

ARE WE MAKING ANY PROGRESS?

The business of designing and constructing buildings has changed over the years. But change doesn't necessarily mean progress.

BY BARRY ARNOLD P.E., S.E., SECB

PROGRESS, BY DEFINITION, means betterment or improvement. Change without progress is a waste of time and effort. It isn't an indication of improvement any more than shaking one's leg can be considered dancing the waltz. Moving in a clear direction doesn't necessarily mean moving in the *right* direction. And doing things faster doesn't necessarily mean doing them correctly.

Looking back over my many years in the business, I've seen a lot of change, but I'm not sure that we've made progress. Most disconcerting are some of the current trends that have infiltrated and changed the construction process.

Absence of Professionals/Craftspersons

It seems that laborers are doing most of the work these days. By laborers I mean people who, unfortunately, have little or no interest in their job beyond collecting a paycheck. Their commitment to the job is measured by a time clock.

The construction industry used to be staffed with professionals/craftspeople (P/Cs), individuals with a strong passion for their work and a commitment to make sure it was done correctly. They were educated, skilled artisans, trained in their trade and profession and dedicated to completing even the most minute, detailed tasks with enthusiasm.

The P/Cs' minds and hearts were fully engaged in their projects; they knew that problems were an inherent part of construction, something to be anticipated and minimized, not magnified. When problems arose, and they always did, there was no finger-pointing, and you could always count on the P/C to come prepared to offer solutions and ideas—to be part of the solution, not the problem. They knew that correcting a problem was a greater benefit than placing blame.

P/Cs were proud of the product they helped create; they always did their best because they knew their work reflected on them personally. They were proud—and they had a right to be.

Lack of Commitment to Continuous Education

Education doesn't only happen at a desk or in a classroom—or even working in the field. It happens continuously throughout your career. Education happens when a person is willing to learn and looks for opportunities to be taught.

Arrogance seems to have crept into the design and construction business, preventing us from learning from each other. Every problem, regardless of how small, is handled as though it was the ultimate war of right vs. wrong, good vs. evil, or life vs. death, instead of a simple comparison of

mutually acceptable alternatives. Too many people believe that they have the “one and only” correct answer or solution to a problem.

We used to understand that graduating from a university or trade school was only the start of our education. We knew that there was no more prestigious school than the School of Hard Knocks, and we were eager to enroll.

Lack of Common-Sense Design—and Too Much Reliance on the Computer!

Today, I looked at shop drawings with a W12×26 beam that was 12 ft long with an 8-kip end reaction. The end connection had twelve ¾-in.-diameter bolts; the end connections weighed more than the beam. Why? Because the computer said that was what was required.

There was a time when designs were created in the engineer's head first—long before putting pencil to paper or fingers on a mouse button. Before formal design began, the designer had a “feel” for the correct answers. More important, the designer had a feel for what the wrong answers were too. No self-respecting designer or detailer would allow reams of computer printouts to create an illusion of completeness or accuracy. They used the computer as a resource tool, not as a substitute for thought and common sense.

Learning from the Past

We have opportunities every day to not only make changes, but also to make substantial strides forward in helping every person and company progress. When looking toward the future, it doesn't hurt to spend some time looking back. In doing so, we can ensure we're not just making changes but making real progress—progress that will lift every member of the construction business to a new level of commitment, dedication, education, respect, and understanding. Progress fosters respect, understanding, and real, tangible teamwork. By making progress, we make better products and better designs—and build a better industry.

Fortunately, trends aren't a predictor of things that must happen; they're only an indicator of what can happen if the trend is allowed to continue. Look back at your work experience and see if you've made progress or just changes. It's worth your time.

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