James G. Davis Construction Corporation (DAVIS) Automates Secure Jobsite Access Control and Zone Tracking With Trimble's Automated CrewSight™ Solution

Washington, D.C. general contractor reduces inefficiencies and effectively manages security, safety and compliance at job sites, improving daily workflows and simplifying productivity

Overview

Customer Profile: Founded in 1966, James G. Davis Construction Corporation (DAVIS) is a Rockville, MD-headquartered general contractor serving the Washington, D.C. region, building nearly $1 billion worth of construction each year, including some of the area's most complex and notable projects. With more than 400 employees, the full-service, firm provides general contracting, construction management, preconstruction and design-build services across 10 diverse market sectors.

Business Challenge: Natalie Miller, senior project manager and integrated project engineer, DAVIS, needed a workforce management and enhanced security program that her general contracting firm could bring to the table as part of their involvement with The National Geographic Society's multimillion-dollar, multi-phase headquarters renovation in Washington, D.C. The firm's goal was to uncover an innovative, automated approach in which technology could be leveraged to enhance the multifaceted project's job site security and safety, and improve compliance and productivity. Miller and her team began talking with Trimble about the benefits of implementing its automated CrewSight™ solution as a way of streamlining DAVIS' support on the extensive renovation project.

Solution: CrewSight™– Trimble's Construction Jobsite Access Control System

Benefits:

- With Crewsight™, DAVIS has implemented an access control system within its National Geographic Society headquarter renovation project, enforcing secure job site access to only those workers meeting specific entry criteria
- Using a unified cloud-based portal and zone tracking capabilities, DAVIS now has greater visibility into job site entries and exits, as well as when they occur and for how long
- DAVIS has experienced enhanced accountability and reporting capabilities with Trimble's workforce management solution and can now more easily track accurate labor time and attendance data, eliminating the need for paper records and spreadsheets
- The firm can better maintain organized employee data to facilitate compliance-related issues, monitor and track worker license expirations and certifications
- DAVIS can now digitally document workers' contact information and send safety alerts should an incident or emergency arise

The Challenge: Security, Safety and Peace of Mind

Founded in 1966, DAVIS is a Rockville, MD-headquartered general contractor serving the Washington, D.C. region. The firm builds nearly $1 billion worth of construction each year, including some of the area's most complex and notable projects. With over 400 employees, DAVIS provides general contracting, construction management, preconstruction and design-build services across 10 diverse market sectors.

Currently involved in an extensive construction services project for The National Geographic Society's multimillion-dollar, multi-phase headquarter complex renovation in Washington, D.C., DAVIS required a workforce management and security solution to help with job site access control, compliance and safety issues. The Society's 625,000-square-foot complex houses approximately 1,300 staff members, is comprised of four interconnected buildings ranging from 20 to 100 years of age and features museums open to the public, as well as auditorium space.

According to Natalie Miller, senior project manager and integrated project engineer, DAVIS, managing work site access control and zone tracking effectively for the 14-phase construction job was a key consideration, primarily due to the complexity of the project's layout, as well as the constant flow of daily employee and visitor foot traffic. "From a safety point of view, one significant security challenge has been to ensure that people enter and exit the job site in a fashion as not to impede the day-to-day use of their building," Miller said.

Jon Ellen, director, interiors, pre-construction and estimating departments at DAVIS, explained that because the massive construction project is a multiple-phase, "occupied renovation," it's restrictive on what trades can be working at particular times.

"We needed technology that could help integrate our construction team with the ongoing work within the busy complex," Ellen said. "As we researched [technology] options, we realized we needed an innovative, robust solution that could help us effectively know where our workers were, what they were doing, what phase of the project they were working on, and all with as little hands-on use as possible."

Another challenge the firm wanted to address was to have a better understanding of what time crews were arriving on site and what time they were leaving each day. The firm needed technology that could improve communication of personnel access and attendance data flow between the busy work site and the project's supervisors, whether they were in the field or back in the office. "Every person that enters The National Geographic Society's buildings has to go through security and receive a badge," Miller said. "We wanted a solution that would eliminate the need for a security guard checking-in hundreds of workers each day."

After speaking with the team at Trimble about options to create workforce management efficiencies, the DAVIS team determined there would be numerous advantages to leveraging CrewSight™ for increased control and enhanced site security. The firm was also interested in utilizing Trimble's automated technology to remotely track worker time and attendance, safety documentation and compliance-related issues.

Automation Changes the Game For Jobsite Security and Safety

By implementing Trimble's CrewSight™, DAVIS has increased job site efficiency and improved overall productivity on the comprehensive project. Trimble's scalable, flexible workforce management system automates the firm's management of workers entering or leaving the active work site to pinpoint discrepancies and identify opportunities to optimize work processes.

With CrewSight™, DAVIS captures data from sensors using beacons – or innovative, sensor-based stickers – that the firm secures on each worker's hard hat (upon completion of training)

to easily monitor worksite access, reduce safety issues and improve productivity. According to Miller, an estimated 800 workers have been issued sensors to date.

As a result, DAVIS maintains tighter access of its job sites, ensuring that only authorized workers who are trained and verified can enter. DAVIS also now can easily verify that the appropriate number of employees is on site for each phase of the project.

According to Miller, when workers move across the job sites, there are sensors located on each floor of the various buildings that communicate back to the technology's gateway located in DAVIS' central office. The gateway automatically transfers the data – in real-time – to the CrewSight™ website and related mobile applications so DAVIS team members can instantly access the critical information anytime via laptop, tablet or smartphone.

"Trimble's workforce management solution gives us the opportunity – that no matter what superintendent or what project management staff is on site – to always know how many workers are on site for each respective company to ensure we are staffing a job appropriately, getting the schedule to move forward and hitting each end date," Miller said.

DAVIS also utilizes CrewSight™ to track personnel who have entered the work site so, in the case of an emergency, power outage, weather event or other safety issues, all crews can be accounted for when necessary. Site supervisors, she added, receive alerts on their smartphones or tablets in real-time, which is crucial if there is a potentially hazardous situation.

Miller added that DAVIS now can effectively monitor worker skills, qualifications and clearances to reduce compliance and safety concerns. The technology's access-control functionality prevents unauthorized workers from being on the job site, or in certain areas, without the proper credentials.

Miller and Ellen agreed that CrewSight™ has helped DAVIS deliver greater insight into the Society's job site operations, enabling both management and workers to operate more efficiently and effectively. Knowing "who and when workers are on site allows DAVIS to more easily maintain security and safety in the buildings, provide proof of compliance, and deliver confidence to management that the right number of workers is on site for each phase of the project.

"From a personal point of view, I love adopting new technology – it makes my life easier, and it makes my project team members' lives easier," Miller said. "I would recommend CrewSight™ to any company looking for automated software to help streamline productivity … especially if it's for complex jobs that have multiple phases that require significant site security needs."