

COMMERCIAL

# BUILDER/ARCHITECT

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**The HKS Architecture of Healing**

# 21st Century Building Solutions

## Build Virtually First

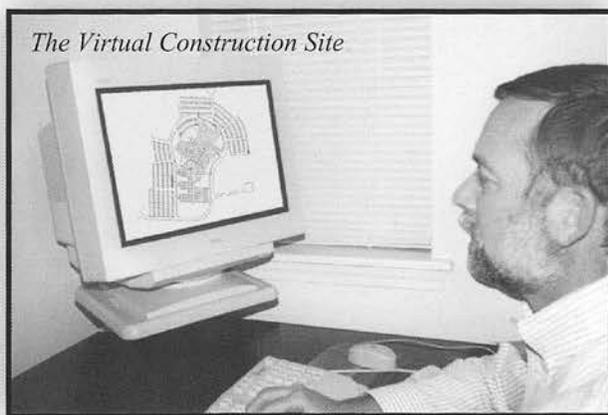
by William Harper

Wouldn't it be great to build the exact same project twice? After building the first one, all the glitches would be foreseen, design questions handled and scheduling issues managed.

Now think how much money and time could be saved if general contractors could build that second project FIRST.

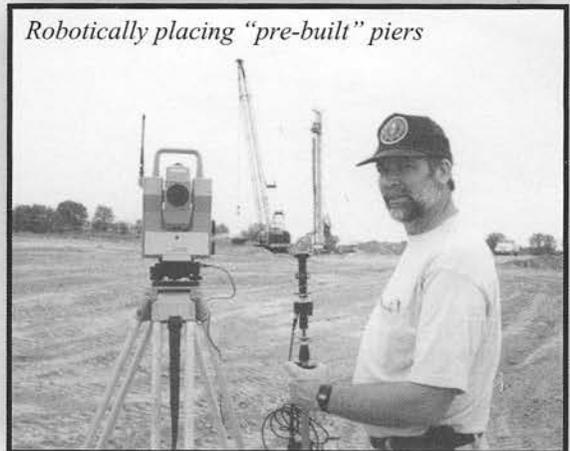
Thanks to technology, that's now possible. International Construction Data uses 3-D computer modeling to dramatically improve the efficiency of large construction projects. They specialize in building that "first project" virtually inside a computer. Like a general contractor, they lay out the work and then methodically build the project in the same sequence the general contractor is going to use. The result? All of the glitches show up on a CRT screen as digital images, as opposed to that concrete pillar "magically" showing up on the job site right smack dab where the utilities are supposed to go.

"We provide the trial run for the building process," said John Spencer, President and CEO, "By building the project step by step inside our computers we find all the difficult areas long before your crews do. If plans are perfect, then the project will build perfectly in a virtual machine. If unclear areas are discovered, they will be identified, documented and worked out with the design team before actual labor and materials have been invested.



The process increases staff confidence, radically improves speed and significantly reduces problem areas. "For the first time ever, we get all the design team's efforts on one page" explained John, "and then we put the contractor and all his subs on the same page. It can be quite intense on our side, but once we are finished, the project goes up like clock work. We have contractors who won't start a job

*Robotically placing "pre-built" piers*



When the model is correct, the digital images become digital data and the real beauty of the technology is realized. "A typical job may contain 500 to 5000 or more points (depending on job size and contractors requirements) relating to practically every part of a project including dirt, paving, utilities, piers, anchor bolts, plumbing and structural steel. These "pre-built" points are loaded into any survey instrument with stake out capability or a new 21st century laser based tool that requires no survey knowledge to run. (More on this later).

until we fit all the pieces together and architects who negotiate with project owners to make sure we are involved. That way they know their job will be built the way they intended. We simply bridge the gap between design and the construction process."

John's firm has well over 50 projects under its belt and their customer list is growing and fiercely loyal. International Construction Data uses its own proprietary software that integrates with other electronic drawing files. ICD utilizes robotic and conventional total stations and has trained contractor personnel to use both. But there is new technology on the horizon that promises to make it all even easier. Imagine holding a "magic wand" with a small screen that gives an exact three dimensional location of any point on a job. The same "magic wand" can also produce a near perfect electronic rendition of any building or area that an architect can then use for design and construction. Again insuring the project is built the way it was intended. ICD has access to the technology today.

"This system has evolved over the span of 25 years using my own crews. The new technologies coupled with the right experience have allowed us to eliminate many delays that can waste valuable time. The fee is such a small percentage of the overall cost that our clients feel they can't afford not to use the service. That's why architects are asking us to be involved up front.

The concept is simple. By building in a computer model it is possible to fit all the phases of construction together with precision."

In other words, you really can build that second project first. Because in construction, there usually isn't a second chance.

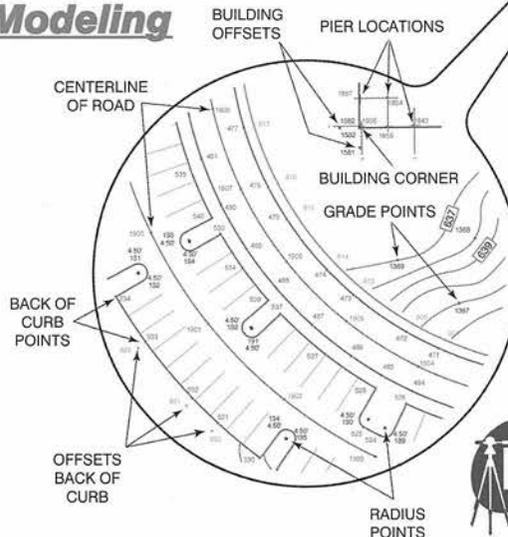
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## ELIMINATE YOUR "NIGHTMARE" PROJECTS... BUILD VIRTUALLY FIRST!

**ICD Builds Your Projects  
with 3D Computer Modeling  
to Make Your Jobs  
Move Faster**

### Use This System To:

- Discover problem areas before they are cast in concrete
- Precisely fit all job components - the first time and every time
- Minimize design and lay-out delays
- Simplify even the most complicated projects



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