

Ch-Ch-Changes ... Managing Risk in the Change Process

by James B. Atkins, FAIA, and Grant A. Simpson, FAIA

*Ch-ch-ch-ch-changes
(Turn and face the strain)
Ch-ch-changes
Don't want to be a richer man
—David Bowie*

Changes give life to architecture. The ability to change as designs are developed allows our creative work to breathe. The design process tends to be evolutionary, and second thoughts often give way to improvements. It is said that Frank Lloyd Wright perpetually changed Taliesin East, his home in Spring Green, Wis. The art of creativity is vested in the power of fluid thought. Tweak this, tweak that, and move this over there; no, maybe it's better over here.

But this life-giving force comes with a price. Changes are time consuming, expensive and disruptive after construction has begun, and there can be risk involved. Because your drawings can never be 100 percent complete or perfectly coordinated, you risk being scrutinized as if they should have been. If changes are extensive on a project, regardless of who caused the need for change, risk of blame becomes elevated.

This article will examine contract changes and the associated risks. We will look at how each project participant can cause changes along with the potential consequences. We will review the notorious budget bandito and its sidekick, escalating construction costs, followed by the value analysis process and risks associated



with substitutions.

We will look at protective measures that can be taken to manage risks better, as well as helpful documentation techniques. Finally, we will examine problems that often arise in the change process and alternative actions to take.

*Well I tell you that we'll all be
Looking for changes
—Paul McCartney*

Who can change things?

All parties involved in a design and construction project can request that changes be made, but only the owner is empowered to approve them.

Changes in the work can be made through a contract modification. The usual forms of contract modification for changes in the work are 1) AIA Document G701, Change Order, 2) AIA Document G714, Construction Change Directive and 3) AIA Document G710, Architect's Supplemental Instructions. Contrary to popular

opinion, responding to a request for information does not constitute a contract modification.

Another popular myth is that an architect can authorize a change in the work through reviewing and marking up shop drawings and submittals. AIA Document A201, General Conditions of the Contract for Construction, Section 3.12.8, clearly states that the architect's approval of shop drawings and submittals does not change the contract unless the contractor has specifically pointed out a change, and a modification as described above has been executed.

Owners request changes in the work for many reasons. Their program needs may change due to lifestyle changes or new developments in their business. Tastes may change or they may simply change their mind about what they want or expect from the design. Many owners who have been involved in the construction process give testimonials that they did not really realize what they wanted until they

PRACTICE

observed it under construction. These same owners often indicate that the more they saw, the better they wanted it to be, and in the end the costs of changes exceeded their expectations.

Contractors often request changes in response to the marketplace. If a similar product can be obtained at a lower cost, they may propose using it with the intention of increasing profits. Should the contractor propose a product change after the bidding/negotiation phase, it is appropriate to review the change as a substitution as prescribed in MasterSpec Section 16000. This section requires the contractor to submit a substitution request using CSI form 13.1A, Substitution Request.

Substitutions carry risk for the architect and owner in that they may not be equal to or better than the originally specified product, and, if they fail, the architect is sometimes blamed. An alternative is not to add the substitution specifications and details to the contract by change order, as it could then be considered the architect's design. Also, if the following paragraph is added to the specifications, it provides further protection.

Contractor warrants that substituted material or system will perform same as original specified material or system would have performed. Should accepted substitution fail to perform as required, Contractor shall replace substitute material or system with that specified and bear costs incurred thereby.

This substitution caveat protects the owner against contractor-proposed products that fail to perform and protects the architect against questionable products that are incorporated into the work over their objection.

Another way that the contractor can

effect a change in the scope is by installing work that is not in conformance with the contract documents, yet it is accepted by the owner. Although the nonconforming work may be undesirable and may adversely affect other building components, it is frequently accepted by the owner to avoid a delay in project completion or the threat of additional costs.

A201 allows the architect, acting alone, to make minor changes in the work as long as the contract sum or time is not changed. The architect can, and frequently does, recommend a change to the owner to improve the project's functionality or design.

The architect can cause a change by having errors or omissions in the documents that require correction. When this happens, owners may pursue recovery of the change costs. Therefore, the best recourse for the architect when dealing with an E&O issue is to own up to it and diligently pursue remediation. Avoiding or denying these mistakes can cause greater harm such as increased construction costs and damaged owner relationships. Architects are not perfect and will always make some mistakes, but enthusiastic efforts to effect reasonable corrections can bring benefits and minimize damages.

*I'm blind and shaking
Bound and breaking
I hope I make it through all these changes
—3 Doors Down*

Changes to reduce cost or quality

The value-analysis process, sometimes referred to as value engineering, can impose significant risk on the architect. Architects often spend years developing and improving their understanding of materials, systems, and specifications. They base their

designs on familiarity with the performance of products that have served them for many years. Consequently, architects may decide to remove certain products or systems from their specifications if they have performed poorly.



When the value analysis process is initiated, many contractors propose products based solely on their reduced cost instead of an increased value-to-cost ratio. The architect is usually asked to review and pass judgment on these requested changes in a very short time frame. The institutional memory goes out the window, and the owner often receives less value for money spent. Accordingly, such changes should not be accepted without an appropriate reduction in the contract sum.

When the key is turned and the project is delivered to the owner, the realities of the product's true value and performance usually surface. Owner discontent can lead to claims and legal action against the architect based on the argument that the architect allowed the change. For this reason the importance of incorporating value

PRACTICE

analysis changes into the construction contract as substitutions cannot be overly emphasized.

Errors and omissions bring risk to the architect by their very nature. However, many project discrepancies are characterized as errors or omissions when they are not. For this reason, it is important to assist the owner in understanding the actual cause of the problem. For example, in fast track scheduling, architects must make assumptions as to the location, size, and quantity of mechanical sleeves in the building foundation before the mechanical system has been designed.

These assumptions are seldom precise, and subsequent changes are often required to fulfill final MEP design requirements. Such imperfections are often looked upon by owners as a mistake by the designers, when in reality only the owner benefits from the quest for speed. For more information on the rigors of fast track see "Managing Risk in Fast Track" by the authors in *The Architect's Handbook of Professional Practice, Update 2006*.

*There ain't no good guys, there ain't no bad guys,
There's only you and me, and we just disagree*
—Billy Dean

And if by chance we disagree

Although owners can change the scope at their preference, problems can arise if the owner approves a change that the architect recommends against. If the change violates a code requirement, a successful argument can usually be made for rejecting it. But if the change is one affecting performance or quality, the architect may not always prevail.

In this case, the architect must determine if the product will likely perform

in an acceptable manner. In the event, after investigation, the architect feels that the product may not meet expectations, he or she should provide the owner with the supporting information and attempt to build a consensus for rejection. Should this attempt prove unsuccessful, an alternative for the architect is to cite the work as nonconforming and refuse to change the drawings. This becomes owner-accepted nonconforming work, and it should be listed as an exception to AIA Document G704, Certificate of Substantial Completion. Otherwise, it may be alleged that the architect approved the change by default.



The architect's refusal to change the drawings may not meet with the owner's approval, and an explanation may be in order. It can be helpful to explain to the owner that the architect is often inappropriately judged by a product's performance, and the proposed product does not meet the quality level that is acceptable. In addition, when the shop drawings are submitted on the nonconforming product, if they are reviewed and approved by the architect, it may be alleged that the architect approved the change. One

alternative in this case is to mark the submittal "approved as noted" and affix a note like the one below:

This product has been rejected by the architect as nonconforming work. The owner has approved its use in the project, and it has been designated as a substitution under the conditions set forth in the project specifications.

When the project team is not working in harmony, project delivery can suffer. Therefore, if it appears that a compromising value analysis effort is in the offing, the topic should be openly discussed in the preconstruction conference or scheduled project meetings so that the owner and contractor will know in advance what to expect.

I hold every man a debtor to his profession.
—Francis Bacon

The rigors of professional practice

The architect is not required by law to perform flawlessly unless the architect promises to do so. The law of professional liability generally recognizes that perfection is frequently sought and often expected, but is rarely achievable. The negligence standard of care applicable to architects requires that we perform our services on par with the services provided by another prudent architect practicing on a similar project in the same community around the same time. When speaking at AIA functions, we have often asked the architects in the room if anyone has made a mistake on a project. Typically, every person in the room raises a hand. Nonetheless, when a mistake is made, and it costs the owner money, there is likelihood that the owner will be unhappy and ask you to pay. This is true although another architect in the same place and time would likely have made the same or similar mistake.

PRACTICE

On the other hand, the architect cannot physically observe and be aware of all discrepancies in the work, and, as a result, all nonconforming conditions may not be noted and qualified in the G704. Should a subsequent building survey reveal these discrepancies, the architect could be accused of failing to detect the problems during construction. Therefore, it is important that the architect document nonconforming work he or she is aware of as an exclusion to G704 on an attached list. This issue is addressed in greater detail in our articles entitled, "Visible Means" in the June 2006 *AIArchitect*, [http://www.aia.org/aiarchitect/thisweek06/0602/0602bp_risk.cfm] and "Absolute or Absolution" in the August 2006 *AIArchitect*. [http://www.aia.org/aiarchitect/thisweek06/0804/0804bp_risk.cfm]



Although changes are an integral part of project delivery, many owners do not understand the conditions that cause them, and consequently they look to others to pay the costs. Many owners believe that the only changes for which they should expect to pay are the changes that they request. However reasonable this may seem to owners and their lawyers, it is not

consistent with the standard of care. Neither the owner, contractor, nor architect can perform flawlessly. All projects should include an allowance for correcting mistakes. It can be beneficial to spend time with the owner discussing this aspect of the change process.

And I hear them saying you'll never change things

And no matter what you do it's still the same thing

—Garth Brooks

Protective measures

There are actions that can be taken to improve success in the change process. For starters, a realistic budget can do much to help avoid cost overruns. However, maintenance of a realistic budget is dependent upon good estimating from the onset and faithful and diligent updating along the way.

Unfortunately, a budget does not always survive on its own. Significant industry changes, such as the recent escalation in copper, steel, oil, and other commodity prices, can send construction costs skyward. This is where contingencies for the unforeseen can serve to neutralize these unfortunate surprises and help keep the project monetarily on track. Success in developing contingences often requires discussions with the owner regarding causational conditions and to help the owner develop a better understanding of construction cost issues.

A very effective method of overall project risk management can be provided by the contractor during the construction phase. When the contractor prepares and executes an effective Work Plan, complex details can be worked out in advance, discrepancies can be discovered and corrected earlier,

and the project generally runs more smoothly. The Work Plan can also show where the contractor's means, methods, techniques, sequences, or procedures may reveal the need to make a change in the design to facilitate how the contractor intends to purchase and place the work. This topic was addressed in our article entitled "Drawing the Line," in the September 2005 *AIArchitect*. [http://www.aia.org/aiarchitect/thisweek05/tw0902/tw0902bp_riskmgmt.cfm]

Finally, a good baseline for navigating the change process is having the right information and knowing who is doing what and when. Knowledge truly is power in a process where the cause of changes may have begun months or years before and manifested over time. A good practice is to discuss the contract change status as a regular agenda item in your project meetings and report them in your meeting reports. A good opportunity to discuss changes with the owner is when the two of you are walking the site together. Keeping changes as a frequently discussed topic will not only keep memories clearer, it may accelerate resolution.

*And all the changes keep on changing
And the good old days they say they're gone.*

—Harry Chapin

The change log—for the record

We have emphasized the importance of documentation more than once in past articles, and nothing is more important in the change process. In today's fast-track-prone industry, change origins and causes are frequently called into question. When memories fade or temporary amnesia takes over, good documentation can often provide realistic insight, and problems are more manageable.

PRACTICE

The architect should make efforts to document, as thoroughly as possible, the cause of each change as it occurs in the form of a change log. Team members sometimes do not remember the conditions that gave rise to the change, and when the architect is able to reconstruct the path of events with documentation, the chances of a disagreement is lessened. An effective change log should reflect the following information:

Change Log

- Date
December 24, 2006.
- Description
Add a door from the conference room into Mr. Smith's office.
- Purpose/Reason
More convenient access to the conference room.
- Requested by
Requested by Mr. Smith.
- Change Proposal / Number
Work Changes Proposal Request, No. 7, dated December 19, 2006
- Estimated Cost
Being developed by the contractor.
- Modification Document / Number
Construction Change Directive, No. 4, dated December 23, 2006.
- Current Status
Authorized to proceed by Mr. Wright.

Such a log may be viewed as burdensome, but carefully detailed records such as this can be an effective defense against faded memories of past actions and events.

I'm gonna make him an offer he can't refuse.
—Don Corleone

Change review meetings

The best practice when reviewing change orders is to do so in an open meeting where all parties can participate in the discussion. This should be

done after the architect has had an opportunity to review the contractor's proposal and prepare a draft of G701. Obviously, the architect's review should only take place after the issues involved in the change have been discussed in project meetings; necessary drawings, sketches, and specifications have been prepared; and a proposal or pricing for the change has been submitted by the contractor.

The purpose of the change review meeting is to review cost and time impacts, approve changes, document decisions, and authorize the contractor to proceed with the work. If pricing or time impact information is not available, the parties can discuss authorizing the change through use of a construction change directive. The discussion should include how cost and time are to be resolved in the event of a dispute after the work has been completed.

*If you want to make enemies,
Try to change something*
—Woodrow Wilson

P-P-Problems

A high incidence of nonconforming work and a significantly exceeded budget are two factors that negatively affect the change process.

Vicarious acceptance of nonconforming work: When claims are made against architects where defective and nonconforming work is involved, it is often alleged that the architect has responsibility for damages because he or she vicariously "accepted" or "approved" the nonconforming work by signing documents used in administering the work such as AIA Document G702, Application and Certificate for Payment, or G701, Change Order. We have identified this problem in prior articles regarding the architect's certification of substantial completion and payment. Regardless of the presence of the architect's signature on these documents, the nonconforming work is rightfully covered by the contractor's warranty along with the contractor's sole responsibility for complying with the contract documents. This position was delineated in "Absolute or Absolution," published in the August 2006 *AIArchitect*. [http://www.aia.org/aiarchitect/thisweek06/0804/0804bp_risk.cfm]

Vicarious approval of runaway change-order costs: When claims are made against architects on problem projects where the budget is exceeded by a significant margin, regardless of the causes, it is almost always



PRACTICE

argued that the architect is responsible for damages because he or she vicariously “accepted” or “approved” the contractor’s excessive change-order costs. The basis for the allegation is because the architect signs G701 along with the owner and the contractor. The architect should be very scrupulous in reviewing the contractor’s proposed costs, keeping careful records, and calling the costs into question when necessary. Whenever a change is proposed after the start of construction, it is always beneficial to remind the owner that the work will not be competitively bid and costs are likely to be higher than if included in the original construction documents. We have seen this claim made against architects, although the architect protested for months over the excessive proposed change pricing.

There are limited available options when a contractor quotes excessive prices for changes on a project. One includes the use of a construction change directive with the contractor performing the work on a time and materials basis. With this approach be aware that the owner’s administrative efforts to monitor the contractor’s work time and audit payment records will be increased. Another option is to contract with a separate contractor to do the work. This approach can be problematic should the warranty of the work be affected by the presence of the second contractor. The limited recourse to this unfortunate situation underscores the importance of pre-qualifying contractors with acceptable performance histories.

Finally, in a circumstance where other parties, such as an owner’s representative, a program manager, or a construction manager, are responsible for reviewing and approving costs and/or time, the architect may consider adding a statement to G701 (or G701/

CMA) that the architect’s signature does not represent an opinion about the construction costs and/or time that are the rightful purview of others. *When you’re finished changing, you’re finished.*

—Benjamin Franklin

Conclusion

Changes can originate through all team members deliberately, by default, or by mistake, and their impact on the project relative to time, cost, and quality can profoundly affect how the project outcome is experienced or perceived. All parties can cause damaging impacts to a project.

- The owner can cause damaging impact through failure to understand scope objectives and program for the project. Too many changes can cause disruption to the project coordination and construction sequencing.
- One of the most damaging impacts on a project is contractor installation of nonconforming work that the owner accepts to save remediation time or avoid forced correction efforts.
- The architect can cause disruption and damaging impact through excessive errors and omissions that can occur when construction documents are poorly prepared and coordinated.

Changes complicate and disrupt the design and construction process. They take up our time and cost us money. They are often controversial, untimely, and provocative. Nonetheless, they are an integral part of architecture and construction, and our skills as architects will be judged on how well we manage them. Changes are usually made under duress when construction is in progress and time is

money. Moreover, the owner and contractor may not want to face the tough realities of changes; that they subvert coordination and that administering changes takes valuable time.

Therefore, it is important that architects contribute to managing the change process effectively by explaining the consequences of changes carefully to the owner, frequently monitoring the budget, pushing for the use of contingencies, pursuing the selection of qualified contractors, maintaining good documentation, and insisting that the change-order status be a frequent topic of conversation on the project.

So, as you contemplate the owner’s most recently requested revisions and consider how you will present your thoughts about increased costs and extended schedules, turn on your computer and update the change log, and always remember to be careful out there.

Reference:

Jim and Grant will return next month in *AIArchitect* when the subject will be “Who Are You?—The Enigmatic Architect.” If you would like to ask Jim and Grant a risk- or project-management question or request them to address a particular topic, contact legalcoordinator@aia.org.

James B. Atkins, FAIA, is a principal with HKS Architects. He serves on the AIA Documents Committee and is the 2006 chair of the AIA Risk Management Committee.

Grant A. Simpson, FAIA, manages project delivery for RTKL Associates. He is the 2006 chair of the AIA Practice Management Advisory Group.

This article represents the opinions of the authors and not necessarily that of

PRACTICE

The American Institute of Architects. It is intended for general information purposes only and does not constitute legal advice. The reader should consult with legal counsel to determine how laws, suggestions, and illustrations apply to specific situations.