

SPECIAL SECTION: CONSTRUCTION TECHNOLOGY



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# Paper to Paperless

## ON THE MODERN CONSTRUCTION PROJECT

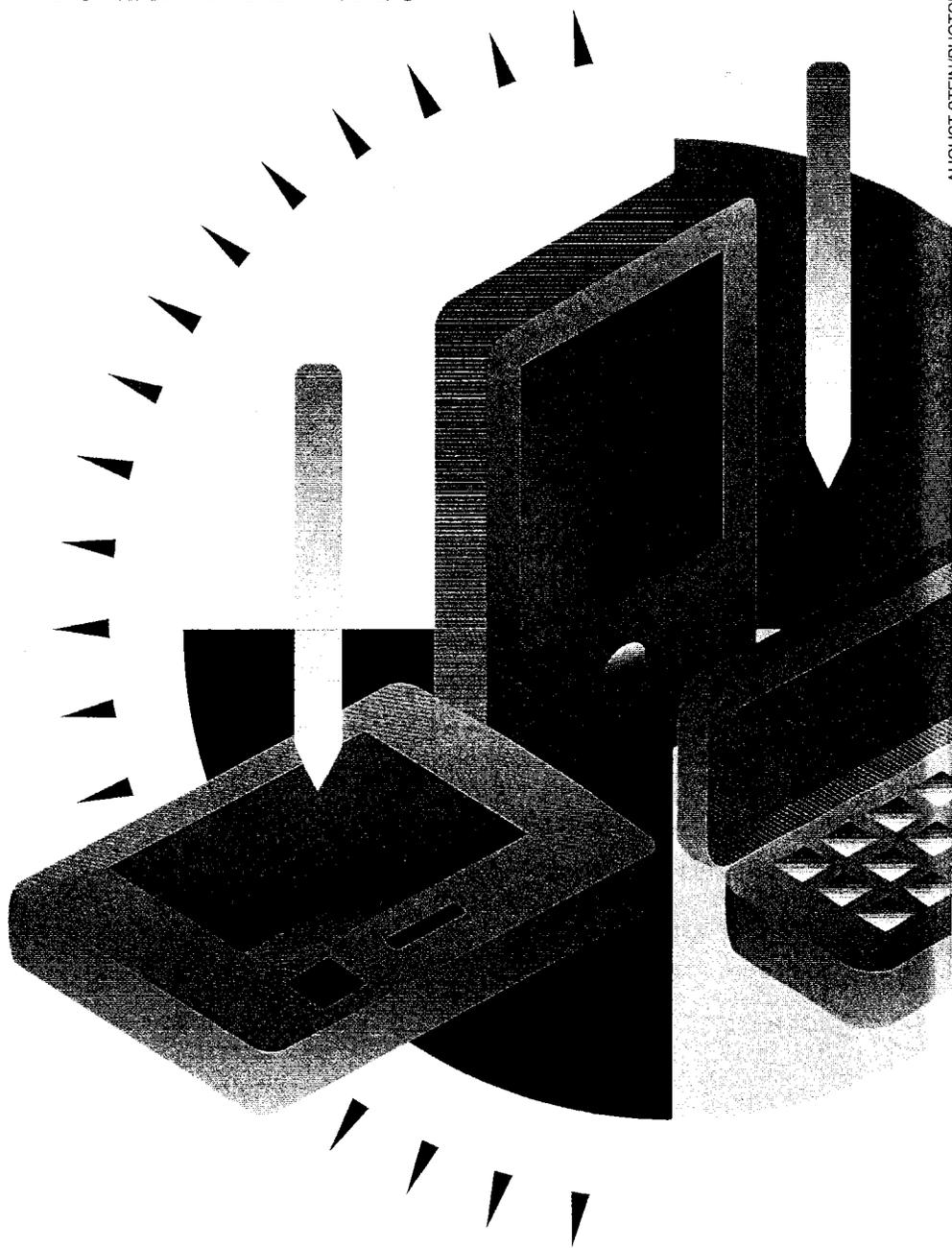
BY MATT DEVRIES

he construction industry needs to consider that “paperless” involves more than simply a different form of documentation, but also a debate about whether the benefits of a paperless endeavor outweigh the upfront investment costs and the potential risks.

Indeed, the courts have struggled with electronic discovery challenges for years. Workable solutions can help parties manage the production of millions of pages of electronic documents. In the end, however, the same common-sense approaches to document management on a paper project can help a contractor deal with similar challenges on a paperless project.

### WHY IS DOCUMENTATION NECESSARY?

Before considering the benefits and risks of a paperless construction project, a contractor must understand the purpose in having a set of project management procedures in place. Good document procedures are essential to plan and manage the costs, labor and time on the project; to give proper notice claims and to reserve any



rights; and ultimately to aid and resolve claims and disputes. Documents—whether the daily log, time sheets, photographs, etc.—are used throughout the progression of the project to manage, monitor and record the work. At the conclusion of a project, those same documents may be used to resolve a conflict between the parties.

Consider the example of owner-supplied parts being delivered to the project. The delivery ticket confirms the date, time and identification of the parts, while the daily log includes a notation that the parts arrived mislabeled. The accounting records establish the cost of the parts, and the electronic schedule can be used to show the time impact of the mislabeled parts. A follow-up letter and a change order provide the requisite notice and preservation of a claim.

If something goes wrong on the project, the proper records are essential for claims and disputes, and are often the only means to establish the causal connection to the event causing the damage. Additionally, documentation is regularly used to establish that a contractor gave timely notice of its claim and is used to properly identify

and prove the actual costs and/or delays on the project.

**WHAT ARE THE BENEFITS OF A PAPERLESS PROJECT?**

Paperless success involves more than simply scanning every project document and putting it into a digital file cabinet. That would be nothing more than moving the archived documents from Building A to Building B. The successful protocol will involve using new technologies, such as project management software and other web-based programs:

- to consolidate project documentation;
- to increase efficiency in project communications;
- to establish a good audit trail; and
- to prove liability and damages in the event of a dispute.

The new tools available to improve record management are limitless. Web-based systems allow the entire project team access to the same pool of construction documents, including design drawings, photos, schedules, change orders, requests for information and numerous other reports. Document control can be enhanced by tracking revisions, storing the

master files and streamlining the review process.

In addition, new technologies allow mark up and review of thousands of pages of drawings, while saving thousands of pounds of paper. One project in Massachusetts received a LEED Innovation & Design credit from the U.S. Green Building Council because of its paperwork reduction and carbon footprint reduction efforts.

**WHAT ARE THE RISKS IN AN ELECTRONIC AGE?**

A majority of the risks on an electronic project can be allocated by contract. For example, the parties' contract can address: Who owns the license to the project software? Who owns the electronic data? How much access will be given to the parties during/after performance? Who controls the project server? What information is to be treated as confidential, proprietary or trade secret?

The more difficult questions to address include: Is less formal communication (email) good or bad for the parties? Can parties still use formal letters if email becomes the primary form of commu-

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nication? What are the risks of loss or destruction?

Perhaps the greatest obstacle to the fully paperless project is ensuring the buy-in from the entire project team. The process requires investment to ensure a project-wide adoption. A contractor needs to train all parties on the new systems, and it is important to create a best-practices protocol for electronic document management. The protocol then can be updated and replicated on future projects.

Even as project administration takes on electronic form, the documents are subject to the same discovery rules as paper documents. Indeed, all federal courts and most state courts have adopted special rules for discovery and production of electronic documents. A contractor needs to work with its attorney before the start of a project to ensure proper preservation rules are in place, and to avoid sanctions for lost or destroyed electronic evidence in the event that litigation arises between the parties.

Does the form of the document affect the claim? Does an instruction from the owner sent by email have the same legal effect as a directive change order on a written template or form? Like most other

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issues in the law, the answer is: it depends. The parties' contract and the applicable state law largely dictate what constitutes a valid change order.

For example, one appeals court in Montana held that an email was sufficient to support a finding of increased costs for a change order. On the other hand, a court in North Carolina concluded that an email promising additional work was not an enforceable contract for purposes determining whether a change order was valid. A case in Florida demonstrates that an electronically faxed release was not the same as the original document because one party demanded the original to be provided.

An electronic document can be the basis of a contract. A digital photograph can be used to demonstrate installed quantities. An electronic schedule (and its logic ties) can be used to impeach a witness. In the end, the form of the document may not have as great an impact as the intended purpose of the document.

From a legal standpoint, the construction disputes that have been the most costly involved companies that did not have a project management system in place or, inexplicably, had one in place but it was not being followed by the project management team. The transition to a paperless project can bring many benefits, but only if the whole team uses the technology available. Whether the document is a piece of paper in a file cabinet or a few megabytes of data on a project server, common sense remains the best practice to use on a construction project.

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