

Substitutions: Flexibility within Limits

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All manufacturers wish that their product or products are used on construction projects; otherwise, they would not be in the business. But, on the design side, not every product is suitable for a given project, nor is there sufficient fee to research every product that could potentially be used on a project. Therefore, with few exceptions, most design professionals focus on one or two potential products for design purposes, which leave other possible products waiting in the wings.

How these other possible products make it into the project depends on what the construction documents provide in the form of substitution procedures. Substitution of specified or indicated products has probably been around as long as building construction has been in existence. However, throughout the history of construction, there was no formalized substitution process developed for construction professionals to implement until the 1960's.

At the beginning of the 1960's, an innovative Arizona architect by the name of Fred M. Guirey, FAIA, developed the "prior approval" system, which allows specifications to be concise by using brand names, but allows bidders to submit "equal" products. Guirey's goal was to achieve the lowest price for the owner at minimal risk for the contractor, while at the same time conforming to governmental requirements for competitive bidding. In 1962, Guirey hired Maynard Blumer, FAIA, FCSI, and tasked him to further define the prior approval process. As a result, Blumer developed a process that consisted of eleven rules. Twelve years later, Blumer's prior approval process was integrated into standard AIA documents. Thus, the formalized substitution procedure was born.¹

The substitution process is beneficial for all parties: owners, contractors and subcontractors, design professionals, and construction product manufacturers; however, the process needs to be regulated with clear and concise provisions in the procurement and contract documents.

¹ "Prior Approval, A Specification System," H. Maynard Blumer, *The Construction Specifier*, pp 80-84, April 1986.

Specifications

Before a discussion of how substitutions should be handled in the procurement and contract documents, a discussion on the more basic topic of how products should be specified is necessary. In order for the manufacturer to prepare a meaningful substitution request and for the design professional to make a fair comparison, the specifications should state the essential characteristics of an acceptable product.

Specifications for privately funded construction projects can be proprietary, but if the owner wants to keep its options open to maximize performance, minimize cost, or both, then substitutions are a means to achieve that. For publicly funded projects, procurement regulations at all levels of government (federal, state, county, and local) require some form of open competition. For example, the Federal Acquisition Regulation (FAR) 6.101, which references the United States Code (U.S.C.), states that Government contracts shall "promote and provide full and open competition."

However, this does not preclude the use of proprietary specifications as long as the specifications are "open," which means the submission of proposed substitutions is available to bidders. For example, the FAR states the following in Section 6.302-1 (c):

Brand-name or equal descriptions, and other purchase descriptions that permit prospective contractors to offer products other than those specifically referenced by brand name, provide for full and open competition and do not require justifications and approvals to support their use.

Many government agencies take the quote above literally and require that the specifications, when listing a brand name, must follow it with "or equal." When listing specific manufacturers and products, some agencies have established policies that require at least three products or manufacturers be listed—some going as far as requiring the minimum three *plus* the "or equal." The problem with using "or equal" in a specification is the conundrum of what is considered "equal"? There are many products out on the market, but very few would be considered "equal" to other like products.

A specification that lists just a brand-name product (sometimes referred to as a "basis-of-design" product) and "or equal" or its equivalent, does not provide the essential information to make a comparison for proposed

substitutions. Many manufacturers provide product sheets with a long list of characteristics and performance data. For specified brand-name products, using these lengthy lists of information is a poor basis for reviewing substitutions, since no two products are exactly alike (*i.e.* equal); leaving reviewers to ask the question: Which features are most important? Therefore, when using a brand-name product, the specifications should additionally identify the minimum characteristics and performance data that are required for the project.

Limiting product requirements to essential characteristics and performance data can simplify the substitution review process and allow broader competition. Manufacturers seeking substitution approval need only to meet or exceed the minimum specified requirements. Thus, if “or equal” is required, then it would be advisable that Division 01 define the term as a comparable product that meets or exceeds specified requirements.

Procurement Documents

If substitutions are permitted during the procurement of a construction project, the procurement documents² should establish the requirements in the “instructions to bidders” or similar document. AIA Document A701-1997, *Instructions to Bidders*, provides basic requirements for submitting substitutions in Section 3.3.

AIA Document A701 essentially allows substitution requests to be submitted up to ten days before the date established for the receipt of bids. Any approved substitutions are to be issued in an addendum. Since the latest an addendum can be issued is four days prior to date of receipt of bids (AIA Document A701, Section 3.4.3), the length of time that the architect and its consultants have to review substitution requests is six days—this does not allow much time for review.

Therefore, some ground rules should be established in the procurement documents to make sure the architect and its consultants have the data and time to make intelligent decisions when reviewing substitution requests. For design professionals, making an intelligent decision is vital, since the approval of a substitution carries the

² Although commonly referred to as “bidding documents,” this article uses the CSI term “procurement documents,” since not all construction documents are bid due to the variety of available project delivery methods. However, this article uses the terms “bid” and “bidder” regardless if the entity is submitting a bid or proposal.

same liability as if the design professional directly specified the substituted product in the original documents.

If AIA Document A701 is not used, then the document used to instruct bidders on the bidding process needs to include the provisions in the following paragraphs plus the provisions similarly covered in the AIA document. If AIA Document A701 is used, then the following provisions need to be included as supplementary instructions (or annotated revisions to electronic documents).

One provision that should be in the procurement documents is the format in which substitution requests must be submitted. It should not be the design professional’s responsibility to research a proposed substitution to determine its acceptability; the burden of proof lies with the submitter. To standardize the submission format, a form, such as the Construction Specifications Institute’s (CSI) Form 1.5C, *Substitution Request (During the Bidding/Negotiation Stage)*, may be used. The submitter should also provide sufficient documentation, such as product data, drawings, test results, or performance data, to substantiate the substitution’s compliance with specified requirements.

Other provisions should include the specific date, time, and location for submitting substitution requests, and possibly who is authorized to submit a substitution request. Regarding the latter, some jurisdictions and A/E firms will only allow substitutions to be submitted by a prime bidder—not from a subbidder or a manufacturer. The benefit of this requirement is that it helps to filter out those products that a prime bidder has no interest in using, thereby eliminating unnecessary review time.

Contract Documents

To comply with competition requirements in public procurement regulations, allowance of substitution submissions is only necessary during the procurement phase. Once a contract is executed, substitutions may or may not be allowed according to the contract documents. AIA Document A701 states in Section 3.3.4 that “No substitutions will be considered after the Contract award unless specifically provided for in the Contract Documents.” Therefore, if substitutions will be permitted after contract award, the specifications need to establish substitution procedures, since the procurement requirements are not a part of the contract documents.

Requirements for substitutions may be specified in Section 01 25 00 “Substitution Procedures.” Included in those requirements should be the conditions upon which a substitution request may be permitted. These conditions can be divided into two main categories: substitutions for cause and substitutions for convenience.

“Cause” refers to conditions that are beyond the contractor’s control. These may include situations where the specified product is no longer manufactured, is unsuitable for the intended use, or is unavailable due to circumstances unforeseen by the contractor, such as a labor strike or a natural disaster or event that delays production, thereby affecting the project schedule. The contractor’s failure to obtain in a timely manner the specified product (*e.g.* a contractor-caused submittal delay, contractor did not take into consideration for long-lead time, etc.) is not considered a justifiable substitution request for cause.

“Convenience” refers to conditions that benefit the contractor, the owner, or both. If permitted, the contractor may submit a substitution request if there is a significant advantage, such as lower cost in labor, material, or both; quicker delivery time; or other benefit to the owner. Unless shared savings is a part of the contract, any cost savings should go to the owner.

Owners may also initiate a substitution for a number of reasons. When requested by the owner, the design professional should prepare a request for proposal and issue it to the contractor for determination of cost and schedule impacts. Design professionals should also review proposed owner-initiated substitutions for possible impacts on the performance of the building, such as compatibility with other specified products and systems. If the design professional determines there is a cause for concern, then it should be brought to the owner’s attention.

If whether for cause, convenience, or initiated by the owner, a substitution request is a change to the contract documents and should be treated as such. AIA Document A201-2007, *General Conditions of the Contract for Construction*, requires that substitutions be made through a change order or construction change directive, unless the substitution qualifies as a minor change. A minor change applies when there is no change in contract cost or time and the substitution is consistent with the intent of the Contract Documents. As to the latter, if the substitution is a completely different type of material

or product, it may be considered inconsistent with the intent of the contract documents, thereby requiring the use of a change order, even if there is no change in contract cost or time. If the substitution qualifies as a minor change and was not initiated by the owner, it is recommended that the owner be informed of any proposed substitutions.

As with procurement documents, the requirements for submitting substitution requests should also address time and format for submission. Substitutions for cause should be allowed at any time during the construction period. However, substitutions for convenience should be limited to the initial weeks of the project. Whether this period begins following the award of the contract, after the notice to proceed, or after the start of construction, is up to the owner and design team. The format should be similar to that for substitutions during the procurement stage. For the construction phase, CSI has Form 13.1A, *Substitution Request (After the Bidding/Negotiation Phase)*, which is available for use.

The Design Professional’s Review

As previously mentioned, when the design professional approves a substitution, it carries the same liability as if it was specified in the construction documents. Therefore, design professionals need to treat substitutions with the same care and attention they gave the products they specified in the construction documents.

CSI’s *Construction Contract Administration Practice Guide* identifies six areas in which the substitution request should be reviewed. These areas, and some of the questions that should be asked, are as follows:

- **Product:** Does the substitution’s characteristics meet or exceed the minimum specified requirements?
- **Manufacturer:** How long have they been in business? How do they respond to problems? What is their delivery track record?
- **Product Representative:** Is the person knowledgeable about the product and does she or he respond quickly to questions and problems?
- **Installation/Installer:** Are there unique installation requirements? Are installers available in the area? Does the substitution require a certified installer?
- **Operation and Maintenance Costs:** Will the product cost more to maintain than the specified product?

- **Warranty:** Does the warranty for the substitution provide protection similar to that of the specified product?

During bidding, if AIA Document A701 is used on a project, the last sentence of Section 3.3.2 states “The Architect’s decision of approval or disapproval of a proposed substitution shall be final.” Thus, if a substitution request is not approved, then bidders must base their bids on the specified product or products.

During construction, approval is based on the issuance of a change order, change directive, or minor change, as previously mentioned. If a substitution is not approved by the architect using one of these methods, then the contractor must use the specified product or products.

Substitutions need not have the negative image that they typically carry. If all parties understand and comply with the requirements, the substitution process will go smoothly. Contractors, subcontractors, suppliers, and manufacturers should not submit substitutions solely on the hope of increasing a profit margin, but to provide equal or better performance than the specified product. Design professionals should review substitutions with impartiality, but with their liability in mind, and should use the same impartiality when informing and advising the owner of any substitution requests. Finally, owners should not be swayed by a quick sales job and a promise of reduced cost to approve a substitution request—careful analysis should always be applied.

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