



## Auditing Financial-Related Construction Logs

By Ron Risner

In the last column we delved into the various reports and logs which are maintained in the field and which help maintain control over the many moving parts in a construction project. We discussed design issues (RFI, Submittal and Non Conforming Logs), labor activity (Sign/Sign Out, Daily Activity and Backcharge Logs), materials received (Materials Received Log), equipment used (Equipment Log) and other field condition logs (Daily Weather Condition Log). In this column we will focus on logs which are more financially oriented but which are just as critical in controlling a construction project. And, we will look at how an auditor should best view these logs in performing a construction audit.

### Value Engineering Defined

Before we talk about a value engineering log—let's first define the concept. Value engineering (VE) is a cost control technique that utilizes a systematic and creative analysis of a project or operation to determine how best to achieve the function, performance or reliability at the least cost. In other words, VE is a technique used by the project team to reduce the cost of materials, design or construction and still maintain the function, performance or reliability of the project. Value engineering typically takes place when the estimated cost of the project exceeds the owner's Board of Directors approved budget. When this occurs, the architect, owner, and contractor hold a series of meetings to determine ways to reduce the costs of the project such that it falls within the budget parameters. These VE meetings will, hopefully, surface ideas that will directly reduce the cost of



the project but maintain the overall integrity. These ideas are presented to the owner to determine whether the owner wants to accept or reject the value of the "financially engineered" idea. The example I give most often when I am teaching a construction audit class concerns installation of windows. Let's say the architect has specified that a certain brand of windows be installed in a healthcare facility. But, during the value engineering process the contractor asserts that they can get a different brand of window—with the same quality, function, performance and reliability—at a more economical price, i.e., \$500,000 less. Assuming the owner and architect accept the new brand of window, then the concept of value engineering becomes a reality and \$500,000 is saved.

### The Contractor's Value Engineering Log

During the VE phase of a project it would be typical for one of the entities (most likely the contractor or architect) to maintain a log of all of the value engineering ideas that were surfaced by either by the architect, contractor or owner. The VE log typically contains a description of the idea, the amount of savings if accepted by the owner

(although once in a while a good VE idea can actually increase the cost of the project), whether the financially engineered idea was accepted or rejected by the owner, and the date it was accepted/rejected. By keeping a running total of the savings column (for owner accepted VE) it is easy to determine whether the total will reduce the contract price such that it will bring the project back to within budget, i.e., if the original estimated price of the project was \$5 million over budget, then it is within budget when \$5 million in savings is achieved.

### Auditing the Value Engineering Log

What should auditors look for while auditing value engineering? They should make sure that all of the value engineering that was accepted by the owner actually reduced the cost of the project. If the VE was identified and accepted before the contract is signed with the contractor they can look at the final proposal by the contractor to make sure all of the VE was included (deducted) before the contract was signed. If the VE process ensues after the contract is signed (typically the contractor agrees to sign the contract and then deduct future accepted VE), the likely scenario would be for credit change orders to be executed for each accepted VE. You might think the idea of VE being credited to the owner is pretty straightforward—and it is—but from a cost control standpoint you might be surprised to find during your audit some VEs may have been handled incorrectly. Why? Because VE has been known to be credited at the wrong amount or in some cases not at all, i.e., it is "forgotten" or "falls through

the cracks". That's why maintaining a log ensures that VE remains visible and that ultimately it is properly credited to the owner.

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### Allowances Defined

Again, before delving into a log that is commonly maintained on a construction project—the allowance log—let's first define "allowance". An allowance is a project specification the owner knows they want but the exact character or level of quality has not yet been determined. Let's turn to the residential construction industry for an example. (It can also be used on the commercial side). Let's say you are building a home and you have not yet decided the color or type of carpet you want installed. The contractor might approach you and ask you the color and type of carpet you want installed. Since this will typically be early in the construction of your home you might say "I don't know. I haven't decided yet." To which the contractor will probably say, "Ok, I'm going to set aside an allowance of \$10,000 for carpet and once you decide what you want you let me know." Then, when you decide on the type, color, and/or manufacturer of the carpet, the contractor will apprise you as to whether the \$10,000 allowance was enough or not. If he says the carpet will cost \$8,000, you can expect the final price of the house to be reduced by \$2,000; i.e., it is "trued up". However, if the final cost was \$12,000, you will be expected to pay another \$2,000. Yes, that's the way it works. If you choose a higher-end carpet that exceeds the allowance, you must pay the difference. It works the same way in the commercial construction industry. Allowances are set aside at the beginning of the project and are eventually trued up as the owner makes a decision about a particular specification.

### Auditing the Allowance Log

What should an auditor look for regarding construction allowances? First, for cost control purposes, make sure the contractor has established

an allowance log. Allowances are typically enumerated in the contractor's proposal and/or carries forward into the contract—usually in the form of an

exhibit. It is from these two documents that the contractor prepares the allowance log. Second, the auditor should make sure that the allowance log is accurate. This will require reviewing the proposal and/or contract to determine that the log prepared by the contractor includes all of the allowances in the proposal/contract. Corollary to this may be a need to review subcontracts to determine whether allowances are included in their proposals or subcontracts and that the contractor included them in their allowance log. Third, once the owner reaches a decision on each allowance, the auditor should make sure that the price was accurate by reviewing supporting documentation and that the final true up was taken for each one. In our previous example there should be an invoice for \$8,000 for carpet. Fourth, the auditor should ensure that once the allowance is trued up an add or deduct change order is executed. One thing to keep in mind is that allowances are sometimes included in the price of the project but sometimes they are not. Either way they must be trued up and a change order executed as either an add or deduct change order. Keep in mind that any "unused" allowances accrue in total back to the owner.

### Construction Alternate Defined

Again, let's define construction alternate before we look at the attributes of an alternate log. An alternate, like an allowance, is a chance for the owner to defer a decision about the project or to modify the project as construction takes place. Let's say the owner is interested in installing a \$50,000 fountain at the entrance to the healthcare facility. However, the budget is very tight and it is not certain whether there will be enough funds for the fountain or perhaps the CEO has not yet decided on the type of fountain desired. At the beginning of the

project the contractor compiles a list of "alternate" or optional construction ideas that can take place during the course of the project. Like an allowance, at some point the owner must decide whether or not they want to exercise the alternate, in our example, the fountain. However, unlike an allowance the alternate price is pre-determined. If the owner wants the fountain they must pay \$50,000. It is typically a fixed price; there is no true up like an allowance.

### Auditing the Alternate Log

How should an auditor review alternates? First, make sure you have a complete list of all alternates by asking the contractor for a copy of the alternate log. Like the allowance log the contractor will have prepared a log from the alternates included in the proposal and/or contract. Second, make sure that the log is accurate. Like allowances, this will require reviewing the proposal and/or contract to determine that the log contains all alternates listed in the proposal/contract. Corollary to this may be a need to review subcontracts to determine whether alternates are included in their proposals or subcontracts. Third, once the owner has reached a decision concerning each alternate the auditor should make sure the final cost was handled correctly. If alternates are included in the contract sum, nothing needs to be done other than to determine that the construction pertaining to the alternate was completed, i.e., the \$50,000 fountain was installed.

The auditor should make sure that the allowance log is accurate.

When the alternates are not included in the cost of the project, the auditor should expect an add or deduct change order to be executed equal to the original fixed price of the alternate.

### Correspondence Log

The main method that contractors and/or other construction personnel use to control the volumes of correspondence on

a project is to maintain a Correspondence Log. If one piece of correspondence does not get to the right person it can have a direct negative impact on the project. This is why contractors maintain a Correspondence Log. It is a way to record what documents flow between the architect, engineers, consultants, inspectors, vendors, contractors, subcontractors and the owner. While this log does not have a financial impact per se, it does contain documents with financial information, such as whether an allowance or alternate is accepted by the owner. Correspondence maintained on a log can be in the form of email, memorandums, formal letters, RFIs, and submittals. If issues arise during or after a project, the Correspondence Log can be of great value in determining what communication took place.

### Summary

In summary, there are many logs used to manage a construction process. In the previous *New Perspectives* column (vol. 28, #3), we addressed those logs which pertain to controlling the field process such as those related to materials, labor and equipment. In this column we addressed those logs and reports that have a direct financial bearing on controlling the cost of the project. Please note that two critical logs which help control the cost of a project—the change order log and the contingency log were also addressed in previous columns and therefore were not included here. However, in our next column we will address the concept of contingency and contingency logs in more depth. **NP**

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