

Top 6 Rework Offenders Killing Your Margins



Contents

01	How Much are You Paying in Rework?	03 →
02	The Top 6 Offenders	05 →
03	Protect Yourself from Rework	14 →

01
—

How much are you paying in rework?

For many construction firms, there's simply no way to avoid rework. Projects involve scores of workers, specification books are as thick as bricks, and aspects of the job can take months to complete. With all the moving parts of a project, especially with manual processes, mistakes will inevitably occur—and that means costly schedule and budget overruns. But without efficient systems and procedures in place, rework will continue to eat into profit margins.

According to the article “Learning Practices as a Tool for Quality Costs Reductions in Construction Projects,” rework can often be as high as 5% of the contract value of a given project. This means it costs \$250,000 worth of rework for every \$5 million spent on a job. That's a considerable amount of money—and enough to really put a dent in already slim margins.

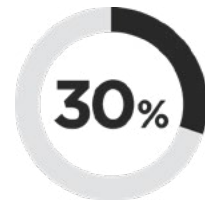




Rework can often be as high as 9% of the contract value of a given project.

A different study conducted by Navigant Construction Forum suggested that this 5% average cost of rework was merely the price associated with the direct cost of reported rework, and that the actual total is higher. The study's authors placed the total cost of rework—including both the direct and indirect factors combined—at more like 9% of the total project cost.

Other studies, such as “Cost Management in Construction Projects: Rework and Its Effects,” found that around 30% of the work performed by construction companies is actually rework. Despite the differences in the amount of estimated rework, the simple fact remains that most construction firms are losing too much money and allocating too many resources to complete work that should have been done right the first time around.



Around 30% of the work performed by construction companies is actually rework.



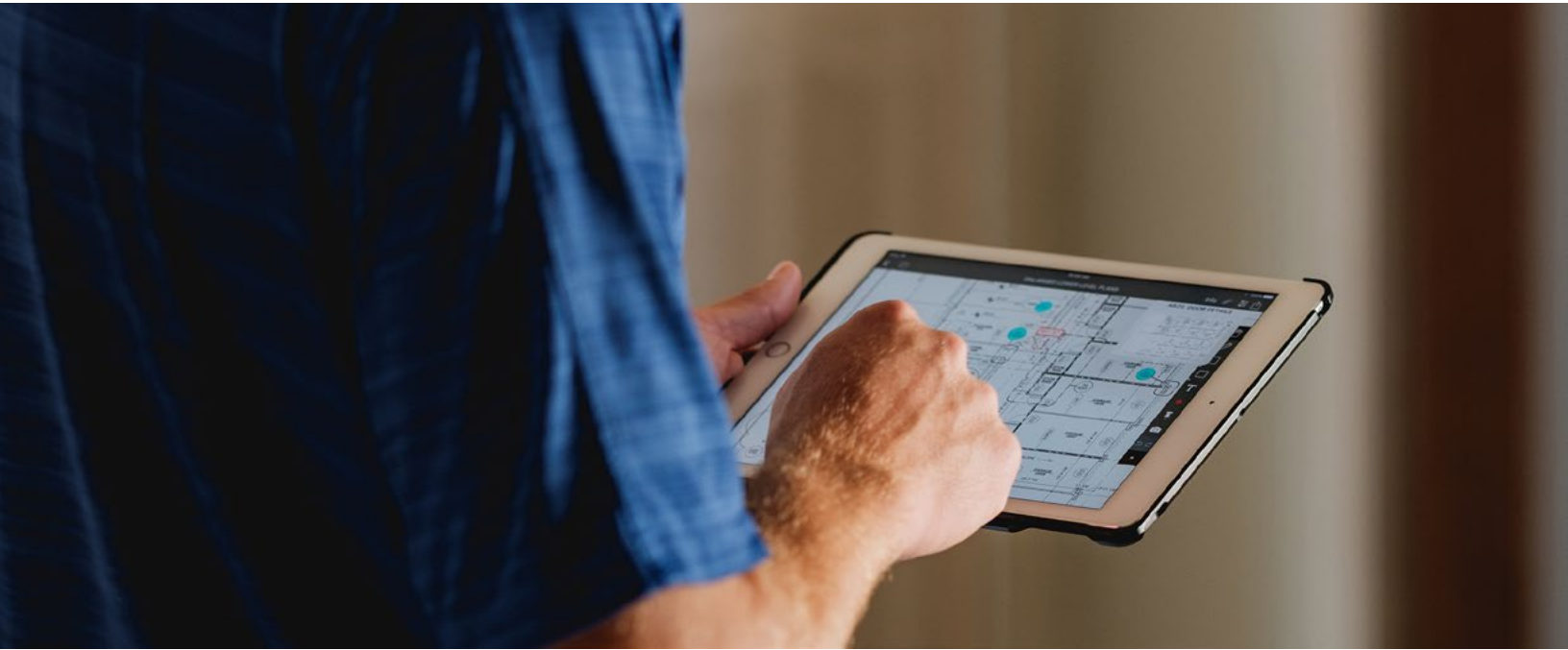
02

The Top 6 Offenders

1. Working Off of Outdated Drawings

According to the Construction Industry Institute, construction firms spend an estimated \$15 billion a year performing rework on projects due to inaccuracies in the initial drawings, failure to distribute new versions of drawings to subcontractors, and discrepancies between builders and architects.

These documents are long, complex, and extremely detailed, resulting in expensive printing costs. As project managers and general contractors redline change orders and post RFIs to the drawings, new copies are printed and redistributed again to team members. If copies aren't delivered in time or if someone involved is left out, it can lead to serious delays in construction, rework, and significant cost overruns.



However with a cloud-based platform, automatic version tracking provides all collaborators with the most recent drawing set to ensure project teams never work off of outdated information. Design and build teams can not only review digital drawings on any device but also mark up drawings, link related documentation (RFIs, submittals, punch list items, progress photos, sketches, and inspections), and share all changes and updates in real-time with collaborators. Better yet, the entire change history is available, allowing users to see exactly what has changed across versions and who made those changes.

As an added bonus, optical character recognition technology recognizes the drawing numbers and titles, making data entry a breeze. It also detects and hyperlinks all detail callouts to the associated sheets, making it easy to flip back and forth.

2. Communication Failures

When the jobsite feels chaotic and disorganized, poor communication is usually to blame. Whether it's between field staff, contractors, designers, or engineers, limited communication can lead to costly project delays and devastating construction defects. Email chains, multiple systems, and slow manual processes all prevent collaborators from sharing and accessing up-to-date information. Instead, they're left with scattered information and siloed data.

Conversely, having real-time access to project information will give teams the visibility they need to make critical, time-sensitive decisions. With construction management software, collaborators can make comments and revisions at any moment, allowing them to diagnose and resolve issues as early as possible. Not only does this boost collaboration and efficiency, it also helps prevent mistakes from snowballing, eventually costing more time and money.

With construction management software, collaborators can make comments and revisions at any moment, allowing them to diagnose and resolve issues as early as possible.

3. Undefined Scope of Work

Despite the inevitable RFIs, change orders, and general frustration around rework, there are ways to help mitigate that risk and ensure the project scope is clear from the beginning.



General contractors who perform a constructability review on the drawings and specs during the design phase can catch a lot of these issues before the job goes to bid to subcontractors. Subcontractors can also perform a constructability review on their scope, helping them identify issues while it's early and easier to change the drawings.


Additionally, you may want to consider a thorough set of instructions to bidders (ITBs). There will always be tricky aspects of the project that could be included in multiple contractors' scopes; if the ITBs don't clarify that, then everyone will exclude those items and the general contractor will be left holding the bag (or trying to pass the bag back to the owner). A thorough set of ITBs should tell everyone what to expect and greatly reduce the chance of surprises down the road.

Growing your business relies on repeat business, and that comes from being a good partner that performs well and helps the job run smoothly. Raising awareness of scope gaps as early as possible is one of the best ways to be that partner.

4. Change Orders

When a change order comes up that alters work, it means that those affected need to stop what they're doing and come up with a new plan. The longer a potential change order stays "potential," the more risk you encounter. A change order might cost \$10,000 today, but in two weeks, it may turn into a \$15,000 issue with greater schedule impact.

If you're managing change orders with spreadsheets, email, and other manual processes, collaborators lack the visibility they need to resolve those issues quickly and efficiently. Plus, those systems don't provide a framework for accountability.



By using a collaborative all-in-one platform, every change order is tracked and logs are automatically updated with the ball in court and current status.

Mobile device functionality allows users to update and access information from the field and the office. What's more, it offers automatic reminders to ensure tasks are completed, without having to chase anyone down for answers. In doing so, teams gain the visibility, efficiency, and accountability they need for faster turnarounds, helping you meet your schedule and budget.



5. Unskilled Craftsmen

The Associated General Contractors of America (AGC) reports 83% of contractors can't find qualified skilled labor to meet demand. Understaffed construction firms may be forced to propose slower schedules or hire under-qualified workers—increasing the risk of poor quality projects, injury, and rework.

Recruiting the best skilled workers can be a time-consuming and complicated task but it can save you a pretty penny in fees associated with rework, safety, quality control, and delays.

Use the following tips to help recruit and retain top talent:

INVEST IN TRAINING

Take advantage of the wisdom your veteran workers have. They're some of your most loyal and experienced employees, so encourage mentoring new employees. Pair older and younger workers in teams to provide learning opportunities and help assimilate new workers. Not only will your younger hires learn about the company culture, history, and principles, your veteran workers will be able to learn from them as well.

BUILD A MENTORING CULTURE

Offer to be a mentor to students at vocational schools or high schools. Not every student is interested in or suited for a traditional four-year college program, so help guide them into construction apprenticeships and training programs to prepare them for working in the field. Don't hesitate to woo them with attractive salary numbers and other positives of construction, such as the creative and technological aspects, the job security that comes with specialization, and leadership opportunities.



THINK OUTSIDE THE JOB

Be aggressive in your recruitment of skilled workers in other industries. Take oilfield production, for example: when highly qualified workers are laid off, many have the same training required of workers in construction, so you know you'll be getting someone with similar experience. Consider increasing wages or improving benefits, both of which will help you hire and retain employees.

IMPLEMENT CONSTRUCTION SOFTWARE

The future of construction will be defined by technological innovation, and that may be the salvation of the sector. Millennials are said to be “digital natives,” having been raised around technology, and their complete comfort and familiarity with it makes them the perfect cohort to take the industry to the next level. The younger workers coming into the industry are often well-versed in mobile technology and can help your business innovate for future growth.

Millennials are said to be “digital natives,” having been raised around technology, and their complete comfort and familiarity with it makes them the perfect cohort to take the industry to the next level.

6. Ineffective (or Nonexistent) Quality Controls

A quality control (QC) program can help drive the success of construction projects by ensuring contract and safety requirements are met and that work is done right the first time. For general contractors tasked with QC responsibilities, this means making sure the project is built to plan, specifications, industry and safety standards, and requirements set by the architect, engineer, and owner.

Typically, part of a Quality Assurance and Quality Control (QA/QC) plan relies heavily on inspections during all phases of construction. When superintendents, project managers, and/or dedicated QC staff follow a rigorous field inspection schedule and daily safety checks, they can identify problems and correct any oversights before they lead to more expensive—or dangerous—issues.

Whereas a QA plan is part of early-stage project planning to lay the groundwork and formulate processes, QC activities occur throughout the project to determine whether the results of completed work meet criteria outlined in the QA plan.

In addition to inspections of all types, QC includes conducting audits—based on metrics that have been established early in the project's front-end planning—to aggressively benchmark quality throughout construction. Consider maintaining an ongoing list of corrective items that must be accomplished before the subcontractor is paid or leaves the job.



03

Protect Yourself from Rework

Instead of dealing with the time-consuming and expensive process of rework, your best bet is to simply eliminate the need to redo a job in the first place. Whether its due to lack of communication, outdated information, or manually organizing change orders, you can mitigate the risk of rework by automating these processes with the right construction management solution.

In doing so, you will not only boost communication, you'll also find it leads to greater accuracy, efficiency, and productivity. That means that instead of dealing with a change order that doesn't make the rounds to everyone or a manager failing to understand the specifics of a project, you'll know exactly how a project is progressing at any moment and can resolve issues in real time. That means faster resolutions, higher quality projects, and ultimately, higher profit margins.

Produced by
PROCORE TECHNOLOGIES,

Procore is a leading provider of cloud-based applications for construction. Procore connects people, applications, and devices through a unified platform to help construction professionals manage risk and build quality projects—safely, on time, and within budget. Procore has a diversified business model with products for Project Management, Construction Financials, Quality & Safety, and Field Productivity. Headquartered in Carpinteria, California, with offices around the globe, Procore is used to manage billions of dollars in annual construction volume.

If you have any questions,
give us a call at 866 477 6267

Or email us:
sales@procore.com

TALK WITH AN EXPERT



Visit The Jobsite >
Procore's Hub for
Original Content



Watch Procore TV >
Procore's Official
YouTube Channel



More Resources >
Free eBooks &
Downloads