



VELA SYSTEMS®

**Turner**  
Building the Future

## Managing QA/QC from an Enterprise Perspective – Verifying Conformance and Driving Performance



**10 Rittenhouse Square, Philadelphia, PA**  
Project Type: Condominium  
35 stories, 561,255 sf



**Hampton Roads Naval Housing, Norfolk, VA**  
Project Type: Military Housing Unit  
755 units, 900,000 sf

### Executive Perspective

#### Technology Improves Enterprise-level Quality Assurance and Risk Management

Executing effective enterprise Quality Assurance and Quality Control (QA/QC) requires a consistent approach to jobsite observations and a structured method of analyzing and reporting all of the gathered information. Often, construction companies lack the ability to gather, analyze and share critical quality information in a standard way. At the enterprise level, it is difficult for executives to track QA/QC compliance data for projects and subcontractors in a consolidated, timely fashion. Without visibility into this critical aspect of quality, project risk increases. Ed McNeill, Senior Vice President at Turner Construction Company, decided to find a better way.

“With tools such as Vela Systems, we’re able to make correlations and assessments of quality assurance with certainty because we’re getting factual, real-time data from the projects,” said McNeill. “We’re documenting conformance to create a more balanced and positive methodology, as opposed to the industry approach of only documenting the negative on punchlists.” While this case study focuses on two of the Turner Construction Company projects using Vela Systems, 10 Rittenhouse Square luxury residences and the Hampton Roads Naval Housing Project, Turner has used these systems on a broader range of building types including commercial, aviation, healthcare and others.

**“... safety at its highest level saves lives while quality at its highest level can save profitability.”**

Ed McNeill, Senior Vice President,  
Turner Construction Company

#### Field Software Enables Comprehensive Quality Measurement

Vela Systems Checklists (QA/QC) software provides the tools and content needed to create an enterprise quality system. In the field and in the job trailer, Vela Systems replaces paper-based quality checklist processes with easy-to-configure electronic checklists and automated reporting. Quality assurance managers, superintendents, and other field personnel simply mark up the appropriate responses using a pen on a Tablet PC, including photos, sketches and other relevant information. At the headquarter level, management can track quality compliance data for one or multiple projects in executive dashboards. Turner leveraged its headquarter-level library of standards checklists and supplemented it with project-specific quality checklists.

“For quality assurance, there needs to be a raised acknowledgement level of conformance and increased number of staff documenting that conformance,” said McNeill. “From this, instances of nonconformance rise to the surface and those habits can be corrected quickly, improving the QA/QC process right then as well as over time. If a particular subcontractor is not being supportive, those details can be evaluated when considering them for future work. This is just like we do regarding safety. Meaning, safety and quality need to be evaluated by carefully analyzing performance criteria, and then judging subcontractor performance based on that data to assess whether or not to use them on future endeavors. Both safety and quality involve discipline, both involve conformance to specifications. Those that ‘get it’ or take it seriously make a big difference to project success. In fact, safety at its highest level saves lives while quality at its highest level can save profitability.”

### Quality Management Is Important Throughout The Project

Turner Construction Company has discovered the tight correlation between QA/QC and punchlists. What they’ve seen over the years is that without a proven and consistent quality assurance process, punchlist can become considerable and time consuming.

“If there’s not stellar quality assurance prior to the punchlist process,” said McNeill, “projects wind up with way too much activity at the end when there should really be far, far fewer items. For example, take the 10 Rittenhouse and Naval station projects. With the great quality program we have in place, subcontractors are conditioned to do it right the first time, which is driving a very manageable, painless process of producing a quality level that is acceptable to our clients. The incidence of what I call the “insanity of voluminous punchlists” can happen when you have a high-rise project



Managing quality in the field with Vela Systems Checklists (QA/QC) software



Executives use Vela Reports Dashboards to gain visibility into quality program effectiveness and behavior.

or sprawling complex like these where punchlist can easily become repetitious and unproductive. With Vela Systems, we can define what quality means early on and establish this benchmark with subcontractors who can then get in front of the process and take care of repetitive issues before they waste time and money.”

### Field Perspective

#### Project Teams Benefit from Field Software

High performing construction teams that have quality programs in place that are being adhered to, avoid risk by documenting conformance, and have the capability to evaluate subcontractors for future projects based on measurable performance criteria, not gut instinct. Having the right technology to be able to confidently administer these duties is an enormous benefit to management and largely why Turner Construction Company is using Vela Systems field software. In addition to these company-level benefits, project personnel are achieving time savings, improving quality control processes, and increased collaboration and productivity.

#### Time Savings

“During the old process, an architect, for example, could do a walk through on Monday and by Wednesday or Thursday we’d get the list,” said Turner Assistant Superintendent Monika Serrano. “It would take days to get the documents. Then, depending on what format it was in, it could take another day or two to get it into the appropriate format. With Vela Systems Issues & Punchlists software in place on the 10 Rittenhouse project, the information now goes out the same day.”

Vela Systems software accelerates the field administration process by replacing traditional field notebooks, paper plans



**Turner personnel using Vela Systems on 10 Rittenhouse Square**

and clipboards with easy-to-use software and Tablet PCs. Field personnel simply mark up plans and documents using a digital pen on a Tablet PC. Digital photos can be added to specific observations immediately in the field and any written text is automatically turned into typed text by the Tablet PC. Then, the detail is aggregated automatically across projects and the company into executive reports.

**“With Vela Systems Issues & Punchlists software, the information now goes out the same day.”**

Monika Serrano, Assistant Superintendent,  
Turner Construction Company

**Better Quality Assurance**

“We used Checklists QA/QC during metal framing, rough-in, drywall and the beginning of finishes,” said Assistant Superintendent Ryan Turner referring to the 10 Rittenhouse project. “The software was beneficial not only to our project but to our company because there was a consistent focus on quality. Even if some people looked at doing things differently as being a chore, there was a constant and consistent reminder to look at the work being put in place and to make sure it was up to par with what the owner had required.”

“Having a solid quality program in place at the onset really helps when it comes to the punchlist,” continued Turner.

“Punch starts on day one. That’s how we handle it. Vela Systems helps us bring our quality program to the attention of the entire team early on, which is a tremendous benefit because it allows us to keep our eyes on quality throughout the project to completion and significantly minimize punch along the way.”

**Improved Collaboration and Transparency Yields Higher Productivity**

Vela Systems allows you to inspect the quality and status of the work throughout all job phases, including creating, tasking and reporting on outstanding work automatically by responsible party and subcontractors.

According to Bob Wunderlich, Turner Quality Control Manager on the Hampton Roads Naval Housing project “We now have the ability to check subcontractor QC work in near real time. While we always expect them to do their work to standard, we can now stay ahead of the process, efficiently closing completed items and focusing on unresolved ones. It greatly speeds up the project. As a matter of fact, we pick up a day of time on the schedule every week or so. You continue to pick up a day here and there and pretty soon it adds up.”

Previously, Turner Construction Company had paper checklists for concrete, steel, welding, stairs, and for most other activities needing to be performed. “Now we are creating the checklists in the software and then logging items in the Tablet PC,” Wunderlich continued. “The capabilities of the software are amazing and functions well for any inspection I need to perform. I don’t know how I got along without it. We’re committed and we love it. What’s more, we can now document conformance as a regular practice, thanks to Vela Systems. Before, you’d only document non-conformance so every report was about what was wrong. Now, when you have a checklist and you check off every item as positive in nine out of ten items, but you have one deficiency, you’re batting 90% and it keeps things in the

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Bob Wunderlich, Quality Control Manager,  
Turner Construction Company

right perspective. It's a big deal for us and I think that any company, large or small, would greatly benefit from having the documentation functionality that Vela Systems provides."

## Summary of Benefits & Results

From the field and throughout the enterprise, Vela Systems software is helping Turner Construction Company achieve the following results:

- **Immediately gather QA/QC information** from projects to proactively identify trends and reduce both jobsite and corporate risks.
- Understand both subcontractor and self-performed **quality performance** to better manage post-project evaluations and subcontractor selection during pre-qualifying, bidding and procurement.
- **Avoid claims** by providing a secure audit trail of the progress of quality and construction.
- Establish **documentation consistency** across projects.
- **Save weeks of project time** normally spent on transcription and communication of field information.



**Vela Reports give operations managers visibility into project quality trends.**

### About Vela Systems

Vela Systems construction field software automates the execution and oversight of field activities on construction and capital projects. Instead of carrying a field notebook and paper plans or specs, jobsite users work with Vela Systems software on mobile computers to electronically access documents and to complete field reports, QA/QC inspections, worklists, punchlists, update the BIM and many other critical field activities. Construction happens in the field - Automate it.™  
[www.velasystems.com](http://www.velasystems.com)

### About Turner Construction Company

Turner Construction Company provides building services to institutions that recognize the value of a partner who works diligently and creatively to find the best possible solution for each particular project. With construction volume in excess of \$8 billion in 2009, Turner ranks first or second in major segments of the construction industry. Turner maintains a nationwide network of offices and a staff of more than 5,100 employees, performing work on over 1,200 projects each year. Turner's nationwide presence offers clients the accessibility and support of a local firm with the strength, stability and resources of a national corporation.  
[www.turnerconstruction.com](http://www.turnerconstruction.com)