

## **Beware of substitutions dressed in RFI or submittal clothing**

By Bill Schmalz, FAIA, and Yu-Ngok Lo, AIA

Most architects know that a substitution, an RFI, and a submittal are distinct things, each with its own relationship to the owner-contractor agreement. Submittals are prepared by subcontractors to demonstrate, at much greater detail than the contract documents, that the subcontractor, the manufacturer, the suppliers, and ultimately the contractor understand the design intent of the documents. An RFI, which means (depending on whom you ask<sup>1</sup>) either Request for Information or Request for Interpretation, is intended to clarify, within reason, the design intent of the documents. Neither RFIs nor submittals should be used to change the design intent.

Substitutions, on the other hand, are requested by the contractor to replace a specified product or system, and can be “for cause” (e.g., the specified product is no longer available) or “for convenience” (e.g., the proposed substitution will save the owner money or allow the project to be completed sooner). Substitutions can, when approved by the owner, result in changes to the design intent and usually in change orders. This simplified distinction sounds clear, no? And yet substitution requests have ways of disguising themselves as RFIs and submittals, and the on-site architect needs to be on the lookout for this.

Let's look at a real-life RFI example: On a large California hospital, the on-site architect received an RFI from the contractor asking if conduit with a wall thickness slightly thinner than the specified thickness could be used in concrete slabs. The architect dutifully sent the RFI to the electrical engineer, who had no concerns and returned it with an “okay.” The architect then passed the response, through the owner's construction manager, to the contractor, who in turn sent it to the subcontractor.

A few weeks later, the architect of record—not the on-site architect—received a phone call from the inspector saying all the in-floor conduits were rejected and needed to be replaced, since their wall thickness didn't comply with the specified fire-resistance assembly. This sort of thing is known (in its G-rated form) as an “Aw, shoot!” moment, because the architect of record immediately recognized what had happened: a substitution had been approved without using the contractually required procedures.

Here's an example with submittals: The mechanical subcontractor's submittal included an HVAC package unit by a manufacturer different from the one specified—without specifically noting the change on the submittal as required by contract. The mechanical engineer didn't catch the substituted unit,—superficially it looked the same as the specified one—and approved the submittal. Unfortunately, the electrical access panel of the submitted unit was in a different location from the specified unit, which had been coordinated during the design phase.

After the unit was installed, the inspector rejected the installation because a structural column was in the code-required clearance space in front of the panel, not to mention that the column prevented the panel door from opening. At this point, the project schedule couldn't accommodate replacing the installed HVAC unit with the specified one, so instead the column was removed and additional support was added to the roof

---

<sup>1</sup> The AIA's Document B101—Standard Form of Agreement between Owner and Architect talks about “requests for information” in Section 3.6.4.4. CSI typically calls RFIs “requests for interpretation.”

structure. This was a costly change that could have been easily avoided had proper procedures been followed for reviewing the proposed substitution.

Now mind you, at no time were any of the participants of these misadventures acting with anything but the best intentions for the project. The subcontractors weren't trying to get away with anything, and the contractors, construction managers, on-site architects, and engineers saw no problem with the proposed conduit and HVAC changes. The inspectors, on the other hand, were required to inspect the work based on the documents approved by the authorities, rather than on RFIs or submittals, and were justified in rejecting the substituted products.

The end result? The design and construction teams spent a lot of time-consuming effort, in the first example, to find published performance tests that showed the new conduit met the required fire rating of the slab, and in the second example, to redesign the building's structure to allow the column removal. In both cases, change orders had to be approved to document the changes, and the revised documents had to be approved by the authorities having jurisdiction. The inspectors were then able to inspect and approve the changes based on the revised and approved documents. All this wasted much time and resources—the architects', the contractors', the subcontractors', and the owners'—and delayed the project schedules.

Disguised substitutions are actually quite common for small projects, especially when the design team is not hired for construction phase services. Another real-life example: A cedar panel rain screen system was specified as the exterior skin of a single-family townhouse project. The architect, however, wasn't hired to provide construction phase services. The contractor saw an opportunity to save money and convinced the owner to accept a less labor-intensive system that had the wood panels attached directly to the waterproofing without the designed air gap and without the specified on-site water tests.

Leaks occurred after occupancy, and the new owner sued the developer, the contractor, *and* the architect (who, it should be remembered, had nothing to do with the decision). After considerable time, cost, and effort—all uncompensated—the architect was able to prove that the decision was made by the developer and the contractor. Unlike the examples above, where the disguised substitutions were not made with devious intents, this example is one where the contractor was trying to get away with something, and took advantage of the architect not being able to advise the owner to reject the substitution.

**The moral to the story:** Architects and builders need to be ever watchful for substitution requests hiding in RFI or submittal clothing.

***Disclaimer:** The viewpoints expressed in this article are those of the author(s) and are not necessarily approved by, reflective of or edited by other individual, group, or institution. This article is an expression by the author(s) to generate discussion and interest in this topic.*