AIA/AGC Recommended Guidelines for Procurement of Design-Build Projects In the Public Sector

Endorsed by:
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EXECUTIVE SUMMARY

The American Institute of Architects (AIA) and the Associated General Contractors of America (AGC) were approached recently by a public official who asked if the organizations had any recommended procedures for how public officials should procure design and construction services when using the design-build method of procurement. While this publication's intent is to provide guidance for public owners, this publication is not intended to endorse design-build or suggest it is the best method by which public owners should procure design and construction services. Rather, AIA and AGC have recognized that design-build is one of many viable project delivery systems available to the public sector. These Guidelines are intended to improve the process and hopefully establish some uniform standards which can be used by public owners for the mutual benefit of owners and the design and construction community. The Guidelines were written for public owners who are unfamiliar with the design-build process as well as owners who have used the design-build process in the past.

The **Introduction** is intended for public owners who are unfamiliar with how design and construction services are procured. It describes the three phases of all construction projects: project definition, design and construction, and describes the activities carried out during each phase. The Introduction also describes the different project delivery methods by which design and construction services can be procured, including the design-build method.

The **Overview** begins to focus on design-build and concludes that adherence to these Guidelines will provide the following benefits to public owners:

- Reduce misunderstandings and protests;
- Accelerate the selection process;
- Encourage quality firms to participate; and
- Provide owners with proposals that meet their needs.

The **Recommended Guidelines** are the main body of the publication and focus on specific procedures that should be adopted for design-build, bridging, a variation on design-build, and develop-design-build, a method of financing design-build and bridging projects. This portion of the publication pertains equally to owners unfamiliar with design-build as well as those who are familiar with the process.

As the Overview section of this publication suggests, AIA and AGC do not intend these Guidelines to be rigid but an outline of the major issues that should be addressed with suggestions on how to address each issue successfully. We hope the Guidelines are used in this fashion and will aid in bringing some uniformity and consistency to the design-build process in the public sector.

INTRODUCTION[1]

What activities is a project comprised of?

Once a project proceeds from an idea to reality, it is time for an owner to select a process for its design and construction. The design and construction of all projects can be divided into three distinct activities: project definition, design, and construction. These three steps can be overlapped, subdivided, or regrouped, but none can be eliminated. If one step is incomplete or performed unsatisfactorily, the following step will be adversely affected which will ultimately cause the entire project to suffer. The following is a discussion of the various components of each activity:

Project definition:

This stage can be divided into two distinct activities:

- Discovery — the identification and analysis of project requirements and constraints; and
- Integration — the description of the project and the plan, including an estimate of cost and time for delivering it.

Design:

Typically, design is divided into three separate activities:

- Schematic design — the basic appearance and plans;
- Design development — an evolution of design that defines the functional and aesthetic aspects of the project and the building systems that satisfy them; and
- Construction drawings and specifications — the details of assembly and construction technology.

Construction:

Construction can also be divided into several basic activities:

- Shop drawings — the final fabrication drawings for building systems which are performed by the contractor who is selected to construct the project to meet the design intent of the architect;
- Fabrication, delivery, and assembly — the manufacture and installation of the manufactured components of the building; and
- Site construction — the labor-intensive field construction and the installation of systems and equipment.

[1]Portions of the Introduction have been taken from a paper, "Project Delivery Strategy: A discussion of contracting methods for design and construction by 3D/International," presented by Charles B. Thomsen, FAIA, President and Chief Executive Officer of 3D/International. January 20, 1994.

What are the different ways in which a project can be procured?

Owners have a number of different options in how they can procure design and construction services which will, in turn, affect who performs the different stages of a project. Following are a number of generally accepted procurement approaches in use today:

- The traditional **design-bid-build** approach is common because many owners want to know exactly what they will get before they agree on the price or start of construction. Projects are not bid on by construction contractors until construction drawings are completed by a separate architect-engineer (AE) firm. Once the drawings and specifications are completed by an AE, the architect, acting as the owner's representative, will then ask contractors to bid a lump sum amount that it will take to construct the project.

- **Design-build** contracts are typically negotiated before project definition, or just after. All design (including construction drawings) is done by a single entity[2], the design-build contractor. This single entity has responsibility for both design and construction of the project.

- **Bridging** is a hybrid of the traditional design-bid-build process and design-build. An owner selects an AE to develop a project design through design development (approximately 30 percent—50 percent of the design work), and prepares scope of work documents which form the basis for competitive selection of the project delivery team. The AE specifies the project's functional and aesthetic requirements but leaves the details of construction technology up to the contractor. Construction technology is specified with performance specifications. The project delivery team then has single-point responsibility for final design and constructing the project.

- **Develop-Design-Build (Turnkey), Design-Build-Lease, Lease-Purchase** are financing methods in which an owner retains an entity which has single-point responsibility for developing a project: in addition to design and construction, the selected entity is responsible for providing one or more other project development functions, such as selecting and acquiring a site, financing, and even owning or operating the facility which is leased to the owner (with or without an option to purchase).

This introduction is intended to provide a context for the more extensive discussion of design-build, bridging, and develop-design-build contained in this publication.

[2]The terms "single entity" or "design-build teams" or "competitors" will be used throughout this publication to describe the organizations that submit design-build proposals. These so-called teams can take a number of forms such as a partnership, a joint venture between an architectural-engineering firm and a construction contractor, or a single corporation that has in-house design and construction capability. The type of "design-build team" formed should not, however, influence a public owner's design-build program requirements.

OVERVIEW — PURPOSE OF GUIDELINES

As discussed above, "Design-Build" is one of many methods used in both the private and public sectors to organize the selection of architects, other design consultants, and contractors for building projects. Design-build is a method of project delivery in which the owner contracts with a single entity to take responsibility for the design and construction of a project. Like every other type of project delivery method, design-build has advantages and disadvantages that make it more appropriate for some situations and projects than for others.

Public sector owners carrying out construction projects must select architects, other design consultants and contractors according to local, state, or federal procurement laws and therefore face circumstances different from private owners. Nevertheless, there are many ways for public owners to select design-build teams and to manage the design-build process. Experience has shown that some design-build selection procedures are more equitable and effective than others in meeting the needs of owners, the public, architects, and contractors for quality projects delivered on time, on budget, and fulfilling owner expectations. Based on their collective experience, the American Institute of Architects (AIA) and the Associated General Contractors of America (AGC) have compiled the following design-build guidelines for public owners. This document is not intended to be rigid, but an outline of major issues that should be addressed in a design-build procurement with suggestions for how to address each issue successfully.

AIA and AGC believe that adherence to these guidelines by public owners will provide the following benefits:

- Reduce misunderstandings and protests,
- Accelerate the selection process,
- Encourage quality firms to participate, and
- Provide owners with proposals that meet their needs.

RECOMMENDED GUIDELINES

Design-Build—General Authorizing Considerations For All Design-Build Projects

Criteria for Using Design-Build

Public agencies should adopt general criteria to be used to determine what projects will be delivered using the design-build method. The criteria should also address when to use the traditional design-bid-build and other project delivery methods, listing the comparative advantages and disadvantages of each project delivery method. Criteria that might be considered for determining when to use design-build include (1) time constraints for delivery of the project; (2) the capability and experience of potential teams with the design-build process; (3) the suitability of the project for use of the design-build process; and (4) the capability of the public owner to manage the project, including personnel to oversee the project who are familiar with the design-build process.

The introduction of each public design-build solicitation should contain an explanation of how the specific project fits the criteria for use of the design-build method.

Design-Build Procedures

Public agencies should formally adopt general procedures for selecting design-build entities and for managing design-build projects. Formal adoption will permit the public and the design and construction communities to comment on the procedures and will assure that fair, uniform, and effective procedures are followed.

The following specific project considerations can be adopted to satisfy this purpose. Of course, local laws and regulations, which in some jurisdictions limit the use of design-build, should be reviewed prior to requiring these specific recommendations.

Specific Project Considerations For All Design-Build Projects

A solicitation for a design-build project should clearly spell out the procedures to be followed in conducting the design-build selection and subsequent management of the project, including the project program and scope of work, criteria for selection, requirements for presentations, timetable for the selection process, the composition of the jury (or selection panel), and all other issues described below. It is important that these procedures be described in full at the outset to avoid misunderstandings and selection protests later. Clear procedures will also enable the process to produce a quality project, on time, and within budget.

Rationale For Selecting Design-Build and Description of Process

At the outset, the solicitation should explain how the design-build method of procurement meets the criteria in law or regulation for use of the design-build method. It should then describe the selection process, including detailed submission requirements and selection procedures, the composition of the selection panel, and a timetable for the entire procurement process. Finally, it should provide credible assurance that the project is fully funded. Failure to comply with this last requirement may detract from attracting quality firms.

Scope of Work

The statement of project requirements should set forth an owner's needs with sufficient clarity to assure there is comprehensive understanding of program requirements, project scope, and business requirements. Scope of work documents should include, at a minimum: (1) program statements for the facility that describe space needs, design goals, and objectives; (2) equipment requirements; (3) other pertinent criteria, such as energy use or accommodation for future expansion or adaptation; (4) site information, including a site survey and soil boring report describing subsurface conditions; (5) any minority business enterprise (MBE), women business enterprise (WBE), or disadvantaged business enterprise (DBE) requirements; (6) an outline of specifications; (7) budget parameters; and (8) project schedule.

The role of the owner's representative in the selection process is very important and should be identified in the solicitation. During the solicitation, the owner should also provide a copy of the contract that the winning competitor is expected to sign in order to avoid problems and disputes at the end of the competition.

In order to translate the needs of the users into a set of criteria that teams can bid on with some certainty, the scope of work should be prepared by an architect and other appropriate design professionals. The scope of work should be as flexible as possible, for several reasons:

First, a flexible scope of work will elicit creative responses from competitors that may reduce the cost of the project in the short term and improve life cycle costs in the long term. A generally stated set of program requirements will allow competing teams to suggest imaginative ways to meet the requirements by combining or reorganizing functional areas or by applying innovative design ideas, construction methods, materials, or systems.

Second, procedures for discussions between the owner and the competitors should be designed to facilitate scheduled communication to avoid possible misunderstandings of the program requirements. Nonetheless, it can be expected that, following the selection, the give-and-take between owner and the selected design-build team will result in changes to the building program and/or the design. When selections are based on flexible rather than very detailed programs, unsuccessful competitors will have little grounds to protest the selection. Thus, delays can be minimized.

Third, more projects are requiring public participation and only following the selection can the owner begin to submit the design to formal review bodies or public participation processes. Formal reviews and public participation processes may result in changes to the design, so time spent developing overly detailed designs before the selection may be time and effort wasted. Moreover, citizen groups may object to being presented with an all-but-complete design before they are consulted.

Two-Phase Selection Process

Phase One (Prequalification) Selection

The number of competitors who submit final proposals should be limited. Finalists typically produce relatively detailed proposals, and failure to limit the number can mean that the owner and its selection panel must spend an inordinate amount of time and public money comparing and evaluating proposals. Producing final proposals is expensive and time-consuming for each competing design-build team. The more unsuccessful teams there are, the more dissatisfaction with the process. It is beneficial to owners and competitors in design-build procurements to eliminate as early as possible those competitors that have no realistic chance to be selected.

Therefore, a two-phased procurement process is recommended. In the first phase, after receiving submittals, a short list of prequalified finalists is compiled. The short list should consist of three to five design-build entities, which is enough to assure competition, but a manageable number for the selection panel. Selection of a short list should be accomplished by reviewing applications packages, supplemented by brief interviews if possible, and should be based on a comparison of qualifications, to include: (1) the ability of the competitor to satisfactorily carry out the project design and construction requirements; (2) past performance of individual members of the competitor; (3) relevant experience or potential performance of the design-build competitor as a team, if the competitor is a joint venture or other teaming of separate contractors; and (4) financial capacity to perform. Price quotations from competitors should not be considered at this stage.

Phase Two (Final) Selection

Final selection criteria need to state clearly what weight will be assigned to each criterion. Otherwise, qualified competitors may unnecessarily emphasize criteria of lesser weight to the detriment of criteria of greater weight. This may lead to the best competitor not being awarded the project. Criteria typically include: excellence of the proposed design and construction approach to the project, demonstrated satisfaction of the program requirements, management plan for the project, and estimated cost of the project.

In design-build competitions, price can vary significantly as an evaluation factor. In some competitions, price is a relatively unimportant factor and, in other competitions, price can be the most important factor. An owner must make a determination, prior to a design-build solicitation, about the significance of price. This determination will be based on whether a project's design is of paramount importance or conversely if price is the most important consideration. In most instances, owners will be interested in accomplishing both: maximizing design at the lowest possible price.

An owner who is more interested in design and less on the total cost may choose to ask design-build teams to work towards a specific fixed budget. Under a fixed budget, an owner sets the total cost of the project (e.g. $15 million) and asks the teams to provide a building within that budget. A fixed budget allows the design-build teams to prepare proposals on a level playing field. When a fixed budget is specified by an owner, the teams will be evaluated on the value they can supply within the fixed budget. The benefit of this approach is that teams will maximize their focus on design. At the same time, by fixing the project's budget, the owner has also controlled the cost of the project.

Another option is to ask for price as a lump sum. In this instance, teams provide a designed project for the lowest possible price. Price becomes a competitive factor which will probably drive prices down. However, this price competition may adversely affect the quality of the design.

The purpose of this discussion is to emphasize that there are a number of ways to establish price in a design-build competition. The ideas stated here are two out of a number of different options available. There is no right or wrong way. Owners must evaluate their priorities and use price as a evaluation factor in a way that fulfills their goals. From the design-build teams' perspective, it is important for an owner to decide what role price will play and inform the teams in advance in order to avoid misunderstandings and protests.

Limited Phase Two Presentation Products

The amount of documentation required in submissions should be limited to the minimum necessary to judge adequately between competing proposals. Curtailing the detail required in phase two submissions (for example, by limiting the size and number of drawings allowed, not allowing presentation of models or renderings, etc.) reduces the time and expense to the owner as well as to the design-build competitors. Limiting the number of presentation products will attract more initial teams and also assist in creating a level playing field for all the design-build teams: better financed teams will not have an advantage simply by being able to create more lavish presentation products. Better financed teams may not necessarily translate into the best design-build entity for a particular project.

Selection Panel or Jury

Selection in both phases should be objective, based on qualifications and responses to the project requirements and selection criteria. The selection panel should include design and construction professionals from within the government agency who are familiar with the project. The jury should also include representatives of the government agency that will use the facility because, if the ultimate users are involved in the process, changes requested by the users later during the project can be avoided which can save substantial amounts of time and money. If government regulations require final selections to be made by a government official, state and federal ethics regulations may permit outside advisors to participate on panels, often without a vote. Including outside advisors is highly recommended, since they often bring fresh perspectives to the discussions and will be able to assist the agency in selecting the most qualified team.

The jury should be selected early enough so that it can review and comment on the project program prior to the issuance of the solicitation: this assures that the jury is knowledgeable about and in accord with the program requirements. The same panel should make the first and second phase selections, in order to provide continuity and consistency in the judging process.

The names of jury members should be made public and be included in the initial solicitation. Potential competitors will thereby know what design and other predilections the jury members have and can make an informed decision about whether to participate in the selection process. Moreover, qualified jurors will attract a better level of competition. Competitors and jurors should agree not to have any communications about the project or selection other than communications permitted by the selection procedures.

Compensation

A stipend should be paid to each of the unsuccessful design-build teams that completes the second phase requirements and the amount of the stipend, should be stated in the initial solicitation. In the past, teams have spent much time and money on their design submissions in the pre-selection process, far beyond what is required in the traditional design-bid-build process. By providing a stipend, owners will benefit by attracting quality teams to participate in the design-build procurement process.

If limits are imposed on the materials and documents that the competitors are required to produce during the second phase (see #4, above), it is possible to provide a modest yet fair stipend which will partially compensate the competitors for their efforts.

The winning competitor's total project compensation typically includes what was spent on its Phase Two submission, since that submission becomes the basis for developing and delivering the project. If the project does not go forward for any reason, the winning competitor should be compensated for its Phase Two costs at a minimum on the same basis as the unsuccessful competitors. If the project goes partly forward and is then terminated or suspended, the winning team should be compensated for its Phase Two costs and for its work up to the notice of termination or suspension. This recommendation is a further acknowledgment that a design-build project is far more expensive to prepare in the pre-selection process than the traditional design-bid-build process and therefore some amount of compensation is in order or quality teams will be less inclined to compete for such projects.

Furthermore, design, construction, or other concepts or methods proposed by unsuccessful competitors should not be used by the owner without compensation to the appropriate competitor. Design work generated for a proposal should be the property of each of the individual design-build teams unless and until the proposal is accepted by the owner. An owner has no need for the design work and the design-build team may have a proprietary interest in all or part of the design.

Feedback To Competitors During The Second Phase

There is a widespread misconception that "blind" competitions are fair and so competing teams are often forbidden to have private conferences with the owner's representatives (both the owners' project managers and the jury) until the competition is over. In order to answer the inevitable questions about the program, agencies often arrange public question-and-answer sessions at which all teams are present, or else written questions and agency answers are circulated to all teams. The problem is that, under either format, teams are reluctant to ask important questions that would divulge their design or financing intentions to other competitors. There is no real give-and-take between competitors and owner, and, as a result, very little useful information is exchanged.

A better solution has been used in some successful design-build projects. Each short-listed team is given an equal opportunity for direct and private communication with the owner's representatives; each team gets the same fixed amount of time. Basic elements of fairness are retained and each team can ask any questions of the owner. The result is proposals that respond more directly to the agency's intentions. A side benefit is that the agency managers have an opportunity to evaluate how each team approaches the project and how it interacts in a private working session that is akin to how owners and team will have to work together to carry out the project.

After Selection

It is extremely important to provide candid feedback to unsuccessful teams after the selection process has been completed. This recommendation can not be overemphasized as, aside from compensation to short listed teams (see #6, above), a failure to debrief unsuccessful competitors has been one of the main complaints of design-build competitors. This issue is important because fairness on the part of owners will lead to more satisfied competitors who will want to compete on future projects.

Written jury reports should be provided after each phase describing why the successful competitors were selected. Waiting until a contract is signed, as is often the practice, means there is a significant delay between the time of selection and the jury report and the delay often contributes to a sense of frustration and perceptions that the process may not have been fair. Teams want and need to know why they were unsuccessful and how they can improve themselves for future design-build competitions. A more thorough debriefing will reduce the possibility of formal protests on design-build selections; in return for a more complete debriefing, finalists may agree to waive their right to protest.

Bridging

How is bridging different than design-build?

Bridging, as defined earlier in this publication, is a variation of the typical design-build process already described. In a bridging procurement, teams are provided bid documents that define the functional and aesthetic characteristics of a project by a separate architect-engineer (AE) who has a separate contract with the owner. This separate AE entity takes the design through to design development and is normally precluded from participating on a design-build team and serves as the owner's consultant during the final design and construction phase. The project is then bid on by teams that complete the final construction drawings and the team becomes the architect-of-record. Unlike a typical design-build project, a number of issues previously discussed in the context of design-build do not apply to a bridging procurement. Thus, limited phase two presentation products are not of the same concern because there is no design work. Similarly, jury selection and compensation for the short-listed teams are not as significant issues in bridging because the design concept has been established and, after prequalification in phase one, phase two deals with price only.

Additional Considerations

1. It is necessary to delineate clearly the boundaries between the responsibilities of the designer who performs the preliminary design and the design-build entity's responsibilities for design and construction. The solicitation needs to be clear about the first designer's responsibilities on the project beyond his or her initial effort.

2. For a discussion of the options for obtaining price proposals, see pages 9-10.

Develop-Design-Build (Turnkey), Design-Build-Lease, Lease-Purchase

Develop-Design-Build and the other types of design-build described in the above heading are not actually procurement systems for delivering the design and construction of a project. These systems are financial arrangements that could apply to both design-build and bridging procurements.

Additional Considerations

Since the design-build entity is expected to perform in areas beyond design and construction, the entity must be evaluated in those additional areas. This will require adding evaluation criteria during both phases of selection as well as adding to the selection jury members who can evaluate the additional areas of competence required, which are largely issues of financial capability.

CONCLUSION

AIA and AGC believe that these Guidelines will improve the selection process for design-build projects. When implemented, AIA and AGC believe that these Guidelines will benefit public owners as well as the design and construction community by bringing uniformity and consistency to the design-build process in the public sector.