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Guide for Contracting, Selecting, and Managing Consultants



in Preconstruction Engineering

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

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and Transportation Officials*

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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.