

ENR Contractor Business Quarterly

INSIGHT AND ANALYSIS FOR STRATEGIC LEADERSHIP

May 2015



STRATEGY

CONCIERGE CONTRACTING

Shawmut Design and Construction
President Lee Hiscoe builds a
customized service model for clients

PHOTO BY JAMES LEVENSE

EMPLOYEE SATISFACTION

New survey says construction workers are among the happiest (p. CBQ9)

SMART REPORTING

Safety experts offer tips on how to keep recordables low (p. CBQ13)

PICTURE PERFECT

Jobsite photography becoming a skilled trade in its own right (p. CBQ16)

WORTH RETWEETING

How peer-to-peer websites help to manage equipment sales (p. CBQ19)

OWNERS TOUT VALUE OF BIM

Industry research reveals owner trends in virtual building (p. CBQ21)

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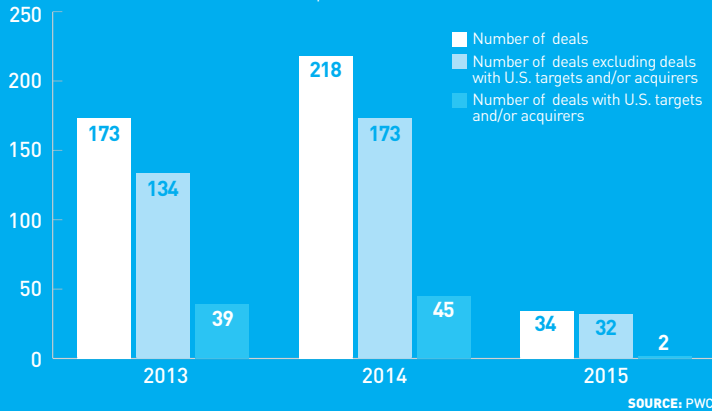
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GLOBAL MERGERS AND ACQUISITIONS- CATCHING THEIR BREATH AFTER BUSY 2014

Number of engineering and construction sector transactions valued at \$50 million or more



MERGERS AND ACQUISITIONS

Taking a Pause?

2014 WAS DIZZYING in the number and size of industry mergers and acquisitions “as firms made aggressive moves” to acquire capabilities and market share, says management consultant FMI. Global M&A activity was “near record” last year, adds consultant PwC, but shows signs of decline in 2015’s first quarter. The firm says low oil prices, an improving U.S. dollar and rebounding European economies may drive “a modest expansion” of M&As, even as currency pricing and other factors “may obscure” deal growth. FMI sees oil prices as a risk factor, creating a “wait and see” approach, it says in a May 6 report. Clouded public-project funding outcomes and sector mismatches in available buyers and sellers also could impact activity, says FMI.

MOVERS AND SHAKERS

STERLING CONSTRUCTION has named as its permanent CEO **Paul J. Varello**, who had been firm chairman. Formerly chairman of oil-and-gas-sector firm Commonwealth Engineering & Construction, he replaces **Peter MacKenna**, who left Sterling after two years. He is a former Skanska executive. Vanir Construction Management Inc. has named **Guy Mehula** as president. He was a regional president at Parsons Corp. and replaces **John Kuprenas**, who left the company. The ironworkers’ international union board has elected General Secretary **Eric Dean** to fill out the term of President **Walter W. Wise**, who will retire July 1. Dean will serve in the role until Dec. 31, 2016.

Jay McQuillen Jr. has joined

Garney Construction as president of its new federal business unit and to expand its western U.S. operations. He was a vice president of Granite Construction Co. **Dale Swanberg** has joined Granite as vice president and deputy group manager for large projects. He had been COO of Flatiron Construction since 2012. Sundt Construction Inc. has hired **Thomas S. Case** as senior vice president of its civil group. He had been a Granite senior vice president and is now chairman of the Associated General Contractors’ highway and transportation division.

IN MEMORIAM

MARTIN R. GRUNLEY, 98, founder of Grunley Construction Co.,

Rockville, Md., which specialized in renovations of landmark federal buildings, died on April 17 in Bethesda, Md. **James C. “Jim” Smith**, 74, who led the construction program at Texas A&M University and was a staff member of the U.S. Senate Armed Services Committee, died on April 20 in Houston. The cause of death was cancer, the school says.

LEGAL

FIRM FACES CRIMINAL CHARGES IN FATAL CRASH

NASHVILLE READY MIX INC. and its president, Mark S. Meadows, face a 24-count indictment charging vehicular homicide and reckless homicide after one of the ready-mix firm’s trucks suffered a brake failure, causing a fatal crash in 2013. The charges, brought by a Cheatham County, Tenn., grand jury, could generate fines of up to \$3 million against the firm, says Bob Wilson, assistant district attorney. The case is one of the few in the U.S. that led to a corporate criminal indictment for vehicular homicide, says Wilson and Hal Hardin, a company attorney.

PROJECT DELIVERY

PREFAB BARRIERS SEEN

RESPONDENTS to a National Institute for Building Science study released in April say design and construction culture and factory-to-site distance are the two biggest barriers to use of prefabrication, modularization and off-site construction. But respondents also rank schedule advantage—and speed to market—as key benefits, followed by quality and cost effectiveness. About 93% of respondents say they have used some off-site fabricated components, while 83% expect to use the approach to the same degree or greater in the next year. The survey had about 312 respondents.

—Debra K. Rubin

“IT’S A PUNCH IN THE GUT TO SEE PAY DISPARITY WITH A MAN FOR THE SAME WORK. YOU HAVE TO FIND THE FACTS, FIND YOUR VOICE, TAKE A RISK AND SET THE RIGHT PRICE FOR YOURSELF.”

—Ivette Vanas, Senior Vice President, Skanska, at the ENR Groundbreaking Women in Construction conference, May 6, in New York City

7.5%

Construction jobless rate in April, down from 9.5% a year earlier, said the U.S. Labor Dept. on May 8. The total of 652,000 unemployed workers is the lowest since 2001, but AGC economist Ken Simonson says job growth is “spotty” in sectors.

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CUSTOMIZED SERVICE MODEL APPEALS TO A-LIST CLIENTS

Boston's Shawmut has tailored its business model to provide highly personal service to its high-profile clients across the country **BY JENNIFER SEWARD**

Looking through Shawmut Design and Construction's portfolio is like browsing a list of who's who in the industry. Headquartered in Boston, the firm has strategically placed its other offices to focus on clients in New York; Las Vegas; Los Angeles; Miami; North Haven, Conn.; Providence, R.I.; and West Springfield, Mass.

The 33-year-old, \$968-million national construction management firm is known for completing complex and logistically challenging projects for retail stores such as Louis Vuitton, Polo Ralph Lauren and Christian Dior; high-end hotels; celebrity-chef restaurants; Ivy League universities; and other clients with a need for heightened detail and a touch of class.

Shawmut meets the special needs of its A-list client

tele with a customer-service model that makes it feel like a much smaller contractor. Specialized groups—called project teams—focus their expertise within one of Shawmut's eight divisions: academic, tenant interiors, cultural and historic, health care and life sciences, hotel, restaurant, retail and sports venues.

Each team is designed to operate like a \$30-million to \$60-million business. A project executive leads a Shawmut team that stays with a client from project to project on a nationwide basis and provides continuity and a single point of contact. The project executive serves as the team's account manager, determines staffing needs and directs all budgeting, scheduling and procurement.

"We're a large company and we're proud of that. We're also proud of our highly personal service—the kind you'd expect from a smaller company," says Les Hiscoe, Shawmut president and incoming CEO. Hiscoe will succeed current CEO Tom Goemaat, who is retiring July 1.

"Our project executives handle one or two customers," Hiscoe adds. "These feel like small business owners running a small segment. We want the customer to feel that personal attention of a small company but with absolute confidence in the resources of a large company."

"The result is the best of both worlds—the horsepower of a billion-dollar company with focused service from these individual smaller groups," adds Randy Shelly, Shawmut vice president. "The fact that we do work nationally appeals to many clients. They know what they're going to get from one project to the next, and it eliminates risk for them. Instead of finding a contractor in each city, they know we will deliver. It's a luxury for them to have someone they know anywhere in the country."

Strategic Locations

"When you think of luxury [builders], the first thing you think of in this industry is Shawmut," says Loretta Turk, senior director of construction for Ralph Lauren. "Shawmut has the experience, knowledge and



Shawmut is currently 30% along on construction of the single largest project in the firm's history, a \$175-million complete renovation of the 15-story InterContinental New York Barclay. The project is located on the corner of 48th Street and Lexington Avenue in midtown Manhattan. Built by the New York Central Railroad, the historic hotel's renovation requires coordination with the MTA and constant communication among the project team to upgrade all 702 guest rooms, the lobby, gin bar and restaurant, InterContinental club lounge and fitness center as well as add two ballrooms in the building's lower levels.



longevity of doing high-end retail stores. You're dealing with your [Shawmut] rep, but there's a team behind them supporting you from the back of the house."

Shawmut completed Polo Ralph Lauren's new 35,000-sq-ft flagship store in New York City last summer. Located on Fifth Avenue in the Coca-Cola Building, the high-end site includes four working fireplaces, custom carved wood, stone and river rock and the Polo Ralph Lauren restaurant.

The contractor also has built Polo Ralph Lauren stores at Caesar's Forum in Las Vegas and the Houston Galleria. Shawmut worked with Turk prior to her role at Ralph Lauren, building Lacoste stores in New York and Miami.

Shelly says Shawmut has seen significant growth in its hospitality sector—an increase from \$139 million in 2011 to a projected \$330 million for 2015—and attributes the growth in part to a population shift back to urban centers. "Large-scale urban residential developments in New York, Miami, L.A. and D.C. are spawning these high-end restaurants and retail. Our focus is really in the urban center; being where the growth is has benefitted us," Shelly says.

The builder launched an office in Los Angeles two years ago and just opened an office in Miami earlier this year to tap into opportunities in those burgeoning city centers. Shawmut completed a yearlong renovation of the 8,000-sq-ft Louis Vuitton flagship store on

Beverly Hills' Rodeo Drive in January and built new concession concepts for San Diego's Petco Park last year—including the Seaside Market, the first fully integrated market inside a baseball stadium; a rooftop bar; and a restaurant featuring an outdoor patio that can seat up to 500 people.

At this time last year, Shawmut was working in 28 different major league baseball stadiums, with a superintendent located at each project site simultaneously. "All of these luxury retail environments are difficult to work in. Sports venues never close. They're continually having concerts and events in the off-season," Shelly says. "We know how to work in this sector, where it's very important to not disrupt their business—this is the common thread."

"We consider ourselves a client-service firm; we just happen to do construction," Hiscoe says. "Everything revolves around this, including setting up regionally in an office to be right next to them to provide better service."

Shawmut's New England offices were created to focus on key academic clients, including five of the eight Ivy League schools. The offices earned \$367 million in revenue last year and are projecting 25% growth year over year, says Ron Simoneau, Shawmut vice president.

"Massachusetts has had a robust building program for its schools," Simoneau says. "And on the private side, we're seeing a lot of donors stepping up to fund projects that have been in planning for many years

CONCIERGE
CEO Les Hiscoe, Shawmut president and incoming CEO, has helped create a culture in which the \$968-million construction management firm provides highly focused services to its clients.

"We consider ourselves a client-service firm; we just happen to do construction."

— Les Hiscoe, Shawmut President and Incoming CEO



PRESERVING HISTORY

Shawmut's 115,000-sq-ft renovation of St. Mary's Hall at Boston College spanned two years and incorporated new construction and historic preservation methods using BIM expertise.

and are now moving into construction. We're putting a lot of people back to work."

Shawmut's academic unit specializes only in academics. From its estimators to the project managers and down the line, these individuals specialize in space planning, climate control, furniture, technology and issues that give their educational clients access to a high degree of expertise.

Recent New England institutional projects include Boston College's St. Mary's Hall in Chestnut Hill, Mass.; the Bruce C. Bolling Municipal Building in Roxbury, Mass.; and Brown University's Applied Mathematics Building and RISD's Eliza G. Radeke Building, both in Providence.

New Technology, Systems

Construction of Brown's 13,000-sq-ft Applied Mathematics Building, a design-build project, led to the \$80-million expansion of the School of Engineering on the math building's former site. The new engineering building is being constructed through an integrated project delivery model (IPD). The owner, architect, contractor and major subs all share in a risk pool to keep the project on time and on budget.

"This ties everyone's performance to the overall project success—it holds everyone accountable. We're seeing a trend toward these collaborative delivery methods. Owners did a lot of hard-bid projects during the recession, and now they're moving toward more collaborative approaches. IPD is about as collaborative as you can get," Simoneau says.

Shawmut is implementing lean principles in its project teams and evaluating all of its internal processes, looking for ways to be more efficient. It's also moving to cloud-based, collaborative software with completely digital files maintained in a digital library. Tradespeople can view up-to-the-minute drawings on an iPad on the jobsite, encouraging more interaction with the architects, who do not need to be on site to communicate with team members.



CONTEMPORARY UPGRADE Shawmut's renovation and expansion of the Isabella Stewart Gardner Museum in Boston included a 300-seat performance hall and a 2,000-sq-ft exhibition gallery.

"Like most firms, we did downsize during the recession. Some [reduction in staff] was healthy and some was due to the economy," Simoneau says. "What it's really done is let us look at our processes, what we do and how to be an efficient company. There was a lot of price pressure [during the downturn] to staff projects efficiently while maintaining the high level of client service we're known for."

Shawmut partnered with an outside technology consultant to map out all of its processes and looked at how to execute them with technology to become more efficient. "Most companies look at their existing processes and try to shoehorn technology into them," Simoneau adds.

Today, the contractor is back up to its prerecession numbers. Its 1,100 employees completed 500 projects last year, including its first \$100-million job and a handful in the \$70-million range, with the majority of its projects between \$2 million and \$10 million.

A 100% employee-owned firm, Shawmut's culture of ownership is created through its leadership development program, an immersion plan designed to take college graduates through a three-year program, spending a year each as a project manager, estimator and superintendent. As the newbies reach higher levels, executive management classes and programs prepare them to be the best people managers, partners and client managers, Hiscoe explains.

The contractor recently renovated its New York City office and is starting to renovate its Boston headquarters to create highly collaborative workspaces that allow people to interact and learn from each other. Shawmut is delivering the office renovation as an IPD project as well, further illustrating its investment in a collaborative approach.

"From the folks we hire to our office space, training programs and how we solve problems and partner with our customers—every step has to be thoughtful and focused on this goal," Hiscoe says. "If a client came to us and needed us to start eight projects tomorrow in different areas of country, we could do that." ■

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Construction Employees Happy With Their Jobs

New workplace survey shows construction tradespeople report the highest levels of job satisfaction among 12 industry groups **BY SCOTT DAILEY**

Her freshman year at Mississippi State had not gone as planned, and Holley Thomas needed something to do. Back home in Double Springs, Ala., she decided to try an automotive manufacturing and robotics curriculum at a local community college. The last of the required courses was welding, and she dreaded it. Still, it was a requirement, so she plunged in.

She loved it. While making a weld, she experienced the feeling of peace and concentration described by skiers, golfers and fly-casters, an opportunity to block out the world and focus exclusively on the task at hand.

Thomas was hooked. She took more welding classes and in 2009 was hired as a welder's helper by KBR, a global construction firm headquartered in Houston. Since then, she has risen through the ranks to become a piping general foreman and certified welding inspector. In March, the Associated Builders and Contractors named Thomas its craft professional of the year.

"Probably the biggest thing I like when I'm welding is that I'm not thinking about anything except the weld I'm making right then," Thomas explains. "So it's very freeing and relaxing at the same time."

Taking pleasure in one's craft is common among people who work in construction, so much so that the industry ranked first in a February survey of job satisfaction conducted by TINYpulse, an organization that analyzes employee happiness. Far ahead of white-collar workers, construction craft professionals led the way among 12 industries surveyed. Consumer products and services employees and those working in technology and software were ranked second and third, respectively; manufacturing came in last, just after the government and nonprofit sectors. TINYpulse says construction workers expressed satisfaction with colleagues and the job and enjoyed completing projects.

The findings come as no surprise to Greg Sizemore, a 30-year industry veteran and now ABC's vice president



When I'm welding ... I'm not thinking about anything except the weld I'm making right then."

— Holley Thomas, KBR

of environment, health, safety and workforce development. "Construction workers take care of one another," Sizemore says. "Craft professionals that have good helpers working with them are more than willing to invest their time and energy in helpers as they come up through the industry. Craft professionals remember the career path they traveled to get to where they are, so they are more than willing to help the next generation along that same path."

Economic forces also play a role, says Brian Turmail, director of communications for the Associated General Contractors of America. "I think there are a couple of factors at play," he says. "From a labor point of view, it's a worker's market. We see a lot of firms increasing benefits and pay, making employment more attractive for their staff. More broadly, there's a satisfaction to being involved in a team environment and taking on different challenges every day. The satisfaction of having built something that's going to last for decades to come."

That rings true for Thomas. She says, "The greatest



NEW WHEELS Stuart Bradie, KBR president and CEO, congratulates Holley Thomas on winning a Ram pickup after being named ABC's craft professional of the year.



TRADING UP Mike Bradley of Iowa Insulation installs a protective aluminum jacket over 2-in.-thick Styrofoam insulation on an outdoor duct at a feed mill in Hedrick, Iowa.



TOOL TIME James Balius Jr. of Eustis, Fla., competes in the fire sprinkler portion of ABC's national craft championships on March 5.

“One day, somebody’s life is going to be on that receptacle, that emergency power that you’re installing.”

— Aaron Velasquez, Sunwest Electric Inc.

thing is to go back to the parking lot each day and say, ‘There’s something I helped to build. My weld is in that place, and my weld is the only thing that’s holding that up.’ When I first get to the site, it’s just dirt. Two years later, when I leave, there’s this huge plant.”

Aaron Velasquez, an electrician with Anaheim, Calif.-based Sunwest Electric Inc., says, “Taking pride in your work, and being a builder of a city—it’s a great experience.” For the past two years, Velasquez has been working on a large addition to San Antonio Regional Hospital in Upland, Calif. The future import of his work fuels him with a strong sense of urgency.

“One day, somebody’s life is going to be on that receptacle, that emergency power that you’re installing,” he says. “Or maybe a machine is going to be breathing for somebody who just got out of a car accident. Everything has to function correctly every single time. The install has to be perfect.”

Upward Mobility

That kind of commitment pays off in job advancement in an industry where people can build their skills, master a craft and possibly own their own company.

“In this business, hard work really does show through right away,” says Mike Bradley, a journeyman and mechanical insulation installer with Iowa Insulation in Nevada, Iowa. He also teaches the company’s apprentices. “If you work hard right away and do your job right the first time, especially in construction, people will take notice instantly. And once people take notice, that first impression ... you can only go forward from there.”

Drew Golder, a journeyman electrician with Tri-M Group, an electrical contractor in Kennett Square, Pa., emphasizes training and career growth as the keys to employee satisfaction. “I know where I started, about five years ago. I didn’t know much of anything about electrical, and looking back, how far I’ve come. I still have a ton to learn—and, year by year, I can see that ... I’ve come a long way. And that feels satisfying to know where you were and where you’re going,” he says.

Golder also stresses the importance of compensation and investment in employees. “The reason why we all work is because we need to pay bills ... I think taking care of [employees] will kind of push them to learn

more, stick around, want to be there. They’ll feel appreciated. There’s a lot of trades where you talk to the employees and the employer doesn’t give them raises, tries to keep their pay scale as low as possible,” Golder says. “And then I’ve also seen companies where they pay their employees, they pay for training, and they show the employees respect and appreciation. And you can definitely tell a major difference in the type of work they do and their appearance and just all-around. I think it looks good for the company, and also the employees are happy that they’re being taken care of.”

Darrell Bunting, president of Iowa Insulation, believes in good pay, training and advancement and recently created an employee stock ownership plan (ESOP) for his people.

“The idea [of the ESOP] is to get more of our employees’ involvement in what they do, to take more of an interest,” Bunting says. “It also helps ... to get their opinions, to get their ideas ... just more engagement, and getting more of their ideas out there is what gets them really committed and involved.”

Bunting is hardly alone in his views. Pat Lynch, president of consulting firm Business Alignment Strategies Inc., says employers improve productivity when they enable staff members to voice their opinions about the organization. It is also important for companies to focus on job growth for promising employees. The lack of career advancement was among the three biggest sources of employee dissatisfaction in the TINYpulse survey. The other two were unsupportive managers and a lack of tools to get the job done.

“If you want to build a winning team,” says Bunting, “you really need good people, and you keep good people by treating them well and by developing career paths for them and by having your finger on the pulse of where they want to be and how fast they want to move.”

For contractors, retaining good employees will become even more challenging over the next five to 10 years. U.S. Labor Dept. statistics project a 24.3% growth in the job market for construction laborers between 2012 and 2022. That’s good news for people entering the industry, but it also means company owners will need to work harder than ever to keep their employees safe and satisfied. ■

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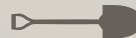
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Injury Management Can Help Lower Recordables

Experts offer common sense ways to improve safety programs and lower recordable incident rates **BY JIM PARSONS**

What's the best way to achieve and maintain a low total recordable incident rate (TRIR)? The obvious answer is by preventing work-related injuries and illnesses from happening at all. But despite a contractor's best efforts to instill a heightened awareness among its workers, incidents still occur.

The effect that an incident can have on a contractor's TRIR can loom large, particularly in a competitive environment where safety program effectiveness can make or break a firm's candidacy for new project opportunities. The advantages a contractor can offer—price, quality, availability—can be undercut by a TRIR that owners or construction managers deem too high for comfort.

Some contractors have attempted to artificially lower their TRIRs by unethical means—deliberately misclassifying incidents or simply not recording them at all.

“Because recordables are specifically defined by law, a contractor is obligated to report them,” says Teresa Magnus, principal of the Birmingham, Ala.-based construction advisory firm Magnus & Co. A far better—and legal—approach, she says, is injury management, a strategy that avoids turning incidents into recordables wherever possible without compromising care for the affected workers. Magnus says applying a sound injury management approach to recordables is not unlike paying taxes. “Avoidance is permissible as long as it's done legally,” she says. “Evasion is not.”

For example, a jobsite injury is not considered “recordable” if it can be treated with first aid. Cleaning a skin wound like a minor cut or abrasion and covering it with a bandage may be enough to allow the employee to safely return to work. Similarly, heat or cold therapy and massage can prevent a muscle injury from worsening.

In such cases, the contractor has no regulatory obli-



gation to add the incident to its recordables.

As with other elements of a safety program, preparation is essential to injury management. That includes identifying where injured workers should be taken for treatment. Because most hospital emergency rooms don't treat injuries with first aid, Magnus recommends establishing relationships with physicians and 24-hour industrial hygiene (IH) clinics well versed in OSHA rules and definitions.

“An emergency room will almost always treat certain eye injuries with tweezers, making them recordable,” Magnus says. “An informed doctor or clinic will understand that flushing the eye may be just as effective.”

Magnus adds that IH clinics and physicians are usually easily found in industrial areas, though referrals from owners and other contractors may be helpful. In areas with less construction activity, the firm's safety director may need to contact the facilities directly and interview their physicians.

Another potentially cost-effective injury management tactic, particularly at more remote jobsites, is for the contractor to establish its own nursing station

DAILY MANTRA
JE Dunn Construction requires regular onsite safety briefings. The company says safety is ingrained in its culture.

LESSONS LEARNED ABOUT LOWERING RECORDABLES

Understand what injuries may be treatable using onsite first aid versus emergency room care.

Establish relationships with clinics and physicians that are well-versed in OSHA incident-reporting rules.

Ensure that all employees understand safety incident-reporting protocols and procedures.

Be willing to experiment with potential safety improvement practices, including those that may have only indirect benefits.

Gain worker buy-in to the company safety culture through ongoing management commitment and support.

“You simply can’t fake a safety culture.”

— Jim Smith, CEO, Elford Inc.

staffed with people trained in first aid.

“It’s also a good idea to hire site safety supervisors who are former military medics,” Magnus adds. “They’re experienced in treating injuries with first aid in the field and getting the employee back to work. And it’s a good opportunity to hire veterans as well.”

Constant Contact

As with every other aspect of safety, good communication is critical to injury management. Magnus says every person in the company needs to be trained on the appropriate chain of command for safety incidents.

“Every incident has to be reported to the project supervisors and company safety leadership whether or not it turns out to be recordable,” she says.

Similarly, the contractor’s safety director must retain control of the treatment by staying in touch with the employee to ensure that injury management treatment has been successful.

“Once the employee leaves the site, the safety professional should check in with the individual to ensure that his or her condition is improving,” Magnus says. “If the condition worsens, and the employee wants to seek additional care, the safety professional must remain involved to manage the care.”

In addition, the employee should have a good contact number for the safety professional, who should be on call 24 hours a day.

“If the employee seeks treatment after hours, first aid should still be the first course of action,” Magnus says. “Should more extensive care be required, the incident could eventually become recordable.”

Magnus also notes that any subcontractor can make injury management part of its safety program, even on projects where owner- or contractor-controlled insurance is involved.

“The subcontractor may feel it has no authority to implement injury management because someone else is paying for insurance, just as they do for workers’

compensation,” she says. “OSHA regulations clearly state that the employer is responsible for its workers’ safety. That means the subcontractor has a legal obligation and authority to control treatment of its employees, regardless of who pays the worker compensation bill.”

In addition, contractors and subs can also obtain insurance to protect themselves from employee accidents that occur away from work. “They provide short-term disability so the worker won’t be able to make a false work-related claim,” Magnus says.

Prescriptive Practices

Even if a contractor already has a low TRIR, there’s always room for improvement. For example, Scott Ritter, safety manager for Columbus, Ohio-based commercial contractor Elford Inc., discovered that the highest percentage of his firm’s recordable injuries involved hands and soft tissue on the back and legs.

“For the hand injuries, we went out and bought all the different types of gloves the workers needed because they cost much less than an injury,” Ritter says. “We also developed different protocols for which gloves are used for different types of work, such as demolition and framing.”

Suspecting that the extensive use of various ladders might be contributing to soft-tissue injuries, Elford invested in several platform ladders to give employees a larger, more stable base to work from.

Ritter notes that there’s no direct evidence that a subsequent decrease in soft-tissue injuries is a direct result of the ladder switch, “but it had to have an impact,” he says. He adds that the company has also developed a program of task-specific stretching and flexing exercises as another preventative measure.

Though pleased with the program’s success at shrinking an already low TRIR, Elford CEO Jim Smith believes the program would not be as effective without management setting the example to gain workers’ buy-in for adopting these practices and holding each other accountable.

“You simply can’t fake a safety culture,” he says.

While OSHA has established the distinctions between what is and is not considered a recordable injury, contractors may still find themselves facing circumstances that defy conventional definitions. Several sources of guidance are available to help navigate these gray areas.

For example, osha.gov provides interpretations of workplace safety rules and responses to employers who request clarification of specific situations. Third-party safety consultants are also available to provide guidance or manage some or all aspects of a contractor’s safety program. ■

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NOTE VAULT

Jobsite Photography Becoming a Skilled Trade

Sophisticated documentation technology ensures that contractors and owners get the most out of their project photos **BY JIM PARSONS**



WORK IN PROGRESS
MultiVista's photo-documentation captures interior and exterior progress and substantial construction details at pre-determined intervals.

With the proliferation of easy-to-use cameras in smartphones and other electronic devices, contractors can gather an almost unlimited number of project images.

But more is not always better. If a problem arises during construction or after work is complete, how can a contractor be sure it has the right photographs to capture exactly what happened, and why? Photos can be lost or forgotten if not shared immediately or taken too late to be of much use, as is often the case after MEP systems are covered by drywall.

Dave Stadnik recognized this need in 2003, when the Phoenix-based development company he founded

began a \$25-million commercial construction project.

"There was a lot of paper associated with the project," Stadnik recalls, "but of all the things I paid for, no one had the capacity to show how that money was being spent in a real-time way."

Stadnik heard about MultiVista, a Vancouver, British Columbia-based construction documentation start-up co-founded by former electrician Luis Pascual and materials engineer Graham Twigg. MultiVista offered not only expert digital photography services specifically tailored for construction projects but also technology tools to store and organize the images and to facilitate immediate access across the project team.

"What Luis and Graham offered solved a number of problems with my project and avoided others," Stadnik says. Stadnik was so impressed with MultiVista's potential application to a variety of project types that he joined the company in 2007 as chief operating officer. Headquartered in both Vancouver and Phoenix, MultiVista now operates more than 50 franchises across the U.S., plus locations in Canada and the United Kingdom. All provide a variety of still and video documentation services to owners and contractors, including preconstruction site surveys, interior and exterior progressions and finished surveys of projects ranging from health care and education facilities to stadiums and apartment buildings. Videography and streaming webcam services are also available.

"A contractor may take ... 50 photos over the course of a project, whereas we'll take hundreds, all of which overlap to ensure 100% coverage," explains Ethan Gunnip, operations director for MultiVista's Washington, D.C., office. "The scope and frequency of what we shoot is all dictated by the clients and what they want to see."

Within 48 hours of each shoot, images are linked to a digitized site and floor plans in a cloud-hosted system that Stadnik asserts has "bank-level security." It allows team members to examine photos and collaborate from

any location. By clicking on a specific point in the plan, users can see every image for that location during the project, allowing them to monitor progress, verify performance and research quality issues. Photos from other sources can also be uploaded into the system. The cost of MultiVista's core services tends to range from \$0.20 to \$0.50 per sq ft over the life of the construction phase.

Stadnik says that organization and access differentiate MultiVista from "do-it-yourself" photo documentation. All of MultiVista's high-resolution images are taken systematically from the same pre-identified locations throughout the project by trained photographers, many of whom are former construction trade workers and site supervisors.

"They know what it's like to be on a site and what to look for," Stadnik says. "We train them on our methodology, from shoot patterns to adjusting for various lighting conditions. On site, they capture every wall, every ceiling, every system at exact points in the construction schedule and in close coordination with the other trades." Indeed, Stadnik sees photo-documentation itself as a "trade," providing a clearly organized deliverable—information—that's as critical to a project's success as concrete and piping.

Anthony Bell, Turner Construction Co.'s CMO QA

manager for the Transbay Transit Center in San Francisco, agrees with the distinction.

"If you do your own photographs, you need your staff to do it and that takes time," says Bell, whose firm is relying on MultiVista for as-built documentation for the \$4.5-billion, 1-million-sq-ft project. "We coordinate with MultiVista, and they go out and take the pictures that are stored along with ours in one place. It's worry free."

Bell recalls a change-order issue in which MultiVista photographs disproved a subcontractor's claim that certain work had been performed. "They're an unbiased source of the documentation, which is a big advantage when there's a dispute," he says.

Samuel Chui, project manager, building design and construction, for the city and county of San Francisco, adds that the power of photo documentation is in the indexing.

"For any construction program, you might have hundreds of photos but with no kind of organization or intent," says Chui, who used MultiVista to document the city's new \$243-million Public Safety Campus. "Now, you have an effort to collate and make sense of what's happening on site, especially if you can't be there for the activity." ■

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Peer-to-Peer Equipment Rental Apps Gain Steam

The 'sharing economy' comes to construction, helping contractors find idle equipment through decentralized rental models. **BY JEFF RUBENSTONE**

Idle construction equipment costs money. Not just in maintenance but also in the lost revenue from not putting it to work. Small contractors with a few pieces of iron or big firms with massive fleets often eat the cost of idle equipment or set up handshake deals to lend it out for a fee. But a few ambitious tech startups are taking this informal economy online with free mobile-based equipment-rental apps.

"It's about helping the contractor make money and save money," says Willy Schlacks, who co-founded the peer-to-peer rental startup EquipmentShare with his brother Jabbok Schlacks. Based in Columbia, Mo., EquipmentShare lets contractors in the Midwest list equipment, get price quotes and arrange rentals. He notes, "Rental costs are a fairly large pain point for contractors." Schlacks says their prices are usually 30% below the going rental rates. "At first, some customers don't want to rent their stuff out, but we can analyze their asset utilization and show they're losing money on idle machines." EquipmentShare also tracks telematics data on equipment through its tracker devices, keeping users up to date on performance histories.

Not all rental apps focus on contractor-to-contractor deals. Getable is an app designed to better connect contractors to existing rental firms. "We facilitate connections between contractors and suppliers," says Tim Hyer, Getable CEO. "Not just to suppliers they haven't worked with before, but also setting up new connections in long-standing business relationships." Like other rental apps, Getable asks renters and owners to rate each other after a deal. But Getable focuses more on building detailed profiles of supplier performance. "We let people rate things like response times, on-time delivery, pickup times—we let both sides rate the experience in detail," says Hyer. "You may already have good relationships with suppliers in your own region, but if you're expanding into a new city, we want to be able to showcase the best suppliers in that area to you."



TAP-TO-RENT
Mobile apps from startups Yard Club (top) and Getable (bottom) allow contractors to rent idle construction equipment on demand from owners or other contractors.

San Francisco-based Yard Club asks that its members ante up some of their own iron for rent before they join up. "We focus more on heavy, earthmoving equipment and have pretty strict standards on what can be listed on the site," says Colin Evran, Yard Club CEO. He says they have about \$200 million in heavy-equipment assets listed in the app today and are planning to expand beyond California. "Our primary feedback from users so far is that they want high-quality equipment—this isn't a race to the bottom on price," he says.

On May 7, Caterpillar announced it will provide strategic financing to Yard Club and will use the app in its own rental business. Greg Foley, Caterpillar vice president for its newly formed analytics and innovation division, sees it as a natural step for the company. "With all of the advances in peer-to-peer technology going on around us, we asked ourselves, why shouldn't our customers have the ability to share assets to increase efficiency and lower the cost of ownership?" ■

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Building Owners Find Greater Value in BIM

New research says more owners are leveraging building information modeling for help with facilities management **BY STEVE JONES AND DONNA LAQUIDARA-CARR**

Building owners are becoming more aware of the benefits that building information modeling brings to their construction projects, and to a lesser extent, its value in the management and operation of their buildings. That's one of the conclusions supported by a recent Dodge Data & Analytics study about building owners' perspectives on BIM published in "The Business Value of BIM for Owners" SmartMarket Report.

The SmartMarket Report, sponsored by Autodesk and Skanska, features data collected from building owners in the U.S. and the U.K. The findings reveal a strong contrast between these countries, largely because the U.K. government announced in 2011 it would mandate BIM on central government-funded projects beginning in 2016.

This has generated enormous interest in and adoption of BIM there. To support this effort, the U.K. BIM Task Group has developed extensive standards and guidelines and provided education on the implementation of BIM. This effort extends to all players, including owners, not just for design and construction,

but also across the entire building life cycle.

This investment and commitment are reflected in the study findings: U.K. owners are significantly more engaged in the use of BIM on their projects. They more widely recognize its benefits and are far more likely to require its use, even on projects where it is not mandated, than their U.S. counterparts.

However, even the findings from the U.S. alone demonstrate that BIM's potential to benefit the operations phase of a building will help drive its use. Building owners who say that they have at least a medium level of capability for leveraging BIM in facility management (FM) report significantly higher engagement with BIM overall and a higher recognition of its benefits, and they are more likely to require BIM on their projects.

Contractors that wish to remain competitive, especially in sectors involving complex buildings, can leverage owners' growing respect for BIM to improve their relationship with their clients.

Owner Engagement With BIM

On average, building owners in the U.S. with at least a moderate ability to leverage BIM for facilities management report that architects and contractors are using BIM on a higher percentage of their current projects—on average, about 55%—than building owners with less ability to leverage BIM for FM, with an average of 37% of projects involving BIM.

While this is not necessarily an objective measure of the degree to which BIM is actually being used on projects, it clearly indicates that owners who can leverage BIM in their FM plans are at least more widely aware of BIM use on their projects.

In addition, a significantly higher percentage of owners who can leverage BIM for FM actually own BIM software (81% compared with 49% of those with less ability to leverage BIM), and they are also more than twice as likely to use it if they own it, according to the findings.

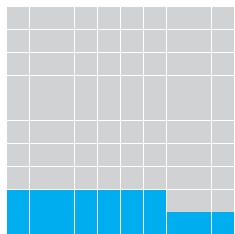


Steve Jones is senior director of industry insights for Dodge Data & Analytics. He oversees DD&A's thought leadership, market research and SmartMarket Report initiative.



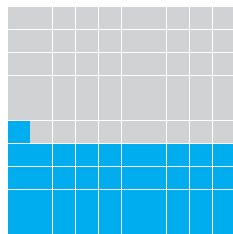
Donna Laquidara-Carr is director of industry insights for Dodge Data & Analytics. She has served as managing editor on numerous SmartMarket Reports covering diverse industry trends.

OWNERS REQUIRING BIM ON THEIR PROJECTS



17%

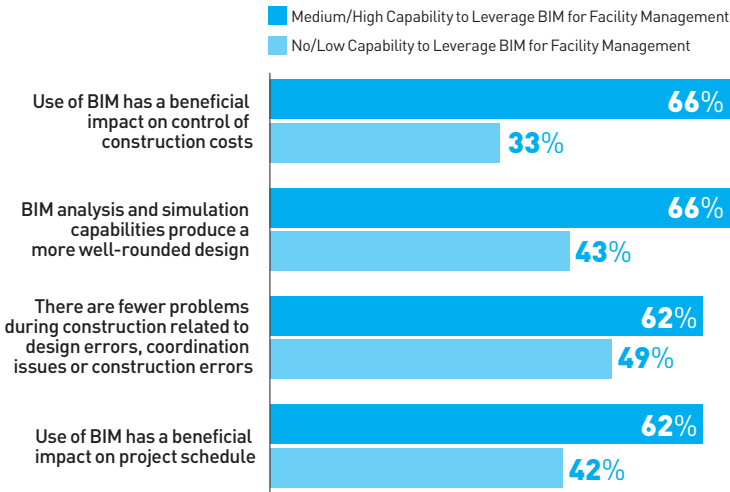
Owners With No/Low Capability for Leveraging BIM for Facility Management



41%

Owners With Medium/High Capability for Leveraging BIM for Facility Management

OWNERS WHO SEE THE BENEFITS OF BIM



66%
Of owners with a medium/high capability to leverage BIM for FM say that BIM cuts construction costs.

62%
Of owners with a medium/high capability to leverage BIM for FM have well-developed BIM guidelines.

However, it is notable that only 38% of those who can leverage BIM for FM actually do use the software, suggesting that they are finding other ways to extract data from the model for their building operations.

The most telling finding—the one which demonstrates that owners who can leverage BIM for FM are generally more engaged with BIM—is the high percentage (62%) who report they have well-developed guidelines for BIM. That’s much higher than the 35% of those who are less capable of leveraging BIM for FM.

This finding is important because it suggests that these owners recognize the need to guide the industry to ensure that the final model contains the information they need. For an owner to best take advantage of BIM for FM, architects and contractors must create models with that goal in mind, as well as the needs of the design and construction process. In fact, in some

cases, it is likely that owners may be more capable of leveraging BIM in FM because they have strict guidelines in place for their design and construction team to help them do so.

Benefits of BIM Use

This higher level of BIM engagement may also enable owners who can leverage BIM for FM to be more aware of the benefits of using BIM for design and construction. In fact, two-thirds (66%) find that BIM reduces construction costs. That’s double the percentage of those with fewer capabilities to leverage BIM for FM (33%).

A significantly higher percentage also finds that BIM reduces their construction schedule and provides them with a more well-rounded design. And while the difference is not statistically significant, a notably higher percentage (62%) who can leverage BIM for FM see that BIM reduces problems during construction, compared with the 49% who have less capability for that.

Owners Who Require BIM

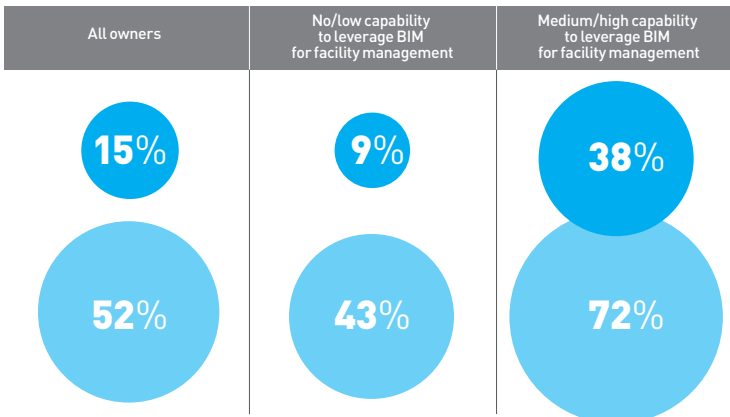
Given the greater awareness of BIM’s benefits, it’s not surprising that 41% of the owners who can leverage BIM for FM require it on their projects, compared with just 17% who cannot. Not only are they capable of drawing value from BIM throughout the project life cycle, but their greater knowledge and engagement with BIM also allows them to perceive more clearly its benefits during construction.

One last finding demonstrates the longer-term implications of this trend: Nearly all U.S. owners (90%) believe that by 2019, BIM will offer at least moderate value for the operation of buildings, a dramatic growth over the 61% who believe it currently does. This strongly suggests that owners expect BIM tools to improve enough to extract more value across the life of the building from models created during design and construction.

If that expectation holds true, then contractors can expect to see a significant growth in the number of owners with specific BIM guidelines and growth in the number of owners who will require BIM use on their projects. This trend offers an opportunity for contractors who can proactively demonstrate their knowledge of BIM to potential clients.

However, knowledge of how to improve construction processes may not be enough to truly gain a competitive edge. Instead, construction companies can work with owners to create models that have value throughout the building life cycle. Those firms may be the ones that build the strongest and most lasting relationships with clients, creating repeat business and distinguishing themselves from their competitors. ■

PERCEIVED VALUE OF BIM IN FACILITY MANAGEMENT



■ Owners who currently believe BIM is valuable for facility management
■ Owners who believe BIM will be valuable for facility management in the next 5 years



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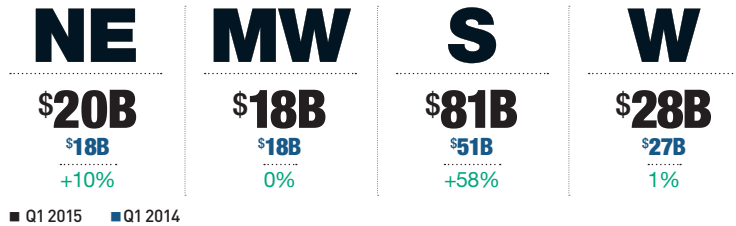
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The Numbers

A compilation of key data from targeted segments of the industry

REGIONAL FOCUS Where Is the Growth in Construction Starts?



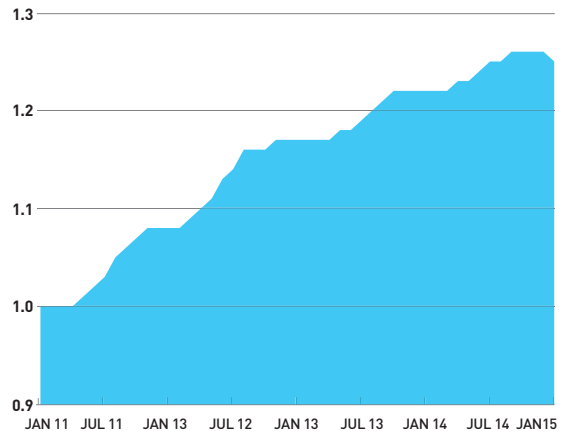
NORTHEAST SPOTLIGHT Top Metro Areas for 2015 Q1 (\$ Mil.)

METROPOLITAN AREA	NON-RESIDENTIAL	RESIDENTIAL	NON-BUILDING	ANNUAL
New York-Northern NJ, NY-NJ-PA	\$3,694	\$4,342	\$2,372	\$10,408
Boston, MA-NH	\$952	\$1,087	\$643	\$2,682
Philadelphia, PA-NJ-DE-MD	\$380	\$450	\$415	\$1,245
Pittsburgh, PA	\$160	\$320	\$157	\$636
New Haven, CT	\$448	\$22	\$25	\$494
Bridgeport-Stamford-Norwalk, CT	\$233	\$215	\$35	\$483
Hartford, CT	\$269	\$56	\$61	\$386
Albany, NY	\$119	\$48	\$89	\$256
Buffalo, NY	\$134	\$69	\$46	\$249
Providence, RI-MA	\$41	\$72	\$118	\$231

NORTHEAST INCLUDES: CT, MA, ME, NH, NJ, NY, PA, RI, VT

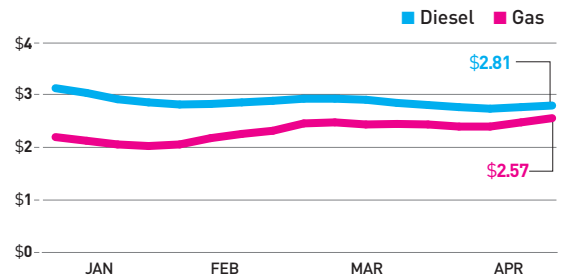
EQUIPMENT RENTAL RATES Steady Recovery

(Rental rates relative to January 2011)



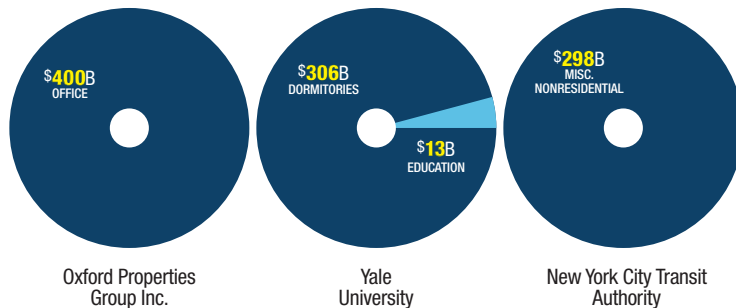
SOURCE: ROUSE ANALYTICS; ROUSE RATE INDEX, ALL CATEGORIES

FUEL PRICES What Am I Paying at the Pump?



SOURCE: U.S. ENERGY INFORMATION ADMINISTRATION. WEEKLY RETAIL PRICE FOR REGULAR GASOLINE AND ON-HIGHWAY DIESEL.

TOP NORTHEAST OWNERS Commercial Construction in Q1 2015

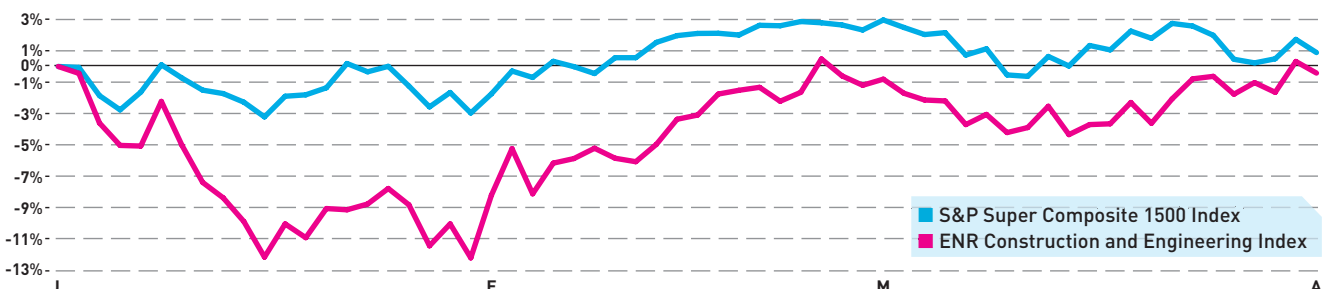


SOURCE: DODGE DATA & ANALYTICS

HOT SECTORS: YANKEES AHEAD

HOUSING: Dodge Data & Analytics reports that the Northeastern region of the United States posted a healthy 10% increase in construction starts value in the first quarter of 2015. This growth was driven by the states of New York and Massachusetts, which saw increases of 24% and 43%, respectively. Expansion in both the public works and residential multifamily markets drove most of the Massachusetts expansion.

ENR CONSTRUCTION STOCK INDEX How Are Construction Stocks Performing?



Alternative Funding Sources For Construction Projects



BY EVAN SINGER

DESPITE THE UPTICK in construction, many firms are feeling hamstrung by the hesitancy of traditional banks to provide growth capital. Unfortunately for smaller players in construction, the small business

lending process is not working well, with banks often reluctant to lend to smaller firms and offering high-rate and fee-laden business credit cards.

Some Small Business Administration loans are available, but they can be cumbersome to obtain, with many banks preferring not to offer SBA loans of less than \$350,000. Fortunately, new online SBA options do exist. If you apply for some of these or other new online options—whether at a bank or through an alternative lender—construction firms should follow several tips to find the capital they need at a reasonable cost.

- **Maintain a good credit score.** Good personal and business credit scores will help you qualify for reasonably priced financing options. However, if the construction firm's owner has a history of bankruptcies or charge-offs, or if the business does not have a strong credit history, that can hurt the firm's ability to secure a low-priced loan. Business credit can be improved by creating a Data Universal Numbering System (DUNS) number and providing Dun & Bradstreet with past payment information and vendors.

Additionally, just as you monitor your suppliers' and vendors' credit ratings, your customers can monitor yours. You might lose business without knowing it. Also, commercial credit fraud is increasing, and you need to keep track of your business credit report for any transactions you did not initiate.

- **Look at an SBA loan first.** The Small Business Administration is an agency that supports entrepreneurs and small businesses. SBA loans are made through banks, credit unions and other lenders who partner with the SBA.

SBA loans have some of the lowest interest rates, longest terms and lowest monthly payments in the industry. If you can secure an SBA loan quickly from

online providers, that may be the best option. Before applying though, check with your bank and make sure your company is asking for an allowable use of funds. The company must specify exactly how loan proceeds will be used in order to pass banking guidelines.

The loan also has to be demonstrably repayable. Management must provide documentation showing that the business has an ability to repay the loan. Typically, past business and personal tax returns as well as a business and personal debt schedule are used as evidence of repayment ability. A newly formed construction business will also likely need to provide a financial and business plan that projects the business' future cash flow.

Construction firms applying for SBA loans should understand the importance of accurate and updated paperwork, including documents relating to insurance, taxes and the structure of the business. The management applying for the loan will also need to demonstrate a positive tenure in the construction business so the lender can see the firm or the project has the greatest possible odds of success.

- **Consider peer-to-peer lenders.** If your business can't qualify for an SBA loan, then construction firms may want to look to marketplace-lending options. These lenders offer business term loans and lines of credit as well. With rates typically at 10% to 20%, these loans can be a good alternative if you don't mind the higher interest.

- **Choose cash advance lenders as a last resort.** Beware of expensive cash advance loans. Construction managers considering such financing should carefully weigh the risks and rewards. For example, if capital is borrowed from a cash advance lender, ideally it should be just a one-time infusion that helps complete a lucrative, nearly finished project. Similarly, if you're trying to grow your business, a credit card is usually not the right way to go, as the rates are a lot higher than other options.

Another drawback to using a credit card is the high annual fees, fees for late payments or fees for being over the borrowing limit. If you do need a credit card, be sure to read the terms and conditions on the credit card agreement carefully so you're aware of all the costs. ■

“The company must specify exactly how loan proceeds will be used in order to pass banking guidelines.”

Evan Singer has extensive experience in financial services and consumer industries. He is the general manager for SmartBiz, the small business division of Better Finance, a venture-backed, technology-based finance company. For more information, visit smartbizloans.com.



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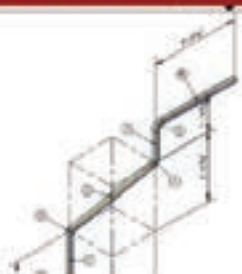
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