASHTO Guide for Contracting, Selecting and Managing Consultants in Preconstruction Engineering* was prepared for public officials who have the responsibility for engaging private sector engineering work or other related services.

A 1992 AASHTO survey of state transportation agencies indicated an increase in the use of consultants to perform all aspects of engineering and related activities. This increased use of consultants is prompted by new legislation at the national, state, and local level as well as personnel constraints which have made it imperative that states and consultants form a partnership to provide quality engineering services in the most cost-effective manner.

Selecting the best available consultant engineering or related firm and negotiating for compensation requires hours of research, organization, evaluation and responsible decision making. The goal of most procurement officials is "total value," a result which occurs when the most competent consultant firm, engaged at a fair and equitable cost, develops a project design or study that serves the client's best interest in construction, life-cycle cost, and quality.

In order to achieve quality in the preconstruction phase of a project there must be a clear and complete scope of services. Without this understanding, it is impossible for the consultant to provide a quality product. Ambiguities and inaccuracies because of poor scope of services may result not only in errors and omissions during the preconstruction phases, but also during the construction phase when correcting may be very costly and involve litigation.

Although not continually referred to throughout this guide, its underlying principle is that every step of the consultant selection and management process is predicated on the goal of producing a quality product for the public. There are costs involved. It may cost more money and time to review and inspect. It may cost more to train people to do the job correctly. However, these expenditures in turn can prevent errors and omissions, thus saving unexpected costs.

An item of major concern in justifying the use of consultants is cost. Cost-effectiveness continues to be brought forward as a criterion for use of consultants. While it can be shown that the use of consultants can be a very cost-effective decision to meet peak workloads or to do specialty work, it may not be less costly.

In addition to providing adequate staff to oversee consultant work, there is clearly a need to maintain an adequate level of in-house expertise with the capability of perpetuating its engineering experience through training in all areas. Also, there is a need to have trained staff to research and develop or oversee the development of policies, standards, guidelines, and technical publications required for the daily operations of the transportation system and to assure that a continuous quality improvement is perpetuated throughout the program. This is certainly in keeping with the intent of Sections 1043 and 1060 of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). No state can ever afford to totally eliminate an experienced core of in-house design, environmental, right of way, or construction experts.

To assure that the in-house organization will be able to perpetuate the experience and skill levels required, each agency should look in-depth at its long-range plan and develop a program that includes a sufficient number of projects and project elements that would be done by the in-house cadre of professional and technical staff. It has been suggested that there are types of projects, especially restoration, rehabilitation and resurfacing projects, where the skills to retrofit and match existing conditions may be more cost-effectively done in-house. However, to be able to provide adequate and effective oversight for any type of agency project, the in-house oversight staff needs to be not only trained in leadership skills but also be knowledgeable engineering experts on the projects and the issues relating to them.

This guide covers a wide range of issues involved in the process of selecting and managing consultants for preconstruction engineering. Any such process must recognize and be consistent with a myriad of federal, state, and local legal, regulatory, or administrative requirements. In this guide, the Task Force on Preconstruction Engineering Management has attempted to identify and discuss some means by which to establish and manage this process in order to have an efficient delivery of high quality products.

It is the intent of this publication to aid in creating or strengthening a public/private team, to establish guidelines for the most appropriate and best way to manage this public/private team for the benefit of all and, most importantly, to develop a cohesive partnership throughout all of our organizations, from top to bottom, consultants and states alike. The bottom line in today's environment is a need for a strong, effective, public/private team to meet the transportation goals desired by the public.

For those states initiating a consultant program or re-engineering their existing program, the Task Force suggests a review of Chapter 7 ("Organizing and Training"). This chapter provides information useful in establishing an agency's consultant program. This chapter also provides information concerning specific training and education courses in the managing and administration of a consultant program. The Task Force also recommends joint training of consultant and agency staff in an established continuing education program of courses related to technical subjects.

2 Introduction—Using Consultants

Chapter 2

ESTABLISHING THE CONSULTANT PROGRAM

Establishing a Need for Consulting Services

Government agencies are constantly faced with providing needed services with limited resources and personnel. These agencies also desire to maintain a stable staffing level to avoid the cost and disruption caused by hiring and training new staff that could then be followed by staff reductions in the future when the workload decreases.

Consultants serve the purpose of providing trained personnel to supplement the peak workload of the agency. The use of consultants with special expertise allows the agency to take advantage of their previous training and experience to provide the appropriate services on specialty or controversial projects that are not encountered routinely by the agency's staff.

Balancing the Program

Before proceeding with the process of securing consultant services, an agency must first evaluate its needs and perform an analysis of available in-house manpower and resources.

There are numerous major projects that can be done cost-effectively by consultants. In many states these projects can often add up to 50 percent or more of the state's program. However, in-house experts are required to oversee this work. It is essential to continue enough in-house work to assure that an adequate level of up-to-date, experienced and well-trained staff exists for all types of projects in each state. This is important to assure that experience is gained by staff, journey, and supervisory levels so that these personnel can also become effective as oversight staff.

There are certain types of projects, mainly where retrofit is involved, that are less costly and also more cost-effective when done by in-house staff experts. These include reconstruction projects that require extensive knowledge of the system or area, many rehabilitation projects, most emergency repair and permanent restoration projects, and traffic management safety projects.

It is recommended that transportation agencies develop procedures and requirements for the establishment of the need for, the evaluation of, and the approval for the use of consultant services. This may only require providing basic information to top management such as the Chief Engineer or Director for their review and sign off prior to beginning the selection process. In some transportation agencies it may be necessary to include the preapproval process through their programming, budgeting, or legislative branches.

Types of Consulting Services

Each transportation program is unique. This uniqueness results from the different transportation needs of each state, demographics, organizational structure, staff size, and governmental structure. The determination of the need for consultant services is based on these and other factors that are discussed in more depth in each section of this guide.

The various types of work performed by consultants for the transportation agency in the preconstruction area may be summarized as follows:

1. Project Development and Environment (Pre-Design)
2. Design
3. Construction Engineering
4. Other Areas.

Project Development and Environment (Pre-Design)

Examples of work normally included in the pre-design phase are

- Mapping
- Value engineering
- Transportation planning
- Hazardous and toxic materials study and/or recommendations
- Archaeological investigations
- Asbestos testing abatement procedures
- Various permit preparations
- Reconnaissance studies
- Feasibility and preliminary engineering studies
- Environmental study, review, and recommendations
- Public involvement
- Wetland investigations
- Biological reviews
- Partnering facilitation
- Developing alternatives, analyzing and providing recommendations
- Other

Design

Examples of work normally included in the design phase are

- Surveys
- Value engineering
- Soil mechanics—geotechnical
- Hydraulics and hydrology
- Right-of-way plans
- Roadway design
- Structure and Bridge design
- Architectural
- Landscaping design
- Traffic engineering

4 Establishing the Consultant Program



- Utility design
- Right-of-way acquisition
- Peer review
- Project management
- Other special expertise, etc.

Construction Engineering

Examples of work normally included in services required during the project construction phase are

- Shop drawing review
- Construction engineering services relating to design features
- Plan modifications required by changed field conditions
- Facilitator/Mediation
- Other special expertise, etc.

Note: Although this guide does not specifically address the use of consultants as construction project managers, most principles also apply to this service.

Other

The other category could include items that may be one-time consultant work. Examples of this type of work are the design of a computerized project management system, development of special CADD software, bridge inspection, bridge scour studies, development of various manuals and guides, developing and conducting training courses, and other special requirements as needed.



Chapter 3

PREPARING FOR CONSULTANT CONTRACTS

After the need for consultant services has been established, the next step is to identify the specific projects that will be contracted to consultants. After the agency has identified the work to be contracted, the type of contract needs to be determined so that the scope of services expected of the consultant can be prepared and a proposal elicited.

Following are the typical steps in the selection process:

1. Project development—preliminary scope of services
2. Contract type
3. Advertise project—statement of interest
4. Review responses—develop short list
5. Request for Technical Proposal (RFP)
6. Detailed scoping conference
7. Receive and evaluate technical proposals—interview (if necessary)
8. Final rankings—approval and notifications
9. Negotiate contract
10. Execute contract

Project Development/Identify Needed Consultant Services

A statewide work program is usually developed by an agency which compares transportation objectives, agency capabilities, its staff availabilities, and funding resources. From this, project schedules and priorities are established and the need for consultant services is identified.

Following project identification, the needed consultant services and agency responsibilities are outlined. A schedule for the project is also tentatively established. General requirements that the consultant needs to follow to deliver a quality product should be identified at this point in the process.

Contract Type

Prior to beginning the selection process, the type of contract needs to be determined. Contract type refers to the method in which the contract is structured to cover the work, such as:

- Project-specific contracts
- Multiphase contracts
- On-call contracts.

Project-specific contracts provide for all the work associated with a specific project that is desired to be contracted with the consultant firm and requires detailed scopes of services. These contracts may provide for all work to be placed under contract at the same time depending on availability of funds.

Multiphase contracts are similar to project-specific contracts except that the work is divided into phases such as survey, environmental, design, and right-of-way. Individual phases are negotiated and the work authorized while future phases may wait until later in the contract period before completing negotiation and authorization. Multiphase contracts give the agency some latitude in determining to what extent the consultant firm continues with the contract. They are also helpful for complex projects where the scope of a future phase is not well defined. They allow the agency to get complex projects under contract in a minimal amount of time but require continual negotiations as each phase approaches. Multiphase contracts permit the agency to terminate a contract at the end of a phase without the effort and possible disagreement associated with using the termination clauses in the contract.

On-call contracts cover basic contractual requirements without defining specific projects. They are set up to handle a number of projects or specialized services which are established during the contract period. Generally, these contracts run for a period of several years. The base or general contract sets up specific agreed rates upon which maximum payables are determined. As specific project needs arise, changes can be negotiated using a work order or supplemental agreement. The biggest advantage to this type of contract is the ability to get a specific project under contract in a minimal amount of time because much of the selection process has already been completed. Typically, on-call contracts are used when a specialized service will be needed for a number of different projects, e.g., field survey, wetland determination, and hazardous waste analysis. This is a very popular form of contract with many agencies.

Advertise Project/Statement of Interest

The need for services of a consulting firm may be advertised in appropriate national, state, and local publications and/or electronic bulletin boards. Notices can also be sent to firms known to be qualified to do specific work, to professional societies, and to recognized DBE organizations. The advertisements and notices seek statements of interest and/or qualifications from consultants who are interested in the project.

Review Responses/Develop Short List

All statements received should first be reviewed for completeness. Each response must contain all required forms and any other information requested in the advertisement. The response may be considered incomplete and rejected without further evaluation if all required information is not provided or if the submittal is late.

The qualifications of all responding firms are then reviewed according to established evaluation criteria or factors. For information concerning statement of interest evaluation criteria, see the section entitled “Establishing Selection Criteria” in Chapter 4.

The agency then establishes a short list of at least three consultants that are determined to be the most highly qualified to perform the required work. Firms not selected should be notified in writing.

Request for Technical Proposal

An RFP is sent to the short listed firms. The RFP should indicate the content of the proposal, technical review procedures, anticipated schedule of activities, scope of work, project description, proposal delivery site, the number of copies required, and the due date.

Items typically required in a technical proposal include:

- Work plan
- Organization plan
- Schedule for meeting time frame
- Available computer equipment and programs
- Staffing plan and resumes
- Preaward audit/financial package information (if deemed appropriate)
- Examples of similar work previously completed
- DBE, their proposed participation, other related information.

Some agencies receive the technical proposal orally as part of an interview conducted for this purpose. In these cases, written documentation may not be required.



Chapter 4

SELECTING CONSULTANTS

Selection

There are several methods of selecting a firm to provide consultant services. The method of selection is established by federal and/or state regulations and statutes.

- Title 23 U.S.C. 112(b)(2), as amended by section 111(b) of the Surface Transportation and Uniform Relocation Assistance Act of 1987, requires the award of engineering and design service contracts using Federal-aid highway funds to be in accordance with the “Brooks Bill” (Public Law 92-582, 86 Stat. 1278 (1972), 40 U.S.C. 541, et seq.). The “Brooks Bill” provisions require that all applicable contracts be awarded pursuant to a fair and open competitive negotiation process on the basis of demonstrated competence and qualifications. The 23 CFR 172, “Administration of Engineering and Design Related Service Contracts,” is the Federal Regulation applicable to Federal-aid highway projects.
- Additionally, all state and local statutes and regulations must be recognized and adhered to during the consultant procurement process.
- If a state law exists which supersedes the “Brooks Bill,” the above-mentioned federal law and regulations allow other selection methods such as (a) competitive bidding, (b) priced proposals at the technical proposal stage, or (c) noncompetitive selection.

Some agencies use a centralized unit for all selection, negotiation, and administration activities, while in other states each district handles these functions.

Process for Selecting Consultants

The following selection processes can be used in any transportation agency as deemed best:

- **Separate selection of a consultant for each project.** This selection process may be either competitive or noncompetitive. The competitive approach, which is most commonly used, gives the opportunity for selecting the most qualified consultant available for each project. It is the most time-consuming and resource-intensive method. A noncompetitive, sole source method may be used when special conditions arise and competitive negotiation is not feasible. This may be acceptable when only one firm is qualified to do the required service, an emergency situation exists which cannot tolerate delay, competition is determined to be inadequate, or a state university or state college is desired for special work.
- **Combining several projects into one selection.** This approach is particularly advantageous when there is a need to obtain consultants for several projects at the

same time. It saves considerable time and resources for the agency during selection and reduces the overall administrative costs throughout the entire process. This process can also increase efficiency and achieve economy of scale by allowing a single consultant to be selected for more than one project, especially if the projects are small and similar.

- **Selecting consultants from a pre-established list.** This approach involves establishing a list of qualified consultants and then selecting and negotiating with a consultant from that list for each project. The list may be established for a designated period of time and, upon its termination, a new list developed. The advantages of this approach include less resources and time required to select a consultant.
- **Selecting consultants for use on an “as-needed” or “on-call” basis.** This approach is commonly used for specific, specialty, repetitive types of services (hydraulics, surveys, archaeological investigations, etc.) or small projects and has the advantage of obtaining a consultant on short notice. This method is often used to support larger in-house efforts, to provide for overload relief, or to rapidly respond to unanticipated needs.

Regardless of the selection process utilized, the professional qualifications, experience, and conduct of the consultant firm should be prime considerations when entering into a contract for consultant services.

Qualifications

In an effort to ensure quality performance and results, a consultant should be required to be prequalified or otherwise meet minimum qualifications to be eligible for consideration in the selection process.

One prequalification process many agencies use is to develop and maintain a file of consultant firms by specific work categories or areas of expertise. This data file or interest list is usually updated annually. Some agencies solicit this information by advertising in national, state, and local publications. The collection of data for the purpose of prequalifying consulting firms may be accomplished by requiring submission of Federal Form 254/255 or a special state form. The form should list consulting firm details, names of principals, office locations, personnel by discipline, project experience and examples, current workload, and types of service the firm is qualified to perform. Also, resumes of key persons, specialists, and other associates that may be assigned to the project or projects should be included. This information should be the basis for evaluating and placing a consulting firm on a general prequalification list.

Another alternative is to qualify consultants on a project-by-project basis. This is accomplished for some agencies by advertising or publishing notices in national, state, and local publications for needed services for specific, individual projects. These notices include a precise project location, a defined preliminary scope of services to be performed, a specific schedule within which the work is to be completed, and a list of products and deliverables to be provided by the consultant. Specific project advertisements usually are published when the proposed project is large and complex, in-house resources are not available, special expertise is required, or the objectivity of an outside authority is desired.

In both cases above, data received is evaluated by the agency to assure compliance with the criteria for the selection for a specific project or several projects. The consulting firms are then grouped or ranked based on the criteria established prior to the selection process.

Selection Methods

Competitive Selection. Under this method, firms are selected based on factors other than cost. Such factors include technical expertise, previous experience, capability to adequately staff the project, location of the firm with respect to the project, and other factors as determined by the agency. Only after the final ranking has been developed and approval obtained does the negotiation process start. At that point, the negotiation commences with the firm at the top of the list. If an agency is unable to successfully negotiate with the top firm, negotiations should stop and proceed with the number two firm on the short list. This procedure is the recommended method for consultant selection.

Noncompetitive Selection. This method is appropriate when obtaining services from a sole source. This may include specialized services only available from one firm or services provided by another governmental agency such as a city, county, or state university. If this selection method is used, once the need is determined, the agency proceeds to the negotiation process.

Two-Step Selection. This method is used with “on-call” contracts. Step 1 is generally the same process described for competitive or noncompetitive selection. Step 2 involves matching projects to the selected firm(s). This may be accomplished by assigning work in specific regions to a consulting firm. Work may also be matched with a consulting firm based on special expertise, by rotation of firms, or by other methods as developed by the agency.

These forms of qualification-based procurement that comply with either the “Brooks Bill” or equivalent state qualification-based procedures are the most common. It should be noted, however, that the current federal regulations on Administration of Engineering and Design related “service contracts” provides for the use of *any* formal procurement procedure established by state statute.

The following methods are neither preferred nor recommended; however, if required by state law, they may be used for Federal-aid contracts:

Competitive Bidding. This is a method whereby the contract is awarded to the lowest bidder. Agencies who have tried competitive bidding have seen a wide variance in bids. It should be noted that engineering costs represent a minor portion of the overall project cost. Also, the quality of the design can affect the overall cost of the project, both in initial construction and long-term maintenance. Under this concept, there is little incentive for the consultant firm to develop the best design but rather develop a design with the lowest design effort/cost and still meet engineering standards. This method does not provide opportunities to improve upon the overall design within the contract. It also usually results in a contract that will have to be amended (at higher cost) to achieve the desired goals.

Price Competition. This method is similar to competitive bidding in that quotes are requested as part of the Request for Technical Proposal (RFP) submittal. Generally, agencies develop a short list based on qualifications and then use the quote as a basis for determining final ranking in order to award the contract. Specific procedures vary among agencies as to the extent cost is considered. In some states, state law requires cost be considered. Some use cost as a final selection criterion in ranking firms, while others use it as a weighted factor along with other selection criteria. Several agencies use the “two envelope” system. The second envelope, containing the proposed engineering costs, is opened and contributes to the selection only after the firms have been ranked based on their technical proposal. When cost is a predetermined (even minor) factor in the selection process, the disadvantages cited above under competitive bidding may result.