Document, Document, Document

The First Three Rules of Construction

By Scott Lowe

One thing savvy contractors have learned is that the first three rules of the construction phase of a project are document, document, and document.

Unfortunately, too many engineers do not adequately document construction activities. The problem with this is the old maxim, "If it is not in writing, it did not happen." Though there is wisdom in this old maxim, it does not tell the engineer what to document or how to document.

The first goal of documentation is to collect the facts accurately and then to support these facts with written descriptions and photographs so that construction issues can be quickly and fairly resolved.

Three things to consider are:

- Documentation is a must!
- Documentation is related to risk.
- Documentation is only as effective as what is documented, why it is documented, and how it is presented.

Documentation is a Must!

Not everything must be recorded but engineers ought to document everything that may be important, so they have the necessary facts should disputes arise. While a true statement, it is not very helpful and easier said than done. The information deemed important depends on the situation and what the engineer is trying to communicate.

For example, it is not essential for an owner and engineer to record the cause of a delay if the contractor mitigated the delay, finished the project on time, and did not ask to be paid more money. All is well that ends well. However, the owner and engineer must record the cause of the delay if the contractor causes the delay, accelerates to mitigate the delay, and then asks the owner to pay for the acceleration.

It is not known in advance which contractors will accelerate to mitigate project delays and not ask for additional compensation or which contractors will ask to be paid. Prudent owners and engineers document all delays.

Documentation is Related to Risk

The greater the risk, the greater the need for documentation to mitigate or control that risk. Project documentation, to be useful, should include the specific facts needed to substantiate the engineer's opinions and conclusions for presentation to the owner.

Engineers also need to protect themselves. For example, owners and contractors can claim that problems are attributed to a poor design. The engineer's defense and the proper resolution of the issue comes from solid documentation of both the design and the construction activities related to the item(s) in question.

Effective Documentation

Three techniques can be used to ensure that valuable information is documented.

Engineers do not have to do all the writing. Some Federal agencies require the contractor to produce daily logs or reports for the project. The logs are then submitted to the owner for review and comment. The owner and engineer can add anything to the daily log that they think should be recorded or comment on the contractor's entries. This eliminates the need for both the contractor and the owner/engineer to prepare a complete daily log. The same is valid for meeting minutes, submittal logs, RFI logs, and other documents that can (and should) be shared.

Writing is not the only form of documentation. Pictures are unique tools, but often need an explanation to help the reader understand why the picture was taken. In this digital age, it is easy to add circles and arrows to a photograph to emphasize problems and focus attention, but the value of adding notes should not be underestimated. Without a short paragraph of writing to add clarity, the picture is not nearly as valuable. The writing also memorializes the issue so that, in the future, it is easier to remember the situation accurately.

Document the whole story, not just pieces. Pictures are powerful tools for documentation, but it is critical to ensure that they tell the whole story. Those doing the documenting should always keep the story they want to tell in mind.

As an example, an engineer took two pictures of the same bridge, on the same day, to make a point about the causes of delays during construction. Two significant things had happened while the bridge was being built. First, the contractor experienced a form blow-out while constructing one of the tall, slender bridge piers. This pier supported the precast concrete girders that crossed the river. Second, during the erection of the steel girders for another part of the same bridge, a construction document error was discovered and the girders needed to be re-fabricated.

The owner asserted that the form blow-out caused the delay. The contractor asserted that the steel design error caused the delay. Because the engineer took two pictures on the same day at the expansion joint between the concrete and steel sections of the bridge, the pictures conclusively proved the cause of the delay. One of the pictures was taken of the concrete portion and showed that the bridge deck was yet to be constructed. The second photo, of the steel portion, showed the deck constructed and all but finished and striped.

These two pictures told a defensible story; the form blowout delayed the project – the concrete portion of the bridge was not complete when the deck had already been poured on the steel portion of the bridge. Either one of the photos, by themselves, would not have told that story.

While the old cliché – "If it is not written down, it did not happen" – may be true in some situations, engineers can learn from savvy contractors to stay on-point and effectively document construction activities using reports, photos, and notes.▪

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