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## EXECUTIVE SUMMARY

**Purpose:** The Consulting Engineers Council of Minnesota (CEC/M) and the American Institute of Architects Minnesota (AIA MN) established the CEC/M - AIA MN Liaison Committee in the spring of 1994 to improve the relationship between the architectural and engineering communities and to address areas of mutual interest.

These guidelines were created for the purpose of providing more consistent and improved service to the client, as well as contributing to the enhancement of the relationship between architects, engineers and clients.

The committee identified several issues of concern on which to focus. After some discussion, the committee established three task groups to address the following areas:

- Consultant selection procedures, contract forms and fee methods
- Project delivery systems
- Practices and procedures

The task groups have met regularly since their inception to develop this report, while the overall committee has met to discuss these topics as well as other issues of interest to the architectural and engineering communities.

It is the feeling of the committee that this activity has been beneficial for both architects and engineers. Committee members believe that the committee should be continued to further these initial efforts and to provide design professionals with a continual and open channel for communication.

The committee welcomes input from members of CEC/M and AIA MN and looks forward to continuing this beneficial activity.

The original task groups were composed of the following individuals:

- |  |                             |              |
|--|-----------------------------|--------------|
| <b>Consultant Selection Procedures, Contract Forms and Fee Methods</b> |                             |              |
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## **CONSULTANT SELECTION PROCEDURES, CONTRACT FORMS AND FEE METHODS**

Purpose: To evaluate current selection procedures, contract forms and fee methods used by architects in their dealings with consultants and to identify each profession's expectations of its consultants regarding these issues.

### **Consultant Selection**

Communicate what is required or desired by each in their anticipated relationship.

#### Define the prime designer's (typically the architect) expectations

- Will the consultant team be exclusive for project types and clients to pursue, or are project teams to be developed from a group of prequalified consultants on a project specific basis?
- What are the necessary consultant qualifications that will aid in developing trusting relationships between team members?
- What types of checks and balances are to be expected?
- Develop a system of evaluating the qualifications statements prior to reviewing the qualifications and conducting the interviews.

#### Consultants must clearly communicate their specific qualifications

- The consultant should assist in clarifying and defining the prime designer's expectations when necessary.
- When necessary, the consultant should recommend additional consultants specializing in specific areas to the prime designer.
- The initial selection of potential design team members must be based on their qualifications specific to the prime designer's and client's goals.
- Contract considerations and fee negotiations should begin only after a detailed review of the consultant's qualifications is complete.

### **Contracts**

- Use commonly used standard forms of agreement to start contract negotiations from a level field.
- Use any supplemental forms necessary to deal with specific requirements that may not be included in standard forms.
- Thoroughly define scope.
- Clearly define proper notification procedure and expected response for unforeseen conditions that occur during the project.

- The prime designer should communicate the scope of proposed consultant services and agreements to the owner prior to signing their own prime agreement.
- The prime designer should communicate all specifics of the prime agreement to the consultants during their respective contract negotiations.
- If in the best interest of the owner, specialized consultant services may be negotiated directly with the owner, if desired.

### **Establishment of Fees**

There are many items that should be addressed to assure that fees are based on a clear understanding of the scope. These include:

- Should the prime designer add a mark-up to the consultant's fee for project management and coordination?
- Who is responsible, the prime designer or the client, for authorizing additional services and the basis of compensation for the same?
- Does the client have clear direction for the project or are they investigating several alternates that are to be sorted out during the construction bidding process?
- Should a basic fee be established for predesign studies and reports that will provide early direction for design and eliminate dead ends?
- How much planning and coordination will the consultant provide to educate and assist an inexperienced project manager?
- How much involvement may be required of consultants during the construction phase to assist in administration of the contract, provide for inspections, attend progress meetings and coordinate work of contractors and subcontractors?
- Should there be cost sharing built into the fee for consultant services for the prime designer's marketing efforts? What about the consultant's efforts to market to the prime designer?
- How soon is it necessary for the consultant to become involved in the design process?
- How does provision of services vary between consultant disciplines?

### **Billing and Payment Procedures**

- The owner's payment practices and policies should be communicated and clearly understood by all parties.
- Billing format and payment procedures should be mutually agreed upon and established during contract negotiations.
- Payment of fees should be made promptly after the prime consultant is paid.

## PROJECT DELIVERY SYSTEMS

**Purpose:** To review and report on the current and future impacts of new forms and methods of project delivery. The goal is to prepare guidelines for architects and engineers so that they may more effectively respond to new service delivery options. With that, the following ACEC position statements on traditional and new delivery systems and the AIA position statement on government procurement: design/build are presented.

### **ACEC Traditional Design/Bid/Build Project Delivery System Position Statement**

#### Background

Over the years, the vast majority of engineering projects have involved a traditional three-party system (i.e. owner, design professional and constructor). This system provides for the owner to directly select and contract with its design professional based on qualifications, followed by a separate contract for construction services.

The process allows for a systematic development of concepts, planning, design, bidding and construction of a quality project. The owner should first select a design professional firm. The best method of selection of the design professional firm is through qualification-based selection (QBS). This selection should occur before concepts are decided and planning has begun. This allows teamwork to begin between the owner and the design professional early in the process and communicates needs and expectations of the owner and the design professional, which is an important ingredient to quality.

Once concepts and planning processes are complete, the independent design can begin with a focus on meeting the clients' needs and expectations. Once design is complete, the owner can bid the project to obtain the most cost-effective price for the construction of the project. Construction can then begin. During the construction, a team of the owner, design professional and the contractor can complete the project. Each party brings an independent and important view relative to the successful completion of the construction project.

#### Position Statement

The American Consulting Engineers Council (ACEC) strongly believes that use of the traditional design and separate bid/build project delivery system should be the primary delivery system for public sector projects and is in the best interest of the owner as well as protects the health, safety and welfare of the general public. By selecting an independent design professional through the qualification based selection process and

utilizing the traditional three-party system, the owner is provided with the checks and balances necessary to give the public the greatest degree of assurance that the project is the most appropriate and cost-effective solution.

### **ACEC Design/Build Position Statement Roundtable Modified Version**

ACEC believes in the value of a delivery system that: guides the design of public and private facilities; is in the best interest of the owner; utilizes a qualification based selection (QBS) procedure for the design professionals; provides unbiased protection for the present and future infrastructure; and protects the health, welfare and life safety of the public.

ACEC recognizes that the traditional design/bid/build project delivery system is utilized for the majority of constructed projects. This system provides the owner and the public a great degree of assurance that the constructed facilities are the most appropriate solution for the project requirements.

ACEC also acknowledges design/build as an alternative project delivery process that is used in certain circumstances for private and public projects. There are many processes used today for design/build delivery systems.

As a public policy issue, when design/build is utilized, ACEC endorses a two-step procurement and implementation process as the one that best protects the interests of the owner, design professional, contractor and the public as follows:

#### Step 1 (Selection of Owner's Design Professional)

- A. A registered design professional (either in-house or retained) shall represent the owner throughout the entire project. The retained design professional shall be selected based on their qualifications and experience and shall be fairly compensated by negotiating a mutually agreeable contract.
- B. The design professional shall prepare design criteria, analyses, reports and cost estimates for the proposed project. ACEC recommends that the design professional shall develop the project design requirements to approximately the 35% design level.
- C. The design professional shall be responsible for assembling a design/build package that the owner can use to solicit proposals from design/build teams.

D. Throughout design and construction, the design professional shall provide technical advice, construction review services and professional expertise on behalf of the owner.

#### Step 2 (Selection of Design/Build Team)

- E. The design/build team shall include a registered design professional(s). This design professional(s) shall be independent from the owner's and shall be selected based on qualifications and expertise. The design/build design professional(s) shall be named in the proposal and retained for the duration of the design/build project to provide the design services, documentation and review.
- F. The owner shall select the design/build team on the basis of a solicited proposal based on criteria developed by the owner's design professional.
- G. The design/build team shall coordinate all design and construction efforts so as to preserve and enhance the quality of the project and to ensure that the original design intent is achieved.
- H. Open channels for communication between the design professional(s) representing the owner and the design/builder shall be provided as a part of the working relationships. ACEC also recommends that provisions and procedures for communicating be implemented among all parties, including the design/build team design professional and the owner of the design/build project.

### **AIA Position Statement Government Procurement: Design/Build**

#### Statement

The AIA believes the public procurement process for building facilities must be fair, open and focused on overall value. Public agencies that employ the design/build project delivery process must recognize and incorporate into the process the public's desire for the architect to design building facilities that are safe, functional, attractive and cost-effective. The AIA believes that qualification-based selection (QBS) procedures should be used when the design/build method is used.

#### Explanation

For the purpose of this policy, "design/build" is a method of project delivery in which one entity signs a single contract accepting full responsibility for both design and construction services of the building facility. (A significant difference between the design/build project delivery method and the conventional design/build/bid project delivery method is that the

design architect's contractual responsibility shifts from the public owner to the design/build entity.) Design/build/bid is defined as the selection of the qualified design/build entity through a competitive process that may require evaluation of the concept design and project cost, along with other criteria.

When a public agency employs the design/build method, selection of the design/build entity should be based on qualification-based selection procedures, which require consideration of competence, capability and a negotiated price that is fair and reasonable to the public. If the design/build/bid selection process is utilized, however, the following criteria are recommended to meet the public's desire for the architect to design building facilities that are safe, functional, attractive and cost-effective.

- **Preselection:** Select a short list of design/build entities based on competence utilizing qualification factors that include: (1) the ability to satisfy the project design and construction requirements; (2) past performance; (3) relevant experience; and (4) financial strength.
- **Scope of Work Documents:** Issue project-specific comprehensive scope of work documents prepared by licensed architects and other qualified professionals who are retained for the duration of the project. Include in the scope of work documents, at a minimum: (1) a procedure that accommodates interaction between the architect of record and the user agency; (2) detailed program statements that describe space and equipment requirements as well as other pertinent criteria; (3) site information, including a site survey and soil boring report describing subsurface conditions; (4) outline specifications; (5) budget parameters; and (6) project schedule.
- **Request for Proposal:** Provide prequalified design/build entities with a comprehensive request for proposal (RFP) that includes: (1) the project scope of work documents described above; (2) the objective evaluation criteria that will be used as the basis for selection; (3) amount of the stipend used to compensate the finalists; and (4) contract forms of agreement for the project.
- **Proposal Evaluation:** Ensure that the proposals are evaluated by a jury of qualified professionals (including those licensed professionals who prepared the scope of work documents) according to the predetermined objective functional and technical criteria identified in the RFP.
- **Compensation:** Provide proposal preparation compensation to the design/build entities commensurate with the level of information required when a facility design and cost proposal are required by the RFP.
- **Project Execution:** Require the design/build entity to retain and use the design architect of record throughout the duration of the project to maintain design integrity, functional and technical responsiveness and to conduct on-site construction observation.

Approved by the AIA Board of Directors in May 1995

While the two step process can achieve the same quality and perhaps exceed the cost effectiveness of the traditional design/bid-build process, we recognize that this is not the only design/build delivery system in practice today. Many different approaches are being tried with a wide range of success. This task group suggests that you consider the following questions when evaluating a project and a client.

### Client

1. Have you dealt with this client before?
2. Do you have personal knowledge of the client's financial stability and general reputation?
3. Does the client pay promptly?
4. Is the client interested in an equitable contract?
5. Is the client interested in the design team's success?
6. Is the contract free of hold harmless and indemnity provisions?
7. Does the client have a contingency fund?
8. Is this a client we are proud to be associated with?

### Project

1. Is the project properly funded?
2. Does the project have a time schedule that can easily be met?
3. Do we know all of the contractors who will be performing the work?
4. Is the project free of speculative aspects?
5. Does the design we will use have a wide acceptance in our discipline?
6. Is our staff experienced with this type of project?
7. Are the code requirements routine?
8. Do we have a clear understanding of all aspects of the project, including assignment of responsibilities? Are these documented?
9. Can we handle the workload without strain?
10. Is the fee adequate?
11. Are we to observe construction?
12. Will we be proud to be associated with this project?
13. Are there any special insurance needs?
14. Can the project be designed and remain within budget?

## **PRACTICES AND PROCEDURES FOR A/E DESIGN TEAMS**

**Purpose:** To provide general practices and procedures guidelines that improve project delivery and the collaborative working relationship between architects and engineers. In order to successfully deliver a project, the project manager, with the assistance of the design team, must address certain critical elements. These critical elements are:

- Project Scope
- Project Commencement
- Project Goals and Objectives
- Project Schedule
- Project Budget
- Lines of Communication
- Construction Delivery Method
- Cost Estimating

### **Project Scope:**

- The Owner and Consultant Agreement should be based upon a comprehensive description of the project scope that includes:
  - project description, including known details
  - size of project by design discipline
  - budget breakout
  - schedule
- The scope analysis should include the input of all disciplines involved in the project.

### **Project Commencement:**

- Arrange a project "kick off" meeting
  - Identify all consultant team members
  - Develop a meeting agenda and a checklist of actions that identify key technical and administrative elements of the project

Some of the administrative issues that should be addressed include:

## **Project Goals and Objectives**

- The project manager should have a good understanding of the owners' ultimate goals and objectives and be able to convey these items to the rest of the project team.
- Facilitate discussion and interaction among team members to help increase the understanding of the project and define a plan and design that achieves those goals.

## **Project Schedule:**

- Prepare preliminary project schedule prior to the kick-off meeting that notes:
  - owner's needs with respect to key milestones
  - target completion date for the design effort
  - ultimate owner occupancy or beneficial use of the project
  - revisions allowed based on input from consultants
- Allow sufficient time for design and approvals and subdivide the allotted time into design phases
- Each design phase should have a completion date and a clearly identified deliverable
- Identify who will be coordinating drawings and allocate time for this activity

## **Project Budget:**

- For each discipline, clearly identify budgetary constraints and the impact they will have on the systems to be designed
- Review both the owner's and the prime designer's expectations regarding project quality
- Identify elements of the project that must be of the highest obtainable quality
- Identify elements of the project where a lesser quality will suffice
- At the time of their introduction into the design, identify previously unanticipated, costly design elements and communicate the information to the project manager
- Communicate this information to the owner in a timely fashion in order to resolve any budgetary or program conflicts that may result

## **Lines of Communication:**

- The project manager should establish the lines of communication and the extent of project meetings that will be in effect for the duration of the project
- Team members should be respectful of this established protocol and operate within acceptable boundaries

- The project manager may have some latitude with respect to direct consultant contact with the owner or user of the project and direct communications should be encouraged and facilitated in order to fully engage all interested parties
- Information regarding the owner's organizational and command structure should be communicated by the project manager to all team members

### **Construction Delivery Method:**

- The project manager should inform all design team members of the owner's intentions regarding award of the construction contract
- The design team must be made aware of the owner's intentions so that contract documents (drawings and specifications) are structured appropriately

### **Cost Estimating:**

- The project manager should review his/her expectations on project cost estimating with all team members
- If a cost estimating consultant is part of the design team, information regarding the design should be transmitted to the cost estimator in a timely manner
- Although cost estimates are usually part of the deliverable for each design phase of the project (schematic, design development and contract document), continually updated cost estimates can be programmed into the design effort with weekly, biweekly or monthly updates
- Accurate cost estimates from each team member must be established in the Consulting Agreement
- The liability for redesign and redraw costs should be addressed if the Owner and Consultant Agreement includes such a provision
- If each design discipline is responsible for their own cost estimates, some effort should be made to impose consistency into the process