

# Contracts BULLETIN

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## Bulletin #74, E-Construction: What's All the Buzz About? (April 6, 2004)

What is E-Construction?

How will it impact your business?

What should you be doing to prepare for E-Construction and what should you be worried about?

This *Contracts Bulletin* will attempt to answer these questions by:

1. Providing some background information about E-Construction;
2. Highlighting some of the technology that project owners will use in the future;
3. Discussing some of the E-Construction issues a prudent contractor should think about; and
4. Discussing some of the legal issues and concerns associated with E-Construction.

The following is a general discussion of E-Construction and is not intended to constitute legal advice. Before making any decisions regarding the legal issues raised in this *Contracts Bulletin*, you should consult with your legal counsel.

### Background

“E” things are increasingly impacting our lives. Each day we receive tens, if not hundreds, of e-mail messages. We make on-line travel reservations and use e-tickets. As consumers, we can buy merchandise (even groceries) from e-retailers without even leaving our homes. No matter what you think about e-technology (“awesome” or “the end of civilized society”), it will *eventually* change the way you conduct business.

As the Internet has evolved from a purely information-based platform (i.e., information driven) to a transaction-based platform (i.e., information *and* transaction driven), so, too, have Internet-based opportunities changed for businesses. Technological advances have made it possible for businesses to not only obtain and exchange information over the Internet, but also to conduct business transactions through electronic media. As discussed below, E-Construction embodies both informational and transactional advantages of the Internet and brings them to bear in construction projects. (See Elias M. Gordon, “E-Commerce and the Construction Contract – Parts I and II,” *Indiana Constructor*, October/November 2000).

### E-Construction: What Is It?

It is difficult to provide a precise definition of “E–Construction.” E–Construction is an evolving concept; what is meant by “E–Construction” today is far more sophisticated than was employed just a few years ago. Generally speaking, “E–Construction” simply refers to the use of electronic media and technology in the construction process. E–Construction involves, for example, using an Internet Web site to review and submit RFPs, sign contracts, electronically monitor supplies, exchange information regarding a project’s status, and review plans and specifications.

### **E–Construction: How Will It Be Used?**

The use of e–technology can occur throughout an entire project (i.e., from design through construction to completion) or for selected portions of a project (i.e., bidding or communication of change orders). The trend, however, appears to use an integrated electronic–based approach throughout the entire construction process.

Project managers and owners are driving the use of electronic media and technologies. Owners are seeking to capitalize on the efficiencies and quality improvements that can be captured through the use of the Internet and other e–technology. Owners are beginning to manage entire construction projects through the Internet (i.e., using project Web sites). Outlined below are *some* of the ways owners are increasingly using the Internet and e–technology for their projects (of course, the use of Internet–based technology is limited only by the imaginations of those using and designing it):

- **Design:** Computer programs enable designers to combine digital imagery, mapping, and modeling to efficiently design projects. For example, sophisticated computer programs permit designers to select “standard” objects, such as load–bearing walls, and the program will automatically develop foundation requirements to support them. Such automatic calculations and designs are predicted to save owners time and money.
- **Transactional:** Procurements, re–ordering, and even payments to vendors and contractors are becoming Internet based. For example, owners can make payments via EFT (electronic funds transfers). Project owners may manage the entire bidding process through electronic media. Indeed, all plans and specifications for a project may be made available on a project Web site (discussed below) with the expectation and requirement that contractors submit their bid proposals on–line.
- **Data Transfer and Collaboration:** Owners can communicate project changes to contractors via e–mail and electronic files. As a result, everyone will receive crucial project data within seconds as compared to days (via ordinary mail). To the extent that collaboration among parties is required, it can be accomplished through the Internet. For example, communications among vendors, contractors, and designers regarding changes to plans or designs can occur quickly through the exchange of electronic files as opposed to shuffling paper. Since information can be shared so freely, the quality of the parties’ collaborative efforts will improve thus improving the overall quality of the project.
- **Project Web Sites:** Much of the above–described E–Construction occurs within the confines of a project Web site owned and maintained by the project owner. The advantage of a project Web site is that it serves as a centralized data hub for the entire project. Owners can post project data on the Web site (i.e., design and specification data, construction timelines, etc.) for viewing and downloading. Information can be updated and sent to contractors and vendors instantly via automatic distribution lists. Communicating in this manner will save the owner time and money and will ensure that all the parties have the latest project information.

### **E–Construction: Practical Implications**

As project owners turn to technology to improve the quality and efficiency of their construction projects, contractors must begin planning for this eventuality. Contractors who seek to capture business

from “e-conscious” owners will need to be prepared to operate in their electronic world. Early planning is recommended because the procurement and implementation of e-technology will take time (and capital investment).

- **Technology:** To state the obvious, you need substantial technology to participate in E-Construction. If you are reading this *Contracts Bulletin* on a computer that has a 150 mhz processor and a 14K modem, it is time to upgrade (i.e., buy a new computer). You will need a computer that can send and receive e-mail messages and large electronic files quickly. If you are pressed for time to submit a bid on a project, you cannot afford to sit and wait for an electronic file to download for half a day. You will also need to explore remote Internet-based technology (i.e., PDAs and notebook computers that have remote Internet access). The ability to transfer data to people in the field will become a necessity. You should evaluate your technological needs early to allow sufficient time for installation and testing.
- **Resources:** E-Construction will require investment in both capital and resources. While the cost of e-technology is certainly coming down, it is still expensive. It is important to budget not only for initial technological needs, but also include the cost of upgrades and replacement. Depending upon the technology employed, you will need to decide whether your staff can handle the flow of information and workloads associated with your participation in E-Construction. You will also need to assess whether you should add staff or outsource your IT (information technology) needs.
- **Strategic Planning/Management Issues:** Numerous “strategic” issues need to be considered:

1. How deep should you dive into E-Construction?
2. With computers giving you access to information on a national or international basis, do you expand the scope of your business from local to regional or from regional to national?
3. How will staff responsibilities change to reflect new responsibilities associated with E-Construction?
4. Will one person be responsible for all things “electronic?”
5. How will you train your staff to use this new technology and implement this new way of doing business?

- **Marketing:** Now that you have the ability to participate in E-Construction, how will you market your business? Is some (or more) Internet-based advertising appropriate? Will someone be responsible for “surfing the net” to learn about new E-Construction opportunities?

The list of issues above is not intended to be complete. Indeed, each business is unique and should conduct its own analysis of how E-Construction may impact operations. No matter what, you should start thinking about these issues now. If you wait until the last minute to explore E-Construction issues, you may be making a costly mistake. There is no doubt your competitors will be exploring such issues so they can expand their business opportunities (and likely their profits).

### **E-Construction: Legal Issues and Questions**

There are numerous legal issues to consider before participating in E-Construction. While the following list is by no means exhaustive, it does outline some of the issues (and questions) to address with legal counsel before “jumping into” the world of E-Construction.

- **Contract Terms:** The fact that contracts may be entered into electronically does not change the fundamentals of contract negotiation. You will still need to carefully consider the terms. There are numerous other important issues discussed in past *Contracts Bulletins* (i.e., limitations on damages' clauses, force majeure, carefully signing contracts, etc.), which must be taken into account. Electronic contracts must be read even more carefully because of the rapid nature of the transactions. You are bound by electronic contracts just like you would be with conventional paper or oral agreements. Therefore, you must still refuse to sign contracts if the terms are unacceptable and negotiate their modification.
- **Electronic Signatures:** You can enter into contracts electronically. Electronic signatures are binding and enforceable. (See "Electronic Signatures in Global and National Commerce Act," 15 U.S.C.A. § 7001 *et seq.* (2000); and "Uniform Electronic Transactions Act" – adopted by some states.) It is important that you protect yourself against forged digital signatures or situations where an unauthorized employee digitally "signs" a contract. Because both original contracts and change orders can be handled electronically, you need to decide how these signatures will be "signed" electronically and who in your office will be responsible for handling these communications.
- **Protection of Interests/Indemnification:** Because you are dealing with electronic transactions, there are some additional clauses that can protect you from liability for problems that occur in the unique electronic environment. For example:

"The Contractor is not liable for any loss or damage, including but not limited to incidental or consequential damages, to the Owner resulting from electronic transactions, including but not limited to crash of systems, virus damage, data loss, system security, or other electronically caused damage."

This and other clauses should be considered and negotiated (e.g., force majeure) to protect you in the event of delays or damage caused by problems with electronic transactions. (See *Contracts Bulletin #65*.)

- **Insurance Issues:** You need to consider who will be responsible for insurance in the event of electronic failures. Your contract should identify who will "bear the risk."
- **Data Ownership (Intellectual Property):** It should be clear in your E–Construction transactions exactly who owns the intellectual property associated with the e–transactions. For example, you need to clearly establish who owns the copyright for the Web site and other software designs.
- **Protection of Proprietary and Confidential Information:** If you submit confidential or proprietary information to a project owner on–line, you must have contractual assurance from everyone with access that the information will be kept confidential. If you have information that you want to share electronically with the owner, and not others, you should make sure this is clearly indicated and defined in your contract. Finally, the owner should have a privacy policy regarding the project Web site, which should be incorporated into your contract.
- **Choice of Law and Venue:** Electronic contracts often involve transactions and projects spread over many states. It is important that your contract identifies both the choice of law and (more importantly) the choice of venue. Choice of law merely indicates what state's law will be applied in a lawsuit. More importantly, a choice of venue clause indicates that if there is any dispute between you and another party, it specifies where the trial will be conducted. The typical clause provides:

“Both parties agree and consent that all disputes between the parties shall be governed by the laws of the State of Minnesota, and that the exclusive venue and jurisdiction shall be the District Court of Hennepin County, State of Minnesota, in any action commenced between the parties.”

Such clauses mean that, no matter where you are located, you will be forced to litigate in the listed jurisdiction. If an agreement is between businesses, these clauses are usually enforced despite the great hardship it may cause one of the parties. You should carefully consider whether you are willing to agree to litigate disputes far from where you are located.

- **Spoliation of Evidence:** If you are in a dispute with another party, you need to be aware of your obligation to preserve relevant information (including electronic information and data) when litigation is reasonably foreseeable. The duty to preserve information can occur when litigation is merely foreseeable. In the construction industry, litigation may be foreseeable (thus triggering a duty to preserve) when a dispute arises over a change order. The duty to preserve relevant information requires more than just preventing intentional destruction of data. It may require you to make back-up tapes of your hard drives to prevent deletion through ordinary, on-going use.

As the discussion above highlights, the use of technology in the construction industry raises numerous legal issues and concerns. Thus, a necessary step before implementing E-Construction initiatives is to seek advice from competent legal counsel so that you can protect yourself from the many legal pitfalls that are associated with E-Construction.

### Conclusion

Whether you like it or not, E-Construction is becoming increasingly common. While e-technology is not going to completely dominate the construction industry in the near term, it will continue to gain momentum and will eventually play a key role in your business. By considering issues associated with E-Construction now, you will be taking the necessary steps to position yourself in an industry that is becoming more and more “e-driven.”

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