

THE LEADING BUSINESS MAGAZINE FOR CONTRACTORS

FEBRUARY 2024 | CONSTRUCTIONBUSINESSOWNER.COM

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CBO Editor
Megan Beam

Appropriately themed around fleets, Construction Business Owner's (CBO) February issue covers broad ground. From demystifying telematics to the revolution of renewable diesel, by the end of this issue you will be well-equipped to tread the terrain of operating your construction business and caring for your workforce with confidence, safety and efficiency.

But the print issue is just the beginning of what CBO has in store as 2024 unfolds. Check out more of what our team is up to in this and the coming months:

- **Webinars** — Register at constructionbusinessowner.com/webinars.
 - **Feb. 22** — Growing Your Construction Business Through Streamlined Financial Operations. Construction business finances are complex, with multiple budgets for different jobsites, employees who need corporate cards and complex systems to calculate cash flow. In this webinar, we'll explore ways to streamline your construction company's financial operations, find efficiencies, and automate key tasks to save you time and headaches.
 - **Feb. 29** — Unlocking Success in Architecture, Engineering, Construction and Operations (AECO) Projects: The Transformative Power of Collaboration. This webinar delves into the efficiencies achievable through adept issue and action item management. We stress the benefits of proficiently handling project data, conversations and files in a unified environment, achieving streamlined processes and enhanced transparency. The presentation concludes by addressing the challenges and opportunities of taking AECO workflows into the field, sharing experiences and best practices for a sound mobile strategy.
- **CBO'S Sustainability VIP** — Get ready for the fourth edition of our special section spotlighting industry trailblazers in green initiatives. Chosen by our editors from peer-submitted nominations, this year's nominees are spearheading initiatives that champion various aspects of sustainability. Stay tuned for our March issue, where you'll read the stories of these change-makers shaping the future of the industry. Learn more at constructionbusinessowner.com/svip2024.
- **World of Concrete** — As this issue goes to print, the CBO team is preparing to attend World of Concrete 2024 in Las Vegas, Nevada. Look for the top products that wowed our team at constructionbusinessowner.com/woc24faves.

Thanks for reading,



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GROWING YOUR CONSTRUCTION BUSINESS THROUGH STREAMLINED FINANCIAL OPERATIONS

FREE | FEBRUARY 22 | 1 PM CST

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Construction business finances are complex, with multiple budgets for different jobsites, lots of employees who need corporate cards and complex systems to calculate cash flow. In this webinar, we'll explore ways to streamline your construction company's financial operations, find efficiencies and automate key tasks to save you time and headaches.

You'll learn:

- How to approach corporate cards and your expense policy
- Budgeting best practices and tech solutions
- How a streamlined process can help your business grow

SPEAKER

.....



Chris Wadsworth
Operations Manager
Cal Wadsworth Construction



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40



26

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FEATURE SERIES

FLEETS

30 6 Reasons Track Conversions Are a Must-Have in Construction

Equipping your fleet for rugged terrain

32 The Rise of Renewable Diesel

What alternative fuel can offer the construction industry

IN EVERY ISSUE

2 From the Editor

6 News

44 Products

48 Stats



38

IN THE OFFICE

The Business Council

8 George Hedley

How to set financial targets to achieve business goals

12 Gregg M. Schoppman

Exploring the factors that can make — or break — lasting connections

14 Marcum Accountants & Advisors

Strategic tax planning for construction business owners

16 Guest Columnist

Reducing the stigma:
Industry shifts around mental health

18 Accounting & Finance

Examining phantom stock

20 Contracts & Bidding

The lowdown on significant risk-allocation clauses [Part 2 of 2]

22 Legal Notes

Navigating the unique challenges posed by prolonged due diligence

24 Surety & Bonding

What to know about bond liability before selling your company

26 Marketing

6 key tactics for branding a construction company

IN THE FIELD

34 Equipment Matters

How to take full advantage of equipment telematics

36 Equipment Update

Electric or hybrid vs. Engine-powered boom lifts

38 Tech Support

Exploring the potential pitfalls of tech & how to avoid them

40 Jobsite Safety

Understanding root-cause analyses & their value

42 Project Management

How Suffolk Construction's Tracy Deal transitioned from lawyer to project manager



CONSTRUCTION
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webinar

February 29th
1pm CST

Unlocking Success in AECO Projects: The Transformative Power of Collaboration

AECO projects are by their nature collaborative enterprises. When stakeholders can communicate and share insights, projects are more likely to come in on time and under budget.

This presentation emphasizes the significance of genuine collaboration, sharing lessons learned in the office and field. It also explores the evolving landscape of learning, addressing the challenges of effective knowledge transfer and exploring modern training methods and technologies.

Session Takeaways:

- **Genuine Collaboration Wins:** Learn why genuine collaboration is the key to success, surpassing simple coordination every time.
- **Efficient Issue Management:** Understand how adept issue and action item management can be a game-changer for a successful AECO project.
- **Modern Learning for the AECO World:** Stay ahead with insights into contemporary training methods and technologies.
- **Today's AECO Required Mobile Strategies:** Equip yourself with the knowledge and strategies necessary for success in the field, ensuring your AECO projects thrive in the modern era.

SPEAKER



Carl Storms
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► Kojo Launches New Integrations With Nation's Largest Electrical Suppliers

Kojo, a materials and inventory management platform for the construction industry, announced Supplier Integrations, a new series of integrations with electrical suppliers in the U.S. These integrations significantly reduce friction in the materials order process and allow contractors to have greater control over their construction projects. With these new capabilities, Kojo helps contractors keep projects on track and within budget, while allowing suppliers to serve their customers more efficiently. The new integrations create a two-way flow of data between Kojo and the supplier. Kojo customers now have a real-time view into a supplier's catalog, enabling them to see the exact product offering and custom pricing so they know the full costs of materials and orders. When a customer creates a purchase order in Kojo, it is sent directly into a supplier's system of record for review (instead of an emailed PDF that needs to be manually entered into the vendor's accounting system). The supplier can automatically send an order acknowledgment directly back into Kojo to confirm the order has been received. The team at Kojo is continuing to work with partners across the vast construction ecosystem as it evolves into a true all-in-one materials management platform for trade contractors. To date, Kojo has powered over 25,000 projects, saving customers more than \$30 million on materials orders. Visit usekojo.com.

► Scott Salyer Joins McShane Construction Company



Scott Salyer

McShane Construction Company announced that Scott Salyer has joined the firm as vice president (VP) and regional manager. Salyer will oversee the firm's Southwest regional office in Phoenix, Arizona. As VP and regional manager, Salyer will lead Arizona operations, including preconstruction

efforts, budgeting and client relations for McShane's projects across the Southwest. Salyer comes to McShane with more than 20 years of experience in construction management. Prior to joining McShane, Salyer served as VP of operations for Adolfson & Peterson. He holds a Bachelor of Science in engineering technology and construction management technology from Oklahoma State University. McShane Construction Company was established in 1984 and is headquartered in Rosemont, Illinois, with regional offices in Phoenix; Auburn, Alabama; Irvine, California; Madison, Wisconsin; and Nashville, Tennessee. The female-owned and led firm offers integrated design-build and build-to-suit construction services for the multifamily, industrial, commercial, health and fitness, and institutional markets. Visit mcshaneconstruction.com.

► Portland Cement Association Elects 2024 Board of Directors, Chair & Vice Chair

Portland Cement Association (PCA), which represents America's cement manufacturers, announced new leadership for its board of directors after holding elections at its last meeting of 2023. Massimo Toso has been elected PCA board chairman. Toso is the current president and CEO at Buzzi Unicem USA and has served the last year as vice chair to former Chairman Filiberto Ruiz. Monica Manolas is PCA's new vice chair and the first woman in the 21st century to be elected to the position. Manolas currently serves as president of Ash Grove East. Jorge Wagner, CEO of Votorantim Cimentos North America was elected to the PCA board of directors. In October 2021, PCA's board of directors set forth the industry's Roadmap to Carbon Neutrality, which is an overall strategy for the cement, concrete and construction industries to collaborate in initiatives to cut carbon emissions and reach neutrality by the year 2050 if not sooner. To pursue this goal, PCA also works with policymakers and federal agencies to arrive at

ambitious yet feasible regulations that help advance efforts outlined in the Roadmap. Visit cement.org.

► Tarlton Promotes Brooke Mason to Project Manager



Brooke Mason

Tarlton, St. Louis' largest women-owned general contracting and construction management firm, promoted Brooke Mason to project manager. Mason is a member of the team expanding and renovating

Logan University in Chesterfield, Missouri. Tarlton is instrumental in the Fuhr Science Center project, which includes a 15,270-square-foot addition and the renovation of 33,310 square feet. The updated facility will house two state-of-the-art anatomy labs, an imaging center, technique labs, simulation space, faculty offices and additional student collaboration and study areas. Tarlton is also managing the 15,000-square-foot renovation of the library, bookstore and offices in the administration building. Mason, who has eight years of industry experience, joined Tarlton as a project engineer in 2017 and was promoted to senior project engineer in January 2022. She has served on Tarlton teams completing projects for Washington University School of Medicine, The Muny, Wexford Science & Technology and BJC HealthCare. A native of Collinsville, Illinois, Mason holds a bachelor's degree in construction management from Southern Illinois University Edwardsville. Visit tarltoncorp.com.

► Fecon Acquires Stumper Industries

Fecon LLC, a global manufacturer of heavy-duty site preparation attachments and forestry accessories, recently acquired Stumper Industries, a manufacturer of stump grinder attachments for mini and standard skid steers and compact track loaders, excavators and tractor applications. The acquisition expands the landscaping and land maintenance solutions Fecon provides in the forestry

mulching and vegetation management industries. Stumper's attachments provide a cost-effective solution for tree service businesses, landscape companies and farm operations to remove debris safely, quickly and efficiently from jobsites with equipment they already own. The Stumper series features five quick-attach models compatible with compact to heavy-duty machinery. The attachments range from 22- to 36-inch cutting diameters with up to 12-inch cut depths per pass to tackle everything from small jobs to large, stubborn stumps and roots. The acquisition of Stumper's stump grinders complements Fecon's current line of mulching attachments and extends Fecon's reputation in the forestry mulching and vegetation management industry. Visit fecon.com.

► **Thunder Creek Equipment Names John Henrichs as Territory Sales Manager for South Texas & Southern Louisiana Markets**



John Henrichs

Thunder Creek Equipment has named John Henrichs as the territory sales manager (TSM) for the south Texas and southern Louisiana markets. Henrichs will work to forge relationships with

contractors, equipment dealers, fuel distribution businesses, disaster response agencies and other organizations that call the rapidly growing territory home. Thunder Creek manufactures and sells a full range of mobile fueling and service solutions. This includes the original multi-tank, bulk diesel trailers that allow businesses to haul up to 920 gallons of diesel without a HAZMAT endorsement, and the company's proprietary 2-in-1, closed-loop system for handling diesel exhaust fluid (DEF). Henrichs joins Thunder Creek after more than 20 years building a sales and support network throughout the Cypress, Texas, region — most recently in heavy equipment sales throughout the region. Visit thundercreek.com.

► **Skanska Names Tracy Hunt Executive VP & General Manager for Florida**



Tracy Hunt

Skanska named Tracy Hunt, a 26-year company leader, as executive VP and general manager overseeing the organization's building and construction operations for the state of Florida. Hunt's appointment to Skanska USA Building leadership team role was effective Nov. 1, 2023. Hunt's career includes managing several prominent projects throughout the state of Florida, including the Southeast's first dedicated orthopedic hospital, Orlando Health Jewett Orthopedic Institute in Orlando, Florida; Coachman Park in Clearwater, Florida; and the complex construction and expansion of Lee Health Gulf Coast Medical Center. Hunt has 28 years of experience in the construction industry, most recently serving as senior VP and account manager for Skanska in Florida, a role he has held since 2018. Visit skanska.com.

► **Trehel President & Chief Operating Officer Keith Poole Named Company Partner**



Keith Poole

Trehel announced that Keith Poole has a new role as company partner. Poole will maintain his role as president and chief operating officer (COO) and become a co-owner of Trehel alongside CEO Will Huss. As partners, Huss and Poole will collaborate on projects and initiatives while fine-tuning the overarching vision and strategic direction of Trehel. Poole began his career at Trehel in 2005, serving as VP of resources. He was promoted to executive VP and COO in 2009 and named company president in 2020. Prior to joining Trehel, Poole owned and managed SafeCon Inc., a business consulting practice with an emphasis on construction risk management, human resources and operations. Trehel is one of the largest contractors in the Carolinas and Georgia. Trehel guides clients

through the entire building process, exploring multiple construction possibilities with the project team to select the best solutions. In addition, Trehel is committed to regional public service and community involvement, a tradition that spans more than four decades. Visit trehel.com.

► **Caterpillar Appoints New Energy & Transportation Group President**

Caterpillar Inc. announced that Jason Kaiser, senior VP of the Electric Power Division, has been appointed to Group President of the Energy & Transportation (E&T) segment, effective Jan. 1. In this role, Kaiser will have responsibility for the Rail Division, Solar Turbines, Large Power Systems Division, Industrial Power Systems Division, Electric Power Division (EPD), Caterpillar Oil & Gas and Marine Division (COGMD), Cat Reman and Electrification and Energy Solutions Division. Since joining Caterpillar in 2000, Kaiser has held numerous roles in engineering, sales and operations with increasing responsibility across the electric power business. Kaiser graduated from Rose-Hulman Institute of Technology with a bachelor's degree in electrical engineering. Visit caterpillar.com.

► **Artificial Intelligence Construction Company Announces Rebrand**

Workorder, a provider of collaborative software solutions for the construction industry, announced a rebrand initiative and unveiled a new name for its platform, Workpack. This move marks a milestone in the company's journey toward innovating the construction industry through working collaboratively as a "pack" using its artificial intelligence (AI) solutions. With the rebranding and new product offerings, Workpack is poised to strengthen its position in the AI construction technology space. Visit workorder.ai.

NEED MORE NEWS?

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Profit Starts With Knowing Your Numbers

How to set financial targets to achieve business goals



GEORGE HEDLEY, CPBC, is a professional construction business coach, consultant and popular speaker. He helps contractors to build better businesses; grow, profit, develop management teams; improve field production and get their companies to work. He is the bestselling author of "Get Your Construction Business To Always Make A Profit!" (available on amazon.com). Email Hedley at gh@hardhatbizcoach.com to sign up for his free e-newsletter, start a personalized BIZCOACH program, attend his educational webinars, watch his YouTube channel, download online courses or utilize his contractor templates. Visit hardhatbizcoach.com for more information.

Just Ask George.

Send your questions for Hedley to
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The key to building a successful construction business: knowing and managing your numbers. You can't bid projects right unless you know your job costs, production rates, actual overhead and profit goal. You can't stay on budget unless you know, update and track your job costs on a regular basis during the performance of building a project. Your company can't make a profit unless you know your annual overhead cost and how much sales at an average markup you need to break even and achieve your profit goals.

When most contractors start their companies, they are excellent at building and doing the work required by their trade or specialty. For example, rough carpenters know how to frame a house or office building, plumbers know how to install plumbing, and project managers know how to award subcontracts and schedule and manage field work. Unfortunately, most contractors aren't proficient in setting budgets, managing cash flow, calculating overhead, tracking job costs and making a profit. Eventually, new contractors might hire an office manager to help them organize their paperwork and handle the bookkeeping — but their new hire may not know construction financial management either. So then you would have a business owner and a semi-bookkeeper who aren't educated in managing the finances for a

construction company.

As a construction business coach and consultant, I work with many different types of contractors: new, old, experienced and hard workers. Most of them do not know their numbers and therefore struggle with doing enough work at the right price and proper markup to make a generous profit.

Do You Have a Net Profit Goal?

If you are planning a trip, you start with a destination and then design a route to get to your goal. In business, you start with a goal to make a profit and design a plan to achieve your goal. Do you have an annual net profit goal? Annual net profit is the amount of money left after all your expenses — including job cost, overhead and the owner's salary — are paid. In other words, it's your company's taxable income. How much money or net profit do you want to make this year in dollars: \$100,000, \$250,000, \$500,000 or more? With a clear goal you can build a plan to achieve it. Without a clear goal, you don't have a specific destination to move toward, and therefore you can't reach an unknown target.

Do you know, track and stay updated on your numbers?

- **Sales** — Annual sales required at what markup to make the profit you want
- **Breakeven** — The amount of annual contract revenue and markup you



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need to break even

- *Gross profit* — Sales income minus job cost
- *Overhead* — Your annual overhead fixed general and administrative costs
- *Markup* — Your total overhead and net profit markup you can achieve in your marketplace based on the type of work you perform, job size, customers and competitors
- *Margin* — Your gross profit margin (overhead + profit) divided by sales revenue
- *Net profit goal* — Your annual net profit goal in dollars and as a percentage of job costs and sales
- *Backlog* — The amount of contract work you have left to complete
- *Bid-hit-win ratio* — The number of jobs you win versus the number of jobs you bid on
- *Working capital* — The available cash

you have available to run your business and pay your bills

- *Equity* — The net worth of your business
- *Liabilities* — The amount of liabilities, loans and debt you owe
- *Accounts receivable* — The amount of receivables billed and currently owed
- *Sales growth* — Your company growth goal
- *Average job size* — The average job size of all your jobs for the year
- *Job cost tracking* — Project job cost budget versus actual cost; crew production hours budget versus actual hours spent; and material and equipment costs versus budgets.

Profit Starts With Winning Profitable Work

The owner of a construction subcontracting company in Michigan

called me for advice. He complained about his customers always asking for lower prices, and the many cheap competitors he bids against who don't charge enough. Therefore, his sales were slowing down, his workload didn't allow him to make enough money and his jobs typically finished over budget. He also complained: "I can't sell enough work at my old markup rates to cover my overhead. So, I lowered prices 5% to try and attract more sales. My lower prices still aren't attracting enough new work or customers. What should I do?"

I asked a few simple questions: "What's the fixed overhead cost of keeping your business open every month and year? What's the break-even annual sales revenue you need at the markup rates you're charging? How much more annual sales will you need if you lower your markup rates? What's your average job

If you are planning a trip, you start with a destination and then design a route to get to your goal. In business, you start with a goal to make a profit and design a plan to achieve your goal.

size, and how many jobs do you bid versus win every month? Do you know and keep track of how many crew hours it costs to install materials per square foot?”

He had no clue. He didn't know or track his annual overhead cost of doing business, job cost or crew production rates. He had a part-time office administrator who paid the bills while he took care of the contracting business, including estimating and bidding, contracts, scheduling crews, ordering materials, restocking, dealing with customers and chasing money. Odds are his administrator didn't know the answers to those questions either, and neither of them had ever seriously discussed overall financial matters. So, I politely asked: “How can I help if you don't have any idea what it costs to keep your business open or do the work?”

I asked him to calculate his annual overhead costs, bid budget crew hours versus completed job crew hours on a few typical jobs, bid markup versus completed job markup, and his bid-hit-win ratio. We then set a time for a follow-up session in two weeks. Guess what? He didn't show up for our scheduled coaching session, and I never heard from him again. I'm sure he still doesn't know his numbers, works too many hours and isn't making any profit.

Do You Have a Handle on Your Numbers?

Business owners must be strong in financial management. Most weren't trained in accounting or finances. There are numerous ways to learn construction finances, including

books, courses, webinars, working with a construction business coach, or joining the Construction Financial Management Association (CFMA) and attending their workshops.

Profitable contractors take personal responsibility to do what they need to do to learn and understand:

- Income statements
- Balance sheets
- Cash flow
- Over/under billings
- Markup versus margin
- Work-in-progress (WIP) schedules
- Cash versus accrual accounting
- Labor burden rates
- Equipment costs

To build a construction business, you must be focused on your bottom line numbers, know the amount of sales and markup you need, know your labor costs per unit of work, and always be sure you're making a profit. You can't rely on someone else to care about your finances as much as you do. Someone else can pay the bills, send out invoices, prepare financial reports and do the accounting, but the owner must be responsible for knowing the numbers every day, week and month — not just once a year, when they meet with their accountant and find out they didn't make what they wanted to make.

Profit Is the Score Card of the Company Owner

When I present to conferences, I often ask: “Why are you in business? To make a profit? How much profit do you make?”

The typical answer is: “I don't really know.”

Could you imagine the CEO of a Fortune 500 company who doesn't know their numbers? No! When asked these important questions, many construction business owners don't know how much money they make. This tells me most owners don't focus on what counts most. Profit is return for business ownership, taking risk and investing capital in your business. Profit is the net amount remaining and available at the end of the year or month to provide a dividend or distribution to the company owners, or to leave in the company for next year's growth. Net profit is the best indicator or score card of your strategic plan, management team effectiveness, written systems, project managers, supervisors, foremen, financial tracking systems and your company leadership.

Busy construction business owners spend their time trying to win enough work to keep their crews busy, negotiating with subcontractors and suppliers, building projects, scheduling, supervising field workers, doing paperwork and then hoping the bottom line numbers work out later. Often, these hardworking, dedicated, multitasking owners don't like to be bothered with the numbers. So, they pass financial matters off to an untrained construction bookkeeper or spouse to handle and manage the money, worry about making payroll, paying the bills and getting paid.

I have been a construction business owner since 1977, and I have hired over ten thousand subcontractors, worked with hundreds of contractors as their business coach, and presented over 500 keynote speeches and workshops at construction conventions and company meetings. My experience tells me that fewer than 10% to 15% of all construction business owners actually know or regularly track their numbers. Guess what? These few who know their numbers also make the most money in their market.

Aim at Something to Hit Your Targets

Profit-driven owners and managers are competitive. They need targets and scoreboards to stay on top of their score. You can't win a basketball game without shooting at a target (the basket), keeping score and knowing which team is ahead during the game. You can't reach your business goals by trying to work as hard or as fast as possible while not knowing your numbers or how well you're doing.

What financial, profit and job cost targets does your company aim at? I know I've said it before, but I'm saying it again: Most companies shoot at moving targets by attempting to make "as much money as possible" or "more than they are currently making." More than what? More than a few dollars or as much money as possible? These are not specific targets or goals. Five percent, 10% or 15% are not clear targets either, as they depend on variable sales or job costs. Do you have specific financial targets to shoot for and track your progress monthly?

Net Profit Is the Lifeblood of Your Company's Success

You can't grow your business without making a substantial profit. Without profits, you can't do bigger projects, buy the right equipment, hire better managers or supervisors, get a line of credit, or increase your bonding capacity. Having no net profit depletes all the cash from your company and leaves you with nothing to invest to grow your business, build a management team, train your employees, develop customer relationships or improve your service. The more profit you make, the more cash you have to spend on your future, and the faster you can build your company. Without a good net profit margin at year end, your business will struggle, and you won't be able to move toward achieving your long-term goals of building a business that works. ▲

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Confronting the 'Arranged Marriage' of Business Partnerships

Exploring the factors that can make — or break — lasting connections



GREGG M. SCHOPPMAN is a partner at FMI Corporation, management consultants and investment bankers for the construction industry. Schoppman specializes in the areas of productivity and project management. He also leads FMI's project management consulting practice. Prior to joining FMI, Schoppman served as a senior project manager for a general contracting firm in central Florida. He has completed complex construction projects in the medical, pharmaceutical, office, heavy civil, industrial, manufacturing and multifamily markets. He holds a bachelor's degree and master's degree in civil engineering, as well as a Master of Business Administration. Schoppman has expertise in numerous contract delivery methods, as well as knowledge of many geographical markets. Contact Schoppman by email at gregg.schoppman@fmicorp.com. Visit fmicorp.com.

Consider the arrangement of many business partnerships, whether they're with one person or multiple people. An individual finds a partner with a similar vision for a startup construction business. Maybe it is anchored in the thought of creating a multimillion-dollar enterprise or even something grander, like transforming a construction niche, sector or offering.

Fast-forward 10-15 years. Assuming the business maintains some modicum of success, the leaders begin the ownership transition. Team members who demonstrate their capabilities as high-performing leaders are often tagged as potential shareholders, with some assuming the mantle of "next-generation leader." In this new iteration of the business, there are new partners who may be aligned from an operational level but not necessarily as business partners.

Remember, the original owners and founders had the opportunity to develop a strong business relationship, and the most successful ones are reminiscent of a marriage that is predicated on trust, mutual respect, proactive dialogue and complementary business styling. The new owners were hired, and while they may have operated as successful individual managers, supervisors or construction professionals, they are now being thrust together in an arranged marriage of sorts. Put another way, if left to their own devices, would these new partners choose to be partners if they started their own organization?

Setting the Stage as the Old Guard

Many organizations subscribe to the philosophy of hiring talented individuals who not only have the right core competencies but also maintain a similar set of core values. For instance, successful organizations find talent that believes in trust, safety, operational superiority, client management, etc., and they most likely promote people who continue to demonstrate these traits and share the ultimate vision for the firm. The outgoing ownership, or "old guard," often earmarks superstars as future owners. It is incumbent that these new owners align on more than just the core competencies of management. For instance, it is necessary to ask some of these fundamental questions about the "new guard":

- How do they get along in general? They may not be friends, but are they collegial, collaborative and actively engaged in constructive dialogue?
- Are their personalities complementary to one another? For instance, does one see things at a granular level while another is more "big picture"?
- How have they resolved conflict in the past?
- How do industry partners and friends of the firm view the relationship? Put another way, what is the opinion or feedback from designers, owners' representatives, trade partners, etc., on them individually and as partners?
- How do subordinates of the new guard interact with one another?

It is interesting to note that the last bullet is an observation about teams work together. For instance, do these business units or teams have adversarial internal relationships with one another? Do you hear gossip about friction between estimating and project management, for example, that is not limited to the ordinary banter? More often than not, the individuals hear and see conflict at the top and throw their loyalty to their direct supervisor, creating undue friction. This is not to say there should be zero disagreements, but it is easy to fuel division when two leaders bring their conflicts in front of their teams.

Inheriting an Organizational Structure

Another common occurrence in the transition is inheritance. To use a sports analogy, a new head coach is installed but required to keep the entire team, largely due to the contracts the players have. Given their druthers, the new coach might want to bring in their own staff and team that know the playbook or, more importantly, have partnered with the coach in a previous life. In the case of the new construction leadership regime, it is hardly as if the new owners are new to the firm. They've grown with the team and most likely know the personalities that exist within their units.

However, does a new owner have an expectation to simply follow the status quo, or do they have their own vision for the future of the firm? Sure, they may have agreed on the destination for the firm, but do they agree on how they will get there? To that end, do the new leaders feel constrained on how they will achieve success based on the convictions of the previous owners?

Additionally, it is important not to postpone challenging decisions that put the new guard in a difficult place. For instance, do not punt on organizational changes that should have been made years ago, but



were deferred to the new generation for convenience.

For mutually assured success, there should be a structured approach to the strategic and tactical transition of the firm. For instance, there should be a structured meetings of the minds to discuss the following:

- *Strategic plan* – What will be the strategic goals of the new team in the short, middle and long term? What does the new team think are reasonable objectives to measure success?
- *Organizational structure* – What elements of the team should be preserved or maintained? How will organizational changes be initiated and communicated across the firm?
- *Execution* – Will there be a new refinements to the playbook? How will those changes be integrated?
- *Capital expenditures* – To support the plan going forward, what decisions need to be made that require sizable capital outlays, and how is the return on investment (ROI) calculated?

The moral of the story is that the firm should focus on evolution, not revolution. This does not mean the firm should sit tight and coast, but rather make changes that don't come as a shock to the system.

More importantly, the changes need to be implemented by the new partners and supported by the exiting partners.

Long-Term Coaching & Therapy

All relationships, whether business or personal, require “maintenance” for ensured long-term success. The greatest role that the exiting old guard could take is that of coach, mentor and even therapist. (There may even be situations where a therapist is required.) If there are two superstars that just can't seem to acquiesce, a professional counselor may be practical.

There are individuals who might think “What, are we going to a marriage counselor now?” The short answer is yes. This is a relationship, and while different than a marriage, it is an extremely intimate one that deals with livelihoods and large sums of money. Ensuring there is fidelity and trust should be in everyone's best interest.

Ownership transition is something that all businesses confront at some point. Successful transition requires careful selection, deliberate conversation and, most importantly, a high degree of focus on cultivating and fostering these new partnerships. ▲

Strategic Tax Planning for Construction Business Owners

How to position yourself for success in 2024



GLENDYS ZUNIGA



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As the new year unfolds, construction business owners must pivot their focus to a critical task: tax planning. The landscape for 2023 was shaped by legislative updates from the last few years that may still substantially influence tax obligations. It is essential for construction business owners to engage in comprehensive discussions with their tax advisors to navigate complex tax laws.

Typically, year-end tax planning provides an opportunity not only to discuss tax matters but also to consider broader financial implications stemming from non-tax developments. This is particularly relevant as we enter an election year and as the details of potential legislative changes remain uncertain.

Looking Ahead

Several key provisions of the Tax Cuts and Jobs Act (TCJA) are set to expire or “sunset” after 2025, and business leaders should be cognizant of these timelines. Now is the time to understand those implications and consider strategies to help mitigate the potential tax risks. Some of the key provisions expiring include the following: individual tax rates reset to higher rates, the standard deduction reset to a lower amount, and the gift and estate tax exemption reset to a significantly lower amount.

Due to the increase in tax rates and lower standard deduction, contractors may want to consider accelerating income to take advantage of the lower tax brackets and higher standard deduction. In an effort to mitigate potential tax risks, contractors whose estates exceed the existing exemption amount (\$12.92 million for 2023)

should pay particular attention to estate planning strategies.

2023 & 2024 Pressing Issues

While it is important to look ahead, several pressing issues face business owners regarding the 2023 and 2024 tax years. These include optimizing bonus depreciation for property, conducting cost segregation studies, understanding the expanded 45L energy tax credit and the 179D commercial buildings energy-efficiency tax deduction, reviewing accounting methods for contracts, and understanding the IRS' focus on the employee retention tax credit (ERTC).

Bonus Depreciation for Property

The TCJA allowed for 100% bonus depreciation for various construction-related assets, such as heavy machinery, equipment, furniture and certain vehicles with a recovery period of 20 years or less. In 2023, the bonus depreciation decreased to 80%, and will decline 20% each year after. Therefore, in 2024, the bonus depreciation will be 60%. Capitalizing on these available deductions calls for detailed cost segregation studies to ensure maximum tax benefits.

Taxpayers stand to benefit from cost segregation more than ever, which allows them to assign assets properly to their class life. This allows for higher deductions when assets are designated to lower-class lives based on their appropriate qualification, because additional assets qualify for bonus depreciation.

Cost Segregation Studies

Cost segregation studies dissect property



components to assign specific tax lives, leading to accelerated depreciation benefits. Instead of depreciating commercial property over 39 years, this study will break down the building into subcomponents, reclassifying 39-year property into property classes with depreciable lives of 15 years or less. These studies are particularly valuable now given the phased-out reduction of the bonus depreciation. Conducting a study can be advantageous for properties acquired or modified in the last few years.

45L Energy Tax Credit

The Inflation Reduction Act (IRA) introduced an expansion of Section 45L — new energy efficient home credit — that is available to qualifying owners and builders of single-family, multifamily and manufactured homes. The updated and expanded 45L program makes the credit available to a greater number of taxpayers by eliminating the restriction to properties not higher than three stories. The expansion also increased the amount of the credit available per unit from \$2,000 to \$5,000 starting in 2023. Contractors

can qualify for the credit in the year an apartment is constructed or sold as a residence as long as that property is certified under one of the Energy Star or Zero Energy Ready Home programs.

179D Commercial Buildings Energy-Efficiency Tax Deduction

The IRA bolstered the 179D deduction for commercial buildings. Prior to the IRA, this deduction offered owners and developers of commercial buildings a deduction of up to \$1.80 per square foot if they qualified based on energy efficiency criteria. Post-IRA, the 179D deduction increased to \$5 per square foot. To qualify for the 179D deduction, prevailing wages and apprenticeship requirements must be met along with energy standards.

Accounting Method Changes

Most contractors file under IRC 460, which addresses long-term contracts and primarily reports on the percent of completion (POC) accounting method. However, contracts should be looked at individually to determine if other beneficial reporting methods exist for tax purposes, and IRC 460 has multiple exceptions. It is

imperative to address this sooner rather than later, as many exceptions require filing a request for accounting method change with the IRS. Home construction contracts and residential contractors are examples of the exceptions.

IRS Announcements Concerning the ERTC

The IRS has increased scrutiny over ERTC claims due to widespread abuse. For construction businesses that may have been misled into filing inaccurate claims, the IRS offers a withdrawal process to avoid potential penalties and interest. A proactive review of ERTC claims is recommended to maintain compliance.

It is time to reflect on the successes and learning experiences of 2023. Identifying the strategies that yielded positive outcomes and pinpointing areas for improvement are critical steps in preparing for the remainder of 2024. With the right planning and professional advice, construction business owners can position themselves for continued growth and success in the new year. ▲

Reducing the Stigma: Industry Shifts Around Mental Health

Data displays construction's renewed focus on employee care



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The construction industry struggles with one of the highest suicide rates of any profession in the U.S., leading to a shift in how companies approach the mental health of their workers. New data from Dodge Construction Network's Civil Quarterly reveals that civil contractors are beginning to take the issues of mental health, company culture and substance use seriously. However, the industry will still need to put more in place to fully address this issue.

The findings reveal 39% of contractors offer some mental health resources, but small and midsize firms struggle to provide the same support as large companies. Even among large companies, only 53% offer resources at all. About one-fifth (19%) of large contractors, though, are in the vanguard of mental health in the industry, providing resources, a supportive culture and leadership attention to this issue; only 3% of the small and midsize companies report the same.

A survey for the Safety Management in the Construction Industry SmartMarket Report (published in October 2023) suggests the low volume may be driven by not knowing how to proceed to tackle this issue. This survey examines a broad

range of contractors, including those focused primarily on commercial and institutional projects in addition to those doing civil work; the respondents are nearly split between general contractors and specialty trade contractors. Strikingly, when presented with a long list of options that they would like to be the focus of toolbox talks, webinars, infographics and other ways of communicating information, by far the top option they chose is more information on mental health, suicide and opioid overdose. Far more contractors select this than more typical safety topics like lifting/ergonomics, power tool or ladder safety. This provides compelling evidence that the industry is seeking more resources to address these challenges.

It is useful, therefore, to see the top programs and types of assistance provided by other contractors. The Civil Quarterly survey reveals that some of the most common ones include:

- Employee assistance programs
- Information on where workers can access mental health assessment websites
- Distribution of information on mental health programs and challenges

Strikingly, when presented with a long list of options that they would like to be the focus of toolbox talks, webinars, infographics, and other ways of communicating information, by far the top option they chose is more information on mental health, suicide and opioid overdose.



Photo Credit: Adobe Stock

Notably, civil contractors also rank these approaches as the most likely to be effective to promote improved mental health. In addition, training for field workers directly addressing mental health issues is also cited as one of the most effective means to take, although it is less widely adopted.

Currently, large companies offer all these means of addressing mental health far more frequently than midsize or small companies. However, apart from offering training, none of these require dedicated internal experts on mental health. Instead, the industry is utilizing many of the tools that exist externally, outside of their companies. This strategy could be more widely utilized by small and midsize companies, if they were more aware of these materials.

The report also features an interview with Dr. John S. Gaal, director of the worker wellness program, MO AFL-CIO's Missouri Works Initiative. In the interview, he discusses many external resources available to contractors. These include:

- The website for the Construction Industry Alliance for Suicide Prevention, which offers an interactive training tutorial on suicide.
- CPWR, which has free data and other materials available on mental health, substance use and suicide prevention.
- The National Alliance on Mental Illness and the American Foundation for Suicide Prevention both have useful materials that can be applied in construction.
- The Healthier Workforce Center of the Midwest at the University of Iowa offers toolbox talks and industry guidelines on these issues.
- The United Way's 211 program allows people to connect with resources available to them, including those addressing mental health. It can be accessed by phone, but also by computer.

One of the most challenging elements to address, though, is the culture at a company and the stigma associated with seeking mental health support. Out of the

five strategies included in the survey to deal with this issue, even the most widely used — access to tools that can be used privately like webinars and assessment tools — is only utilized by 36%. Only 35% of the respondents report that their company leadership visibly prioritizes mental health. Wider adoption of these types of approaches could increase the ability of companies to support their staff effectively.

More encouragingly, the shift to a focus on mental health may already be bearing fruit. When civil contractors and engineers were asked to compare the state of mind /state of mental health at their organization currently with that of five years ago, 36% report that it is better, and only 15% believe it is worse. Hopefully, as more companies can utilize existing resources available to them and make them known to their employees, many more will be able to report improvement in the state of mental health at their companies. ▲

Examining Phantom Stock

A real solution to one of the biggest problems in the construction industry

BY CARL OLIVERI

As the construction industry's most precious resource — people — becomes scarcer by the day, it is time for construction executives to think outside the box and consider new ways to attract and retain key people. One of those vehicles is the concept of phantom stock, a unique method to engage key personnel and to vest them in the long-term profitability and health of the construction company.

Phantom stock is a contract between a company and recipients of phantom shares, who are chosen at management's discretion but are usually (as noted above) key personnel. The agreement gives participants the right to a cash payment at a future date or in association with a defined future event (e.g. if the company sells). The value of the phantom units, and their growth, is pinned to the market value of an equivalent number of shares of the company's stock. In other words, if the company does well and the value rises, so does the future payout. The opposite holds true in periods of decline.

There are two types of phantom stock plans your company can provide: full and appreciation. Under both plans, a participant's phantom stock base is assigned a value based on the number of units awarded and the company's equity at that date. As time goes on and the value of the company grows, so does the employees' phantom stock value.

The difference between the two plans is clear when it comes time to pay out the accumulated balance. Under the full plan, the construction company is paying exactly that: the full value, including the starting equity base, which generally is not attributed to the employees' efforts. The appreciation method, on the other hand, pays out the growth between the equity base and the value of the shares on the payout date.

To illustrate, assume that on Jan. 1, a construction company issued 10 phantom stock units to Carl with a starting value of \$100 each, for a total value of \$1,000. Over time, the value of the 10 units will grow to \$1,000 each, for a total value of \$10,000. Under a full plan, Carl would walk away with \$10,000. Under the appreciation methodology, he would earn \$9,000.

One item to note in both scenarios is that the employee does not invest any of his or her own capital into the construction company or take any risk outside of performing his or her role at an optimal level.

There are a number of benefits to the construction company in researching, designing and implementing a phantom stock plan.

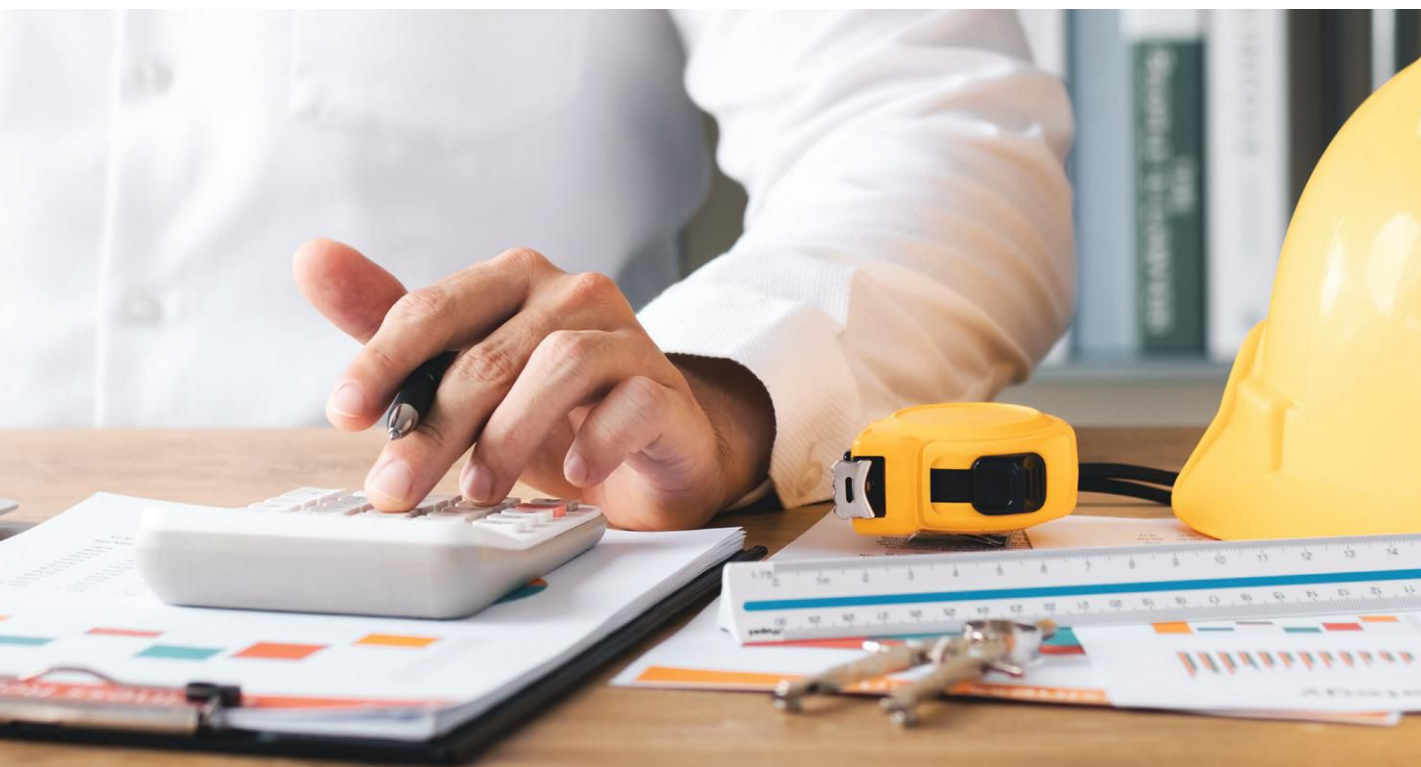
Better Alignment of Organizational & Employee Interests

Stock-based compensation plans are a great tool to align the financial interests of the organization and employees.



Photo Credit: Adobe Stock

Phantom stock is no different. When management can understand what wealth looks like over time to key personnel, they can design a plan to achieve that, assuming financial metrics are met. For the construction company, project performance should increase proportionately to the level of engagement of the project people. Given the financial motivation, employees will be more inclined to make sure projects finish on time and on budget — if not better. Furthermore, think of the efficiency and productivity an organization can achieve if everyone agrees on what success looks like and everyone benefits financially from it. Company executives can build a financial model to strengthen this alignment and keep everyone's goals in clear sight. The model can be shared with the phantom stock owners to show him or her how the strategic growth of the company will directly impact their financial situation over time to achieve their personal wealth goals.



Powerful Retention Tool

It is no secret that money is a powerful motivator, and a phantom stock plan will provide a financial reason for employees to stay. As with most incentive-based compensation/reward plans, however, the company needs to implement a vesting mechanism to ensure that if the value of the phantom stock dips, participants do not “cash out” and run to a competitor. In other words, the plan should be designed that none of the phantom stock value is earned until a certain age or years of service mark is reached.

Exclusive Perk for Future Leaders

Perhaps more important than everything previously outlined, keep in mind that a phantom stock plan is not for everyone. This type of plan should be designated for the key people that the company cannot risk losing to a competitor. While other types of incentives and short-term compensation plans can and will be used for everyone else, phantom stock plans

are designed to retain and reward the construction company’s future C-suite team.

While the concepts and core values of phantom stock sound good, it must not be a surefire solution, or else more companies would be using this tool. There are some important considerations to be made before entering into a phantom stock plan, including:

- *Tax treatment isn't a phantom* – While the company will be entitled to a tax deduction at the time the payment is made (i.e. after fully vesting), the employee, who hasn't received real equity within the company, is paying tax on the payment at an ordinary rate, which is higher than capital rates. This needs to be a consideration for both parties during the modeling process.
- *It only works when it works* – In other words, this isn't real equity for the employees. They haven't invested their own capital within the company, and if there are shifts

or changes that may not align with an individual's personal ideals and goals, it is certainly easier to leave unvested phantom equity behind than attempting to pull real equity out.

The construction industry is a dynamic, growing field that is constantly in flux. The way we build has changed, and so must the way we attract and retain talent. So be open to new ideas for retaining your future leaders. The next great executive of your company may be on the jobsite or in the office right now, and with the proper training and incentives you can cultivate that individual straight up to the boardroom. ▲

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The Lowdown on Significant Risk-Allocation Clauses (Part 2 of 2)

5 critical clauses contractors should know

BY DAVID ARKELL

Contractors wade in a sea of risk for every project, and well-crafted contracts can protect all involved parties. In this second installment on the allocation of risk between general contractors and developers in construction contracts, we'll explore five critical general contract clauses contractors should know.

1. Liquidated Damages

Liquidated damages clauses typically establish a sum certain per day to determine damages the developer will suffer if the contract is not completed on time. Many contractors (and their sureties) treat liquidated damages provisions as anathema. However, such clauses can be beneficial to a contractor for several reasons. First, these clauses help quantify the risk of contractor-caused or inexcusable delays, which may assist the contractor in pricing the project and analyzing the risk should a delay occur. If the contract contains an enforceable liquidated damages provision, the developer usually will only be able to recover the liquidated damage amount, regardless of whether actual delay damages exceed the stipulated sum. Properly drafted clauses also help prevent much of the time, expense and uncertainty in resolving disputes arising from construction delays. Also, a contractor may be able to negotiate a cap on liquidated damages.

It is critical for contractors to

understand that to hold a contractor liable for liquidated damages, the developer must still prove that the contractor caused or was otherwise responsible for the delay. That element of a claim is not negated just because the measure of damages per day is uncontested.

Occasionally, a liquidated damages clause may be structured to allow certain damages to be liquidated and other predictable and ascertainable delay-caused losses to be recovered based on actual expenses. The contractor should recognize and resist these types of clauses, as they negate part of the benefit the contractor may obtain from the provisions.

2. Changes

A changes clause modifies the common law of contracts by allowing one party — the developer — to unilaterally change the contractor's required performance without breaching the contract. The clause gives a developer the necessary flexibility to adapt to the actual conditions of construction to achieve the project's underlying purpose. For example, developers can correct errors and omissions in the plans and specifications and meet unanticipated needs and conditions. In exchange, the contractor has the right to an equitable adjustment to the contract schedule or to additional compensation, or both, to complete the changed work.

When evaluating a changes clause

proposed by a developer, the contractor should look for the following:

- The requirement that the developer provide written authorization and direction to proceed with changed work, as well as an accurate and complete description of the changes.
- A clear and detailed basis for determining the value of the changed work, addressing both additive and deductive changes.
- A requirement that the contractor give the developer notice of the changed work, and the contents of the notice.
- Clear direction regarding contractor markups and other pricing for the changes.
- A pricing mechanism that anticipates variations in quantities and predetermines the resulting effects on cost.

In addition to understanding and evaluating these specific terms, a contractor should also carefully review and negotiate the terms and conditions of the documented change order itself, if necessary. It is especially important to look at the scope of any release or waiver language in the change order form. The contractor should resist any clause that attempts to waive any claims it may have beyond the impacts of the specific change addressed in the change order. For example, a change order form custom-drafted by a developer may require the contractor to waive not only the effects of the specific change dealt with by the change order, but all other impacts of the current change order when taken in the context of all the other change orders, past or future, resulting from other changes in the work. Execution of such a change order would substantially increase the contractor's risk of waiving any claim to such cumulative impacts, which could be substantial over the course of the project.

Of course, the contractor should also be

certain it understands and complies with notice and documentation requirements of the clause, and that its employees who may deal with changes are aware of and compliant with them. Failure to comply could be grounds for finding that the contractor waived an otherwise valid claim.

3. Termination

Construction contracts typically include two types of clauses that allow the developer to cancel the contract: termination for default and termination for convenience. These clauses address different contexts and risks for both parties.

Termination for Default (T4D)

This clause provides a drastic remedy. T4D almost always results in complete polarization of the parties and has long-lasting effects for the contractor, which will have this action on its record. The contractor should ensure that any clause dealing with a T4D requires that the default be material, adequate notice is given, a reasonable right to cure the default is provided and reasonable time limits are allowed.

The contractor also should require that the materiality of a breach be defined as specifically as possible. Additionally, the clause should specifically require that the notice to identify how the contractor allegedly breached the contract refer to specific contract provisions, include a description of the contractor's acts constituting the breach, and specifically identify how the contractor may cure the alleged default and the time within which it must be cured.

Termination for Convenience (T4C)

Most contracts include clauses allowing the developer to terminate for its own convenience without any default on the part of the contractor. Important components of such provisions, and the

frequent cause of extended negotiations or disputes, include provisions dealing with what happens after a developer invokes a T4C. The contractor should ensure that the clause specifically identifies what actions both parties must take, particularly whether the developer is required to pay the contractor some or all of the profit the contractor would have earned had the project not been terminated. The contractor should look for the ability to collect at least a portion of such profit. Alternatively, both parties could agree on a predetermined amount or a method for determining the amount of such recovery by the contractor.

Additionally, the contractor should look for a conversion clause that would require a T4D to be converted to a T4C if T4D was later determined to be wrongful. This clause will prevent the contractor from claiming that the wrongful T4D was a breach of the contract, which could open up the possibility of standard damages for breach of contract. Instead, the contractor would be limited to the compensation in the contract for a T4C. A conversion clause could automatically prevent the contractor from proving and collecting considerable damages for the developer's breach and should be avoided by the contractor.

4. No Damages for Delay

A no-damages-for-delay clause is an attempt by developers to limit exposure to contractors resulting from project delay caused by the developer or an entity for which the developer is legally responsible. Under such clauses, the contractor's recovery for a developer-caused delay is limited to an extension in the completion date. The general intent of the clause is to shift the monetary risk of delay from the developer to the contractor, usually regardless of the cause.

These clauses generally are enforceable, although courts have found numerous ways to either restrict or circumvent the

provisions. A contractor should strongly resist such clauses because of the obvious risk they impart to the contractor. Even if a clause is ultimately found to be unenforceable, the battle to defeat it could be lengthy and expensive, and the ultimate result would be uncertain. It is best to avoid this.

5. Notice

Construction contracts typically require the contractor to give the developer written notice of circumstances that may lead to a claim for additional money or time. The clause is frequently very specific about the timing and content of the notice. Failure to give notice as required can result in denial of the contractor's claim.

Jurisdictions vary on strict notice compliance. Disputes often involve claims of constructive or actual notice and of prejudice to the developer. The contractor should review a proposed notice clause carefully, looking for red-flag language stipulating that strict compliance is necessary; that failure to comply strictly will be deemed a waiver of the contractor's claim; and that the concepts of actual or constructive notice, lack of prejudice and other similar conditions will not excuse the contractor's failure to comply. Such specific provisions increase the contractor's risk if it fails to comply with the clause. A general contractor will have difficulty negotiating changes to these provisions. Absent such changes, the safest alternative is to mitigate the risk by assuring that all employees with any responsibility for claims are aware of the notice requirements and that they comply punctiliously with them. ▲

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Selling Your Business in the Long Haul

Navigating the unique challenges posed by prolonged due diligence

BY PJ MCINTYRE

The pot of gold at the end of the rainbow for many owners of companies is selling their business. Yet, the sobering reality is that the vast majority (between 70% and 90%) of mergers and acquisitions (M&A) transactions fail to successfully close, according to Harvard Business Review.

How do so many deals go off the rails? According to Forbes, “Approximately half of all deals fall apart during the formal due diligence stage.” In the past, due diligence was accomplished anywhere from 30-90 days, with the typical deal’s diligence lasting closer to 60 days.

However, in today’s M&A market, there’s growing evidence that while deals are still getting done, transactions’ due diligence phase has become more in-depth and complex, extending the time it takes to close transactions. Buyers’ increased scrutiny within due diligence is an evolving challenge for owners hoping to sell as it prolongs an already stressful and cumbersome process.

Picture this: You spend decades building a successful business. You decide to sell, invest significant money and enormous time trying to find a qualified buyer to sign a letter of intent (LOI) to purchase your company and begin negotiations, only to have your deal fall apart because of items arising during an extended due diligence process. So, what can owners do to address the new challenges extended diligence poses?

Brokers & Advisors: Quarterbacking Overtime

The pull-yourself-up-by-the-bootstraps mentality has served countless business owners as they build their companies.

But in the world of M&A deals, a DIY attitude is a costly mistake for owners trying to navigate the intricacies of a sale, especially when faced with the minutiae and stress of prolonged due diligence.

Studies show that businesses represented by a third-party advisor are significantly more likely to successfully make it to closing and sell. Even more, owners represented by brokers can expect higher valuations, increased market competitiveness and discreet confidentiality within a sale.

Too many times, owners make the mistake of thinking that just because they know their business better than anyone else (which they undoubtedly do), they’re the best person to sell their business as well. But while they know the business like the back of their hand, lacking the knowledge needed to navigate the highly specific issues within an M&A deal can cost owners dearly. Make no mistake — when it comes time to negotiate a close with the buyer, they’ll come to the table with an army of lawyers, accountants and other experts. Give yourself the best fighting chance possible by retaining an expert to serve as quarterback for your deal team.

Processes & Organization: Order Among Chaos

When a sale becomes especially drawn out, the best way to maintain order within the multiple ongoing facets and stages of diligence is to have predetermined, established procedures and an action plan for requests, actions or communications made by the opposing buy-side.

Such an organization is especially helpful for when (not if) an unexpected

issue arises during a lengthy diligence. Moreover, having a third-party advisor on your side to enact your official procedures creates a cohesive authority structure for communication and conflict resolution when formally dealing with the buyer.

For example, during due diligence, the buyer’s advisors may conduct a quality of earnings (QE), a much-maligned but often necessary examination of the seller’s earnings where the buyer enlists certified public accountants (CPAs) and financial analysts to analyze the seller’s financials and tax returns with a fine-toothed comb to look for errors in sales or earnings. If a mistake is discovered, your appointed advisor would immediately put into place a predetermined plan to facilitate “putting out the fire.” This may include communicating with your CPA or bookkeeper to obtain the relevant data, substantiating the information with legal counsel and efficiently packaging the requisite material to the opposing side.

Task Management: A Tool for Every Task

Harnessing technology and electronic resources can help you stay organized among the seemingly endless conference calls, requests and emails during a long due diligence period. Chiefly, a virtual data room (VDR) is a secure online repository often used in M&A deals for document storage and distribution. VDRs are a cloud-based fold where your deal team can review, share and disclose any documents or information with the opposing buy-side. VDRs give owners an easy — and perhaps most importantly, confidential — way to share sensitive documents and files within the diligence



Photo Credit: Adobe Stock

phase at the click of a mouse.

The best way to keep track of the nearly countless actions and items flying back and forth between the seller and buyer is with a due diligence “tracker.” As the name suggests, this is a file or document which keeps track of what documents have been provided (and which versions), confirmation emails sent, negotiation calls undertaken, dates of performance and other informational data relating to any due diligence requests or actions taken.

Using these technology assets, especially if diligence spans months longer than expected, can be vitally important in keeping track of the countless items being passed back and forth, illustrating that certain necessary actions have been performed, or knowing where and when any changes have been made and by whom.

Exclusivity: Time Dictates All

The deal’s terms, and consequently the structure of the sale, are initially dictated by the contractual language outlined

in the LOI. One key provision should be given particular attention within a prolonged and convoluted due diligence.

As a symbol of good faith and commitment to the transaction, the buyer and seller typically agree to include an exclusivity period as terms of the LOI. Sometimes referred to as a “no shop clause,” this provision prevents the seller from continuing to market the business for sale, soliciting more competitive offers or pursuing any other negotiations with potential buyers.

A set time frame for the buyer to conduct diligence, and by extension the exclusivity period, is established at the onset of negotiations within the LOI (frequently 30-90 days). Crucially important from a seller’s perspective if diligence extends longer than anticipated, the exclusivity clause can be detrimental to the seller’s company and day-to-day operations.

If negotiations fall through, precious company resources were fruitlessly allocated while the owners may have missed out on other, more lucrative

offers. An extension for additional time to wrap up diligence can be granted if necessary. Savvy sellers should use any such requests by the buyer as a negotiation opportunity.

Ultimately, selling a company is a complex, stressful and exhausting process, all for a result that’s not guaranteed. With buyer demands increasing and diligence requests digging into the most granular company details, sellers are rightfully hesitant to launch headlong into a sale. Still, the only thing worse than enduring a drawn-out deal is regretfully missing out on a good deal because you weren’t prepared. ▲

PJ McIntyre is an attorney and co-founder of M&A Brokerage Group, a family-owned consulting group which specializes exclusively in the propane industry advising owners in the sale of their business. His M&A and legal background includes experience in all phases of the sale process, both as a sell-side and buy-side representative. He can be reached at 317-345-1349 or pj.mcintyre@mabrokeragegroup.com.



What to Know About Bond Liability Before Selling Your Company

Not all risks can be transferred, so make sure to protect your assets

BY JOSH CARSON

Selling a construction business can be a bittersweet experience for contractors. Many companies started with a single owner, a few key people or family members. Cashing out is a reward for a lot of hard work and for substantial risks taken. However, some selling contractors learn the hard way that not all liability can be easily transferred. Specifically, the liability on contract surety bonds can be challenging and hard to eliminate. Below are some steps that can help mitigate these risks.

Existing Contracts

Most selling contractors have many projects that are in various stages of completion. If these projects are bonded, this can create liability that continues long after the sale of the company is complete. Many contractors agree to personally indemnify the surety bond company in exchange for bonds. This indemnification is not easily transferred to another party.

Even the best succession attorneys make this mistake. Contractually transferred liability in a sales agreement will not relieve a contractor of their indemnification obligations to the surety bond company.

Here is an example: Contractor A has a contract with Owner 1, and Contractor A provides a performance bond and payment bond on the project. Contractor A then sells to Contractor B before the project is completed. Contractor B contractually agrees to assume Contractor A's project liability. During construction, Owner 1 makes a claim against Contractor A's surety bond. Contractor A believes it is Contractor B's responsibility because they purchased the liability.

Unfortunately, in this example, Owner 1 is holding valid contract bonds on the project. Contractor A's surety will have to pay legitimate claims. The surety does not have a contractual relationship with Contractor B and will seek to be reimbursed from Contractor A. Contractor A may have a valid argument to be contractually reimbursed by Contractor B, but what if Contractor B does not have the funds? At best, this could end up taking time and effort to recover. At worst, it could end up in costly litigation or loss for Contractor A.

Solutions

Obviously, the situation above is not ideal for a selling contractor.

However, this exact scenario plays out all the time. There are two scenarios that produce far better outcomes for all parties involved. These include new contracts or replacing bonds.

New Contracts

The best outcome for selling contractors with outstanding surety liability is to end existing contracts and sign new ones under the new company. In this scenario, the new construction company signs brand-new contracts with project owners, and the new contractor's surety bond company provides new contract bonds for each project. The existing surety bond company will refund any unearned portion of the contract bonds that were in place. The benefit to this strategy is that it accomplishes what each party wants. The selling contractor's liability is limited to projects they oversaw while in control, and the purchasing contractor takes responsibility from the point of sale. The project owner is neutral as they still have a valid contract and bonds in place to get their project completed and protection to make sure bills are paid.

The biggest challenge with this strategy is often with the project owners themselves. Owners may be reluctant to terminate any existing contracts or sign new contracts. However, this process may be easier if the new contractor is an existing, strong construction company. Communication is key. Project owners should understand that they are better working with the new company that is actively interested in the success of the project.

Replacing Bonds

When project owners will not end existing contracts, the next best thing is to replace the surety bonds. Replacing the bonds involves the new construction company providing surety bonds to



Photo Credit: Adobe Stock

Too many contractors assume they can easily pass off their surety bond liability and are often surprised that they cannot. By taking a few extra steps upfront, contractors limit their long-term risks.

replace the selling contractor's bonds. The difference is that the existing contracts remain in place. The new contractor must get the old surety bonds back in exchange for the new bonds.

This process can still create some confusion for project owners, but they do not have to close any existing contracts or sign new ones. As long as they have their required bonds, this is usually not a problem. Normally, the existing surety bond company will refund all premiums for the old bonds, but this is not required. The new bond company will certainly require premiums to be collected, and this could result in paying for two bonds for the same project. Finally, contractors should be aware that they will need a

letter from the project owner stating that there are no problems on the project and that all payments are up to date.

Remove Indemnity

Another mistake I have seen contractors make when selling their businesses is not requesting indemnity from a bond company. This becomes less of a concern with an asset sale but is a must for any stock sale. A letter should be sent to all bond companies the contractor has used in the past requesting that any indemnitors beside the sold construction company be removed. This can be a challenging task. Contractors may have used many different bond companies over the years and may

have had a number of indemnitors.

Unfortunately, I have seen this mistake come back to haunt selling contractors. These contractors thought they sold off their liability only to find the buyer in a bond claim in the future. The selling contractor may have had no involvement with the project, but when these claims happen, the bond company will go back through their file and look for all indemnitors and assets. A contractor could easily find themselves on the hook many years down the road.

A best practice would be to send a certified letter to all surety bond companies the contractor has used. It should contain the date of sale and specifically state that all previous indemnitors request to be removed from future indemnity. It is important to note that this will not relieve any of the indemnitors from liability that was incurred for bonds written. Unfortunately, this liability can extend many years in the future. This is common for maintenance and warranty provisions.

Selling a construction business is a great reward for sellers and an opportunity for buyers. However, too many contractors assume they can easily pass off their surety bond liability and are often surprised that they cannot. By taking a few extra steps upfront, contractors limit their long-term risks. Business transition attorneys and advisors serve a valuable role but should not be used exclusively by contractors. Always make sure to get the advice of a good construction attorney and surety bond advisor in the process. ▲

Josh Carson is vice president and partner at Access Surety Bonds. For 20 years, Carson has helped contractors and businesses with surety bonds, finance and business management. Carson holds an associate degree in fidelity and surety bonding and a degree in finance. Visit access-surety.com.



6 Key Tactics for Branding a Construction Company

Secrets & strategies of building an unforgettable identity

BY CHEMENE PHILLIPS

Your brand in the construction industry is much more than just a logo — it's your professional handshake, your unique brand identity in a crowded market of steel-toed boots and blueprints.

Think of branding as the soul of your construction business: the commitment you deliver and the image that comes to people's minds when they hear your company's name.

Wondering what that image should look like?

Check out these six core branding strategies that will plant your brand's boots firmly on the ground and make you the go-to builder in the business.

1. Get to Know Your Audience

The bedrock of any great structure — and brand — is understanding who you're creating for. You're not trying to attract just anyone to your construction business. That's why it's vital to familiarize yourself with the lives of your target audience and find out their needs, desires and the trends they're into.

When your brand talks their talk and lines up with their main concerns and dreams, you'll be more than a construction company — you'll be the one they trust and remember.

So, how do you get the scoop on your audience? Here's a starter kit:

- *Demographic drill-down* — Get to know their ages, incomes and lifestyles. This

information helps you figure out who you're talking to, how to best address their needs and what mediums you need to market to them.

- *Psychographic mapping* — This involves understanding their personal values and beliefs. Do they value eco-friendly, sustainable materials? Are they looking for cost-effective solutions? Aligning your brand with these deeper values creates a stronger connection.
- *Behavioral patterns* — Observe how they interact with brands. Do they prefer online research, or do they rely on word-of-mouth recommendations? This insight helps tailor your branding and marketing efforts.
- *Local landmarks* — Be aware of regional tastes and preferences to ensure your brand feels familiar and relevant to your local audience.
- *Emotional constructs* — Recognize the emotional needs of your target audience that your brand can promise and deliver, such as security, safety and reliability.
- *Pain points* — What challenges does your audience have? Why would they be seeking your solution as an option? Making sure you understand the pain points that would cause them to consider your solution is a critical part of your visual and verbal messaging.

2. Sharpen Your USP

Your unique selling proposition (USP) is

what differentiates you from the rest. It's a clear statement that communicates why someone should choose your services over another for their construction project.

Here's a step-by-step to finding your USP:

- *Identify what you do best* — Is it your innovative use of materials, your value engineering process or your high level of customer service?
- *Assess your competitors* — What are they offering, and what can you do differently or better?
- *Convert your strengths into benefits* — How does your approach make your target audience's lives easier, make their construction projects more successful, or help them save on their bottom line?
- *Write a clear USP statement* — Craft a statement that you and your employees can remember and repeat easily and effectively. Make it clear and concise, then consistently spread it across your different marketing channels.
- *Reinforce your USP* — Ensure that every interaction with customers reinforces your USP, building trust and recognition for that thing only your company can deliver.

3. Craft Your Mission, Vision & Values

Your mission, vision and values are like the architectural designs for your brand — they give you and your team direction and purpose across your entire brand infrastructure.

Here's how to develop each one:

Your Mission

This is your "why." It's the core reason your company exists beyond making money. What change are you driving in the construction world? What's your impact on the community? Create a clear mission statement that covers what you

do, who you do it for and how it helps them.

For example, Caterpillar's mission is to "enable economic growth through infrastructure and energy development, and to provide solutions that support communities and protect the planet."

Your Vision

This is the "what." It's the end goal you're working toward. It could be a vision of transforming city skylines or creating sustainable homes for future generations.

What is your company trying to achieve in the grand scheme of things? Why? Your answers to these questions will form the bones of your concise vision statement.

For example, Turner Construction's vision statement is "to be the highest

value provider of global construction services and technical expertise."

Your Values

Your core values are your "how." They're the principles that guide your business practices and interactions. Are you committed to integrity, innovation or sustainability? Or perhaps you're more about transparency, communication and safety.

Whatever values matter the most to your company, make sure they're clear and nonnegotiable.

For example, here's what Bechtel Corporation's valued are:

- We live for a challenge.
- We do the right thing.
- We succeed together.
- We take care of each other.
- We build trust.

4. Construct Your Brand Messaging

Your brand messaging is the voice of your brand. It's how you communicate your value and vision to the world, so it's crucial to get this right and keep it consistent to unlock the true power of construction branding.

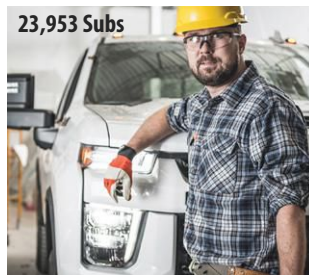
Here's how to craft effective brand messaging:

Develop Your Brand Voice

This is the personality of your brand. Are you authoritative and confident, or do you have a friendly, supportive kind of vibe? Think about how you tend to communicate with your customers, and use this as a starting point for your brand voice.

You want your target audience to have a consistent experience with your brand,

Perhaps These People Know Something That You Don't Know



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so make sure the voice you land on isn't wildly different from how you and your team communicate in person.

Create a Memorable Tagline

A tagline sets the scene for every successful construction business. It's often what sticks out in people's minds when they think of a brand.

Take Nike, for example. As soon as you read those words, you're probably already thinking of their "just do it" slogan. That's the power of a great slogan. Creating brand slogans is one of the most difficult — but important — aspects of your brand messaging.

- **Clarify your construction services** — Instead of just listing your services, explain them. What does each service offer your audience, and what are the benefits for the customer? Help them understand the value you provide.
- **Keep your messaging consistent** — Whether it's on your website, social

media or in a brochure, your messaging should always be recognizably "you." If potential clients don't see consistency, they may trust your brand less. After all, if you can't keep your online presence consistent, how detailed will you be with their build?

5. Design Your Visual Identity

Your visual identity is what gives your brand its visual flair — it's the logo, color palette, fonts and design that people see across all online and printed marketing materials.

Here's how to create a compelling visual identity:

- **Design a logo** — Your construction logo should be distinctive and represent your brand values. It's the face of your company.
- **Select a color palette** — Colors can evoke certain emotions and convey messages, so choose colors that resonate with your brand's character.

- **Choose your typography** — The fonts you use should be readable and reflect your brand's personality.
- **Use impactful imagery** — Images should exemplify your work's quality and vision.
- **Design collateral** — Business cards, brochures and signage should be consistent with your brand's visual identity and leave a lasting positive impression.
- **Ensure a cohesive digital presence** — Your website and social media should clearly reflect your brand's visual theme and brand identity.

6. Cement Your Online Presence

Having a strong online presence is crucial for a successful construction brand. It's how people find you, get to know you and engage with you. It's how you grow awareness and engagement 24/7 for both current and prospective clients and employees.

Here's how to establish a strong digital footprint:

- *Create a user-friendly website* – A website is your brand's online real estate. It should be welcoming, informative and reflect the quality of your work. It should address the audience's pain points and how you solve them throughout the site. Make sure it's easy for visitors to find what they're looking for, whether it's your services, project portfolios or contact information.
- *Engage on social media* – Choose the right social media platforms for your audience and use them to engage in meaningful ways, showcasing your brand's personality. Regularly post updates, photos and videos of your work, team and industry insights. Start conversations and encourage followers to share their thoughts, further

amplifying your brand's reach.

- *Invest in content marketing* – Content marketing involves creating articles, videos and other content types that provide real value to your audience. For example, you might write educational blog posts about the construction process, advice on choosing the right materials or insights into the latest industry trends.
- *Optimize for search engines* – Search engine optimization (SEO) is all about increasing your brand's visibility online. When people search for construction-related services, you want your brand to be a top result. Achieving this involves keyword research, on-page SEO, quality content and local SEO.
- *Use email marketing* – Email marketing allows you to send personalized messages directly

to your audience's inboxes. This can include blog posts, special promotions or updates on new construction projects. It's a great way to reinforce your branding and stay top of mind with your target audience.

Building a brand is like constructing a building – it takes time, planning and dedication. The effort you put into these six strategies will lay the foundation for a brand that not only stands out, but also stands the test of time. ▲

Chemene Phillips is the founder and president of BRIXbranding. Bringing more than two decades of experience, Phillips is an architect of powerful brand transformations in the built environment. Fueled by her love for storytelling, she's dedicated to helping clients build growth initiatives that achieve success. Visit brixbranding.com.



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6 Reasons Track Conversions Are a Must-Have in Construction

Equipping your fleet for rugged terrain

BY ROB OLSON

Photo Credit: MatTracks

Rubber track conversions are gaining popularity as an easy-to-install solution for commercial construction and other types of businesses that frequently need to travel over rugged and unpredictable terrain. Built initially for lighter-duty trucks, advancements in rubber track conversion systems are now a smart option for contractors and construction companies that are driven to complete projects on time.

As compared to expensive alternatives like building temporary haul roads, rubber track conversions are available for most any kind of heavy-duty industrial or commercial truck or specialized vehicle. With tracks versus tires, large service rigs — such as those used in the energy, mining, military and construction industries — can easily traverse through softer surfaces like mud and snow.

The oil and gas industry was one of the first to turn toward truck tracks. Over the past 10-15 years, many others have followed. Companies have listened to the specific needs of large equipment operators and have successfully engineered commercial-quality track conversion systems.

When it comes to tracks versus tires for heavy-duty trucks, here's a short list to share with the decision-makers in your organization.

1. Traction

Rain, mud and snow are no excuse when you have tracks on your trucks. When it's a business at stake, operators need to find

a way to gain traction to move heavy vehicles through sloppy conditions. Tracks provide more transfer torque to the ground, greater traction and increased flotation. As a result, the ground pressure and environmental footprint is reduced.

2. Cost-Efficient

Most track customers agree that the return on investment (ROI) of a track conversion system will most often outweigh the cost of building temporary haul roads. Or worse yet, the expense of having to hire massive machines or helicopters to come in and drag vehicles out of mud, snow or sand. At the same time, construction and industrial operators avoid losing the tens of thousands of dollars it can cost for each down day due to weather delays.

3. Versatile

Commercial-level rubber track conversions are designed not only for soft, wet terrain but also for higher speeds on the roadways when traveling from home base to each worksite. Track manufacturers know that speed and efficiency matter regardless of the vehicle size and weight. Also, the track conversions can be easily switched over to another vehicle in the fleet, if needed.

4. Durable

Advancements in track design have increased durability, efficiency and even tolerance for speed. Today's rubber track

With tracks versus tires, large service rigs ... can easily traverse through softer surfaces like mud and snow.

conversion systems are designed to carry the weight of Class 7 or 8 heavy-duty trucks as well as specialized equipment. Higher-end track conversion manufacturers have a broad range of options with high-end systems engineered to handle up to 80,000 pounds.

5. Specialized

Besides heavy and extra heavy-duty trucks, track conversion systems are also available — either standard or custom — for specialized equipment such as aerial lifts, telehandlers, autonomous vehicles, fire trucks and many others. Depending upon the industry's specific needs and/or the challenges of a certain project or region, track conversions can be an ideal way to solve a specific mobility problem.

6. Safe

The last, but not least, reason for tracks in construction is safety. Rubber track conversions from a proven industry leader and experienced manufacturer will likely have a track record in safety. A track maker with a history of no injuries or deaths is an important consideration due the wide range in what is

considered safe for dangerous jobs. Tracks for heavy-duty work trucks need to be made with the best available materials and designed specifically for each vehicle in the fleet.

The bottom line is that rubber track conversions are one important way your construction projects can safely and efficiently stay on track regardless of challenges related to terrain or bad weather. What matters most is the well-being and productivity of your crew. The most critical factor in achieving this is the quality, durability and versatility of your equipment fleet. With track conversion systems, operators will surely work more hours, accomplish more, and prevent disasters, delays and emergency situations.

Regardless of the specific application, industry, equipment or unique challenges related to the completion of short or long-term projects, rubber track conversions are one good way to stay on course. Contractors, owners and operators know that in today's high-pressure work environment, it's crucial to remove any controllable obstacles and keep moving forward as quickly and efficiently as possible. ▲

Rob Olson is the global account manager at Mattracks. Born and raised in Minnesota, Olson's experience ranges from road construction operator and foreman to a heavy equipment operator in the pipeline industry. In 2021, Olson joined the Mattracks sales team, where he works directly with customers to guide them in selecting the right rubber track conversions for their needs. Visit mattracks.com.



Photo Credit: Mattracks



The Rise of Renewable Diesel

What alternative fuel can offer the construction industry

BY STAFF WRITERS, ASSOCIATION OF EQUIPMENT MANUFACTURERS

To fully understand the potential of renewable diesel and its role in what's expected to be a greener, more sustainable future for the construction industry, it's important to understand what's expected of the fuel in both the near term and the long term.

In November of 2022, the California Air Resources Board (CARB) approved amendments to its off-road regulation aimed at further reducing emissions from the off-road sector. In amending the In-Use Off-Road Diesel-Fueled Fleets Regulation (Off-Road Regulation), CARB required fleets to phase out use of the oldest and highest polluting off-road diesel vehicles in California; prohibit the addition of high-emitting vehicles to a fleet; and require the use of R99 or R100 renewable diesel in off-road diesel vehicles, effective as of Oct. 1, 2023 (with requirements beginning as early as Jan. 1, 2024). Finally, as part of its announcement of the regulation, CARB said the program was expected to yield more than \$5 billion in health benefits between 2023 and 2038.

"Regulations like this one are here now," said David Bolderoff, fleet manager for the Los Angeles County Sanitation Districts, who detailed his thoughts on renewable diesel during an education session at CONEXPO-CON/AGG 2023. "They vary state by state, but this one in particular is a game-changer."

With regulations like the amended CARB Off-Road Regulation starting to come into play, consumption of renewable diesel

is expected to rise significantly in the coming years. But what is "renewable" diesel, exactly? It turns out it has a very similar chemical and structural composition to petroleum diesel, though it's often comprised of fats and oils (animal waste fats, wasted fish products, used cooking oil, vegetable oil residues, tall oil pitch, crude palm oil, rapeseed oil and waste grease).

However, according to Bolderoff, what really sets renewable diesel apart from counterparts such as petroleum diesel and biodiesel is its higher energy density, which is somewhere in the range of 5%.

"That's important, because the more energy you have in fuel, the less you need to produce the same amount of power," said Bolderoff. "One of the real downsides with biodiesel is it has less energy density. And though it is rather difficult to beat the properties of petroleum diesel, renewable diesel is slightly better, and it burns cleaner."

Renewable diesel also:

- Is a paraffinic fuel (with a superior cetane number of >65, which indicates its combustion quality)
- Offers a desirable cloud point
- Provides efficient combustion
- Increases engine life
- Reduces maintenance costs
- Provides a smaller environmental footprint (65-90% carbon reduction)



U.S. renewable diesel production is expected to more than double during the next two years to meet ever-growing demand and increased regulatory activity.

is an easy-to-use drop-in,” said Bolderoff. “So, construction professionals don’t need to buy new equipment. And while it’s not necessarily recommended to mix it on a regular basis, if you have a half a tank of fossil-based diesel fuel, you can drop this fuel in and you’re not really going to have any negative or detrimental effects.”

Because widespread adoption of renewable diesel has yet to take place, there isn’t a ton of consistent guidance regarding how it should be used. According to Bolderoff, equipment service and operations manuals often feature a couple of pages on biodiesel, but nothing specifically on renewable fuel. More recently, he noted, original equipment manufacturers (OEMs) have issued statements saying that if a fuel meets the ASTM D975 standard, using it won’t void the manufacturer’s warranty and it won’t hurt the engine.

“So, if you have a good understanding of its fuel and what it offers from an efficiency standpoint and an emissions reduction standpoint — as it offers somewhere in the range of a 65-90% carbon reduction — you can actually use that in your bid process,” said Bolderoff.

“Because what if bids are based on total carbon footprint, rather than just the lowest bid?” he continued. “In California, with what we’ve actually seen with things like the renewable identification number (RIN) and low-carbon fuel standards (LCFS) credits, we’ve found that (using renewable diesel) actually saved us money, or at least it was price comparable.”

Demand for renewable diesel is expected to rise in the not-too-distant future, due in no small part to increased regulation of the off-road industry. And, as the construction industry begins to evaluate how to comply with various regulations, they’ll need to possess a strong understanding of the options available to them — while still considering implications related to productivity, safety and the ability to service and maintain vehicles and equipment. ▲

The Association of Equipment Manufacturers (AEM) is a North America-based international trade group representing off-road equipment manufacturers and suppliers, with more than 1,000 companies and more than 200 product lines in the agriculture and construction-related industry sectors worldwide. The equipment manufacturing industry in the U.S. supports 2.8 million jobs and contributes roughly \$288 billion to the economy every year. Visit aem.org.

- Provides superior cold weather performance
- Offers good storage properties
- Is essentially odorless

Currently, the vast majority of all renewable diesel consumption occurs in California. And, as of just two years ago, Oregon was the only other state where renewable diesel was consumed. That, however, is about to change. According to the U.S. Energy Information Administration, U.S. renewable diesel production is expected to more than double during the next two years to meet ever-growing demand and increased regulatory activity.

“What we’re seeing in terms of the trend moving forward is big oil getting behind renewable diesel,” noted Bolderoff. “And what we’re seeing is they are spending a lot of time converting their refineries. So, in the next few years, we could really see significantly more production.”

However, the most notable characteristic of renewable diesel that is expected to impact its adoption is that it’s a true “drop-in” fuel that can be easily blended with petroleum diesel or biodiesel. In addition, and perhaps more importantly, it meets the same ASTM D975 certification standard that ultra-low sulfur diesel does as well.

“We’ve seen a ton of state and federal infrastructure projects requiring the use of alternative fuels, and renewable diesel

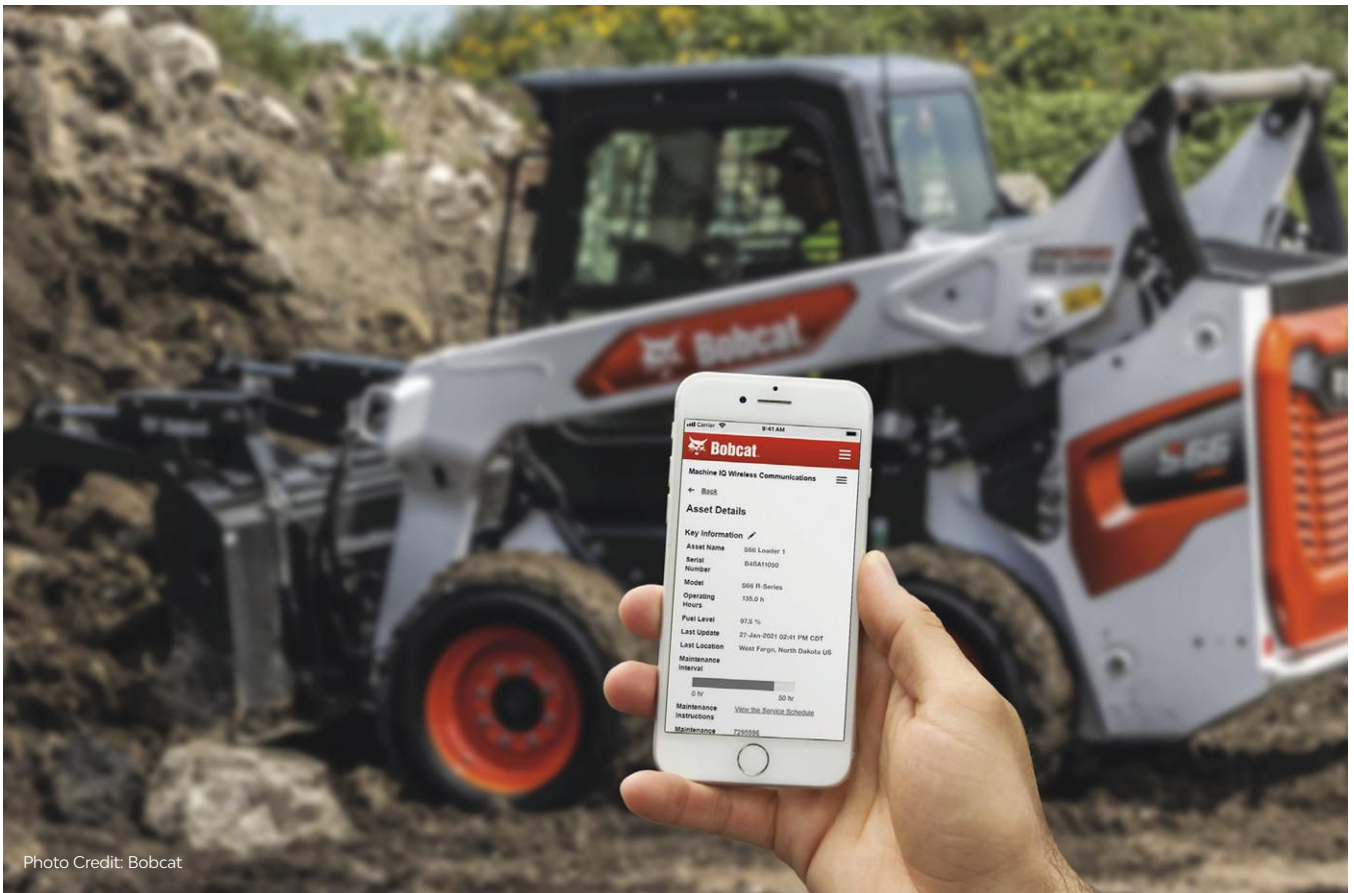


Photo Credit: Bobcat

How to Take Full Advantage of Equipment Telematics

Gathering data insights & looking at the bigger picture

BY LOGAN LITTLE

Today's compact equipment is intelligent, capable of providing owners, fleet managers and machine operators with vital information that can help them manage their businesses more efficiently, increase jobsite productivity and avoid unnecessary downtime. It's all possible with machine telematics — wireless information systems that link human and machine like never before. As a business owner, you can use machine telematics to:

- See where all your assets are in real time
- Remotely track equipment across multiple jobsites and projects
- Track how many hours your machines are in operation and monitor each machine's fuel efficiency
- Receive fault code notifications and maintenance reminders
- Use technology and data as a proof point when attracting new employees, particularly millennials who will

represent 75% of the global workforce by 2025

Understand All the Benefits of Your Telematics System

Machine telematics have several benefits for business owners, including improved fleet productivity and efficiency, proactive machine maintenance and protection, and preventing failures and unscheduled downtime. Knowing how to use this information not only keeps you in the driver's seat of your business but can equate to increased return on investment (ROI).

But before you can fully understand the benefits of your telematics system, you need to grasp what your system can do in the first place. In some cases, it may be a lot more than you think. Always talk to your dealer about your machine's unique telematics information, available packages

and how to best utilize your machine data for long-term success.

Make the Most of Your Investment

Once you have a full picture of your telematics system's capabilities, you can truly put it to the test and make sure your business is using those tools in the right way.

1. Get Set Up

As you are setting up a new system, first map out what key information you want and when you want to get it. This includes setting up notifications for key indicators like fault codes, fuel usage, maintenance intervals and more.

2. Review Your Data

Collecting information is one thing, but it's what you do with it that really counts. Understand how to apply that data to your business goals and operational objectives, including preventive maintenance scheduling, parts and components ordering, and work hours.

3. Stay Consistent

Utilizing telematics is a fluid, continual process. It's not something you can set and forget if you really want it to be a useful business tool. We recommend regularly checking equipment performance data, as well as other key indicators, so you can track machine performance over a period of time.

4. Maximize Your Opportunities

Once you begin tracking and then optimizing your telematics data, you can begin to uncover actionable insights. For example, data related to fuel consumption and maintenance needs can be used to identify inefficiencies and proactively schedule service appointments.

5. Appoint Telematics Leaders in Your Organization

In a company culture that embraces

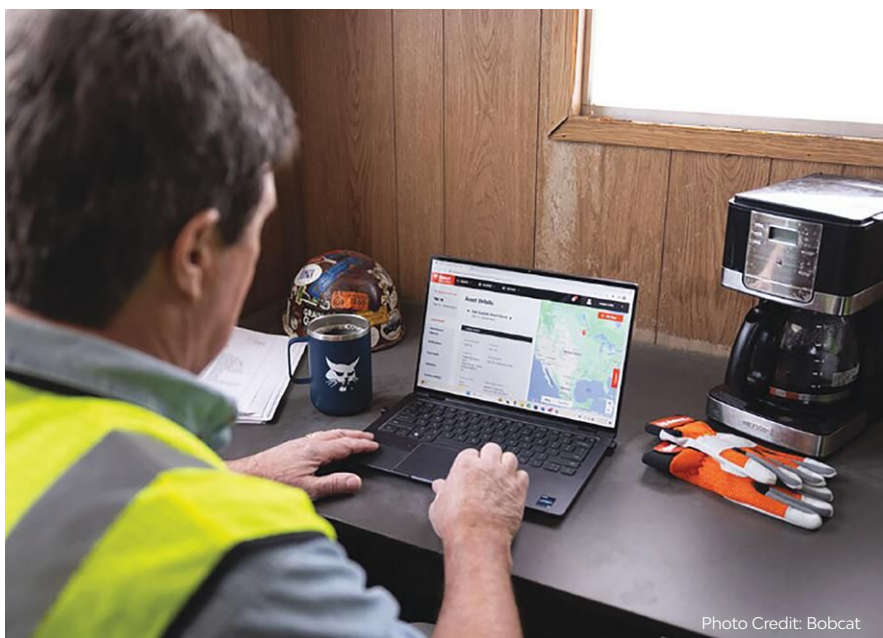


Photo Credit: Bobcat

Machine telematics have several benefits for business owners, including improved fleet productivity and efficiency, proactive machine maintenance and protection, and preventing failures and unscheduled downtime.

technology, innovation and data is critical to cultivate the next generation of construction professionals. These individuals are looking for opportunities to grow, and rewarding talent in this area through increased leadership is a great way to do this.

See the Bigger Picture

While an increase in ROI and productivity are huge benefits of fleet telematics, also consider the long-term impact these data systems will have on the industry as a whole.

A recently published study by the Association of Equipment Manufacturers (AEM) cites that increased usage of machine telematics and digital control systems (among other technological advancements) have led to 79% reduction in worksite injuries, an 83% reduction in worksite fatalities associated with

equipment, a 96% reduction in nitrogen oxide (NOx) and particulate emissions per gallon of diesel fuel consumed, and a 13% reduction in carbon dioxide emissions per machine hour.

This adds up to a win-win for your company, your customers and the industry.

Our industry continues to evolve, and technology is at the forefront of those changes. Taking full advantage of equipment telematics will help you win more bids, maximize your budget and stay competitive in today's market. ▲

Logan Little is a senior marketing specialist at Bobcat. Little helps Bobcat equipment owners and operators harness the full power of their machines through Machine IQ telematics and other digital products. Visit bobcat.com.



Electric or Hybrid vs. Engine-Powered Boom Lifts

Uncovering the best option for your fleet

BY NATE HOOVER

Boom lifts, or cherry pickers, give you the reach necessary to complete difficult indoor and outdoor tasks safely at height — even extreme height. But how do you choose between electric, hybrid and engine-powered? Which one is right for you?

Your choice between electric, hybrid and engine-powered boom lifts depends on where you work, when you work, and the knowledge and availability of service personnel.

Engine-Powered Boom Lifts: Maximum Reach, Maximum Power

Engine-powered boom lifts give you the reach and power for outdoor performance. Some brands offer two types of engine-powered boom lifts:

- Articulating models have a versatile jib to take you up and over obstacles for precise positioning.
- Telescopic models provide faster ascent and extended reach so you can maximize productivity by reaching full height quicker.

Electric Boom Lifts: Less Intrusive Operation

Electric boom lifts help complete jobs with virtually no noise or odor and zero emissions, making them ideal for indoor applications. Their quiet operation also makes electric booms well suited for after-hours work, indoors or outdoors, including densely packed

urban environments where noise may be disruptive to residents. Many electric boom lifts also offer non-marking tires or non-marking rubber tracks, keeping flooring, sidewalks and landscaping intact.

Lithium-ion batteries are available on some electric and hybrid machines, providing high energy density, low maintenance and maximum longevity.

Hybrid Boom Lifts: The Best of Both Worlds

Hybrid boom lifts can get you where you need to go, and then provide an electric solution for more sustainable — and less intrusive — operation. These machines have the unique ability to support a project from start to finish, on rough terrain to finished floors. The use of one machine for all work provides a more economical and efficient solution for the rental company and the end user.

For example, JLG's hybrid articulating and telescopic boom lifts run on a battery with electric drive system, coupled with a diesel generator. Users experience zero emissions when running in electric-only mode and low emissions when the diesel generator is running to charge the battery. In indoor applications, a user can disable the engine with a switch for emissions-free, low-noise operation. The charger can also plug into an external source of electrical power to charge the batteries without running the engine.

Hybrid and electric boom lifts may

help companies earn carbon credits, meet green building requirements set by municipalities, and achieve their corporate environmental, social and governance (ESG) goals.

Service Considerations

Still not sure whether to go engine powered, electric or hybrid? Consider the capacity and skill of your service personnel. Some electric models are specifically designed for fewer scheduled services and less preventive maintenance. However, servicing and repairing high-voltage electric or hybrid machines requires advanced training, even if maintenance is less frequent.

Boom Lift Evolution

As technology advances and new power solutions become available, electric and hybrid solutions will continue to evolve, helping you achieve maximum productivity and push the limits of what's possible. ▲

Nate Hoover is the director of product for mobile elevated work platforms, boom category for JLG Industries Inc., a part of Oshkosh Corporation. In this role, he leads the development and organizational execution of a market informed JLG product strategy that maximizes business outcomes across a global portfolio. Hoover has 20 years of multinational B2B enterprise experience and is seasoned in evaluating business opportunities that deliver transformational growth. Visit jlg.com.



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3 Risks of Using AI in Construction

Exploring the potential pitfalls of tech & how to avoid them

BY PETER RIFKEN

Artificial intelligence (AI) can bring benefits to the construction industry. But like any new technology or equipment on a jobsite, you need to learn how to safely operate it to get the most from the investment.

Based on conversations with executives at midsized and large construction companies, it's clear that AI is already boosting productivity. For example, consider the complexity of a large-scale construction project and the need for accurate, real-time information across every aspect of the build. This includes

finding and assigning skilled labor, ordering and tracking supplies, filing proof of compliance and more. Every part of the project has multiple steps, many of which can be automated and streamlined using AI. This has proven to be a considerable time saver. In construction, minutes equal dollars, so any time efficiency and productivity can accelerate project timelines without compromising safety, it is a win.

But there is a catch.

Getting a return on AI requires the underlying data to be accurate, consistent

and current. When data comes from a variety of sources, such as apps downloaded on a jobsite, ad hoc forms or a spreadsheet, there is a higher likelihood of inconsistency. Even if these tools and apps are driven by AI, they are faster — but poor-quality data will not produce highly valuable insights. Remember, AI is an evolutionary technology, constantly being trained and improving based on the input it receives.

Now imagine that same large-scale construction project has information about a delay in the supply chain. That

As data grows throughout the company, accelerated by AI, you will need to properly manage and analyze it. This allows you to identify unseen patterns and predict likely outcomes based on a continuously learning AI model.

detail is kept separate from information about the availability of skilled carpenters available on a Tuesday. When the carpenters show up on the assigned day, they find they have nothing to do because of that delay in supplies. The cost of this oversight is significant, and it is especially frustrating knowing the issue was avoidable. If the information in digital tools and apps is not brought together in a cohesive way, it increases financial, operational and safety risks.

When considering the risks of AI in construction, they typically fall into three areas.

1. The Risk of Gray Work

The first risk, and the one with the strongest ripple effect, is known as gray work — the time and resources lost using workarounds, ad hoc solutions, and other processes when technology and established methods won't work for you. A common symptom of gray work is time and resources lost trying to reconcile various sources of data and information located in a variety of tools and apps. Gray work makes it hard to collaborate, effectively manage all the parts of a project and make the right decision in a timely manner.

To address gray work, take a closer look at the technology being used in the office and on the jobsite, and look for redundancies, workarounds and information silos. Bringing information together on a dynamic work management platform makes it easier for employees to find what they need, when they need it, at the speed and scale of the project.

2. The Risk of AI Reliance

The second risk, ironically, is overreliance on AI. This may not seem possible in construction, where the end product is a physical structure, but it can happen when AI is viewed as a replacement for work, as opposed to a way to augment and streamline project management.

AI cannot replace all the functions of a construction project, but it can automate time- and resource-intensive tasks such as scheduling, approvals and reporting. And we have all seen examples of how AI can reduce the risks of jobsite accidents by sending robots into risky or hard-to-reach areas, or by identifying failing or soon-to-fail equipment based on maintenance records and equipment life spans. But every job still requires laborers, project managers, site supervisors and others to make sure the work gets done properly.

How do you know you have an overreliance on AI? You will know if decisions are made solely based on AI recommendations and/or your team is unable to accurately assess a situation and make the right decision without the aid of AI.

3. The Risk of Not Managing & Optimizing Data

The third risk is not effectively managing and optimizing the data being generated within projects and across the company. When project teams are using AI-driven tools and apps to streamline processes, and those insights are cohesively brought together to eliminate gray work, the next step is to use the data to run an even more efficient construction business.

Otherwise, you're accumulating mounds of data and missing an opportunity to get ahead of potential project delays.

As data grows throughout the company, accelerated by AI, you will need to properly manage and analyze it. This allows you to identify unseen patterns and predict likely outcomes based on a continuously learning AI model.

For example, consider that constructing a new wing on a hospital typically takes your team 24 months. AI-driven insights can analyze past project milestones and spot potential delays based on previous interactions with suppliers, sourcing skilled labor and local inspector protocols. Knowing about potential setbacks leads to smarter bids and more accurate project plans.

Another benefit of proper data management is training AI models on your construction processes. Since so much of construction is local or regional, adapting the models to how your business works can be a significant productivity boost.

After attending last fall's big construction trade shows and working with construction decision-makers around the globe, it's clear that AI will have an even bigger impact on the built environment. While it offers productivity boosts, making the most from your investments in AI requires a strategic plan that is realistic about the benefits and the risks.

The next and final article of this three-part series will explore real world examples of how AI in solving the gray work issue in construction. ▲

Peter Rifken is a Fellow Solutions Consultant at Quickbase. In this role, he bridges the gap between technology and business by providing valuable insights and driving action through people, processes and data. Visit quickbase.com.



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The Architecture of a Strong Safety Program

Understanding root-cause analyses & their value

BY JAMES RAMSEY

Team member safety is on the minds of organization leaders each day. Successful companies know the importance of keeping their teams safe, no matter the type of work they do or the conditions in which they do them. A safe workplace is also critical to employee recruitment and retention, which are important in today's competitive employment environment. A workplace that is free from incidents and accidents is also a more productive workplace.

So, what can organizations do to

protect their employees? Responsible analyses of safety incidents, along with careful tracking and measurement of safety indicators, are two critical parts of a strong safety program.

Root-Cause Analysis

Each day we face challenges that stretch and pull us from many different directions. None of these are more difficult than when we receive a call informing us that one of our team members has had a serious incident or injury.

Once the incident is over and the team member is receiving the care required, the next vital step is performing a root-cause analysis (RCA) to determine what happened and to prevent it from happening again. Typically, an investigation team consisting of project management, superintendents, supervisors and safety professionals review and secure the scene to collect information relevant to the incident.

As you begin an incident investigation and RCA, it is important to keep in mind that it must be done in a fear-free environment that focuses on the facts as they stand alone, and it must always avoid blame. The information collected must not gravitate around preconceived notions of employee error or misconduct.

Common Causes of Incidents

Most safety incidents occur due to one of

three causal factors:

1. **Human error** — Simple distractions or lapses in judgment are one of the most identifiable causes of incidents. Determining that an error was made is the first part of an investigation, but it does not stop there. We must consider all the factors that allowed the person to make the decision, and work to mitigate those same mistakes from happening again in the future.
2. **Safety systems** — Incidents in these areas require a look at the physical safety systems, how employees are trained on the processes, and how safety systems are implemented and used throughout a company. Are the processes outdated? How was the employee tasked? Was the employee properly trained? What did the training consist of? Is there a training knowledge assessment?
3. **Culture** — Culture is the most difficult part to examine for most employers. It is driven from the top of the organization down, including everything from how processes and procedures are developed to how they are implemented, used and verified. Culture is a critical factor in how employees make decisions, whether positive or negative, based on a perceived acceptable level of risk. At some organizations, project budgets and schedules drive decisions about acceptable levels of risk. Will we have employees working from ladders or lifts? Do we bring in logistics personnel to handle and stage material, or can we use the field teams (or, often, inexperienced apprentices)? Is there enough heavy equipment to warrant hiring a specialty contractor to move and set large electrical apparatus or generators? Should we bring in a specialty contractor for core hole drilling, or does that fall on our team members?

Steps two and three can be difficult, because they require that organization leaders take a hard look in the mirror. Keeping an open mind and being willing to look just as hard at your safety systems and culture as you do the actions of employees enables you to develop effective safety systems and cultivate a positive safety culture, which provides a defense against human error. Organizations with a genuine passion for protecting the health and safety of their employees and working to prevent future incidents can enable RCA success.

Measuring Safety Efforts

Another critical factor in ensuring team members' safety is the ability to measure an organization's safety efforts. Like every other aspect of business, safety must be measured so that companies can determine their level of performance and whether they are heading in the right direction. A clear understanding of safety performance indicators can raise awareness among leadership and team members and help focus attention on areas where it is needed most.

Leading & Lagging Indicators

Safety performance is generally tracked under two broad categories: leading indicators and lagging indicators. Lagging indicators measure the organization's past safety performance and include incident and accident statistics like Occupational Safety and Health Administration (OSHA) recordable injuries; injury frequency and severity; days away, restricted and transferred (DART); and worker's compensation costs. Though these are commonly used safety measurements, the major drawback to solely using lagging indicators is that they only measure past occurrences or failures, causing companies to be reactive rather than proactive. They are a poor gauge of prevention and can create complacency. A company could look at a low incident

and injury rate and think their safety programs are adequate, when in fact there might be numerous unexamined risk factors in the workplace that have the potential to lead to future injuries.

A more proactive safety approach examines leading indicators, which are centered on continuous improvement to ensure future safety performance. Leading indicators focus on the regular activities that employees are engaged in to prevent injuries and accidents. Root-cause analyses are examples of leading indicators; even though they take place after an incident has occurred, they focus on incident causation and prevention of future injuries. Other examples of leading indicators include conducting safety audits, attending safety trainings, tracking near-misses, and performing risk assessments of tasks, equipment and machinery maintenance.

Though lagging indicators are important to track and include measurements that are required for reports, most companies that are striving for safety excellence use leading indicators to gauge safety performance and drive continuous improvement.

Ensuring a safe workplace is the duty of every organization. Those that embrace safety will help ensure organizational success by protecting their most vital asset: their team members. Comprehensive measurement of safety practices, along with root-cause analyses of incidents, are the architecture to a great safety program. ▲

James Ramsey is a national safety director with Faith Technologies Incorporated (FTI), part of a team ensuring the safety of FTI team members through implementation of comprehensive training programs in occupational, industrial and environmental safety. Ramsey holds master and journeyman electrician licenses for Colorado and Idaho and is an OSHA 500 authorized trainer for the 29 CFR Part 1926 construction standards. Visit faithtechnologies.com.



Photo Credit: Suffolk



Reconstructing a Career

How Suffolk Construction's Tracy Deal transitioned from attorney to project manager

BY CARMEN CAPOCCIA

By now, business leaders are familiar with the labor shortage plaguing the construction industry. In addition, staffs have a gender imbalance: the National Association of Women in Construction (NAWIC) reports that women constitute just 9.9% of the construction workforce. While organizations work to attract students to the industry, Suffolk Construction gained an asset from an unexpected place: the legal field.

Tracy Deal is a former attorney who worked for a firm that specialized in construction. As she got more involved, she found a new path. She entered the construction industry and now serves as a project manager at Suffolk Construction. Deal reflects on her career trajectory, her

role as a project manager, the state of the skilled trades and what it's like to be a woman in construction.

Tell me about your trajectory from an attorney to a project manager at Suffolk.

My family has been in the South Florida construction industry for many years. Through the encouragement of my father, I pursued an opportunity to practice construction law at a boutique law firm in Fort Lauderdale. While there, I became a member, and eventually president, of the Fort Lauderdale chapter of NAWIC. Suffolk was kind enough to host NAWIC on-site for a Women in Construction (WIC) Week Event at the Hollywood Hard Rock Hotel & Casino renovation and expansion project while it was still under construction. It was during that site visit that I fell in love with the energy of an active jobsite and the passion that everyone at Suffolk had for their work. I was also very excited to see that Suffolk had strong female leaders running critical aspects of the project. It wasn't very long after that site visit that I reached out to Suffolk and made the switch.

What drew you to the construction industry? Why did you decide to make your career transition?

I love the construction industry because it's straightforward. There isn't much room for ambiguity like there is in the practice of law. There is ample room for creativity and, whatever the problem is, there is always a solution. The main aspect I love about working in construction is the team mentality and the camaraderie built between everyone working on a project.

How did your skills as an attorney serve you in your new role?

The practice of law and project management in construction share many of the same skill sets. Project management is all about being able to read, write and enforce contracts. They also share overlapping skills in client management, time management, critical thinking, planning and risk assessment. The only skills I really had to focus on developing quickly after the switch were learning new software programs and my understanding of the actual construction process.

Tell me about your role as a project manager. What highs and lows have you encountered?

As a project manager, I'm involved in every aspect of my assigned project, from working with our estimating department to buy out trades, to closing trades out at the end of the project. So many of the roles in construction overlap: estimating, field supervision, project management. In order to be really good at any of them, you need to have a solid understanding of all of them. For me, the highs are getting to work with some of the best in the industry on some of the hardest projects South Florida has to offer. The lows are always project close outs, when the work is more mundane, and your teammates are assigned to new projects.

What has surprised you most about moving from an industry-adjacent role to working in the field?

What surprised me most was how fundamental people are at the core of construction. In my opinion, the practice of law can be kind of an independent sport. But in construction, the success of a project is entirely dependent upon the care we give to one another. That includes making sure everyone goes home safely at the end of the day, maintaining positive relationships with our business partners, building strong work families with our team members, and maintaining trusting relationships with our clients.

What advice would you give to someone who is considering a similar career change? What should they know about the construction industry?

I constantly remind myself that the pursuit of happiness is so fundamental that it's in the Declaration of Independence. My advice is, if you are not happy, do something else. I spent a fortune on my legal education, and it was terrifying to



Photo Credit: Suffolk

walk away from my career as an attorney. But that education has continued to serve me in so many ways and I have no regrets. Don't be fooled by my dirty boots and well-worn gloves: the construction industry can be very lucrative. There are also so many different opportunities in the construction industry — legal, marketing, finance, business development, risk management, innovation and people.

What's the most memorable project you've worked on?

Without a doubt, my most memorable and favorite project was the Hollywood Hard Rock Hotel & Casino renovation and expansion project. Not only because it was my first project or because it is known around the world, but because I was able to work with my father, who was working on the owner's side for the Seminole Tribe of Florida. He has always been my mentor, and I was able to learn so much from watching him navigate the challenges of such a complex project.

Have you encountered any challenges as a woman in a male-dominated field? How have you overcome them?

I feel very fortunate to say that many

of my most staunch advocates in this industry are men. I think that — male or female — your reputation is really what determines how you are treated in this industry and when people see that you are putting in the work, you will be treated with respect.

From your perspective, why is construction a great field for women to get into right now? What roles do you see more women taking on in the field over the next 10 years?

Women are finding success in every facet of the construction industry, from skilled tradespeople to owning and operating their own construction companies. Within the Southeastern region of Suffolk, I am fortunate enough to bear witness to a tremendous group of women growing within the company and steadily making their way into positions that have rarely or never been held by a woman before. With the path having been laid, the construction industry is more welcoming to women than ever. ▲

Carmen Capoccia is managing editor of Construction Business Owner Magazine & Digital Media.

New Products to Watch

Selected by the editors of Construction Business Owner, these new-to-the-market products are just a few of our favorites recently released to the construction community. Stay tuned in every issue to find out what you need to know about the latest gear, solutions & industry-leading innovations.



UNITED RENTALS United Rentals Emissions Digital Dashboard

Released: 12/14/23

Availability: U.S. & Canadian markets

What's new? The United Rentals Estimated Emissions dashboard is a digital tool that enables users to view rental equipment and jobsites through the lens of current and historical estimated carbon emissions. The tool is available through the United Rentals cloud-based fleet management platform, Total Control.

Specs: The Estimated Emissions dashboard helps companies understand their equipment emissions and make data-based decisions to enact changes that will yield the most significant results. From any view, users can filter the data by time period [such as current month, previous month, year-to-date and previous year], account, jobsite and cat class. The tool provides access to easily digestible, shareable data on estimated emissions to help companies in the drive to reduce a jobsite's carbon footprint.

YANMAR ▶

V7 Compact Wheel Loader

Released: 12/4/23

Availability: North American market

What's new? This 9,370-pound machine fills the gap in the Yanmar wheel loader line between the V4-7 and the V8 and features a low operating weight, comfortable cab area and high bucket capacity. Its compact design, intuitive controls and high travel speeds maximize performance and efficiency for operators in landscaping, rental, municipalities, snow removal and other applications. The new model is built with the operator in mind. It features all-around visibility, making long workdays easier. The enclosed cab configuration features two steel frame doors and a standard front sun blind to reduce glare.

Specs: Features a 0.92 cubic yard bucket capacity for its weight, which means fewer trips to the pile. An optional light material bucket brings that bucket capacity to more than a full cubic yard with each scoop, further improving productivity. The compact wheel loader also includes a powerful Tier 4 Final Yanmar engine allowing for a lifting capacity of 7,981 pound-force. The V7 includes several efficiency-enhancing features. Bright LED lights improve work area visibility while optimizing power consumption. Operators can move around the jobsite faster using the machine's 18.6-mph travel speed.



MAKINEX

Portable Power Box

Released: 12/8/23

Availability: U.S., Australian & New Zealand markets

What's new? Global energy consumption is on the rise, impacting the construction industry where energy expenses can exceed 5% of project budgets. With increasing diesel prices, contractors seek alternatives, and the energy-efficient Portable Power Box offers a cost-effective, easy-to-use solution.

Specs: Makinex's Portable Power Box is a blend of efficiency, convenience, portability and durability, featuring:

- Capacity — 6 kilowatts of output power combined with up to 15 kilowatt-hours of storage, catering to demanding energy needs.
- Rapid charging — Powers up in just seven hours, boosting on-site efficiency.
- User-friendly design — Features include a robust frame for easy storage and maneuverability.
- Advance safety features — Residual current device [RCD] protection, with thermal overload protection, this IP44-rated unit provides weather resistance, ensuring reliability and durability for a long operational experience.
- Versatile charging options — Compatible with 240-volt mains or solar photovoltaic [PV].
- Multiple connection options — Includes 3x15A outlets, 2x5V USB-A outlets.
- Indoor friendly — Safe for use in confined spaces.



▲ STELLAR

Stellar 14530 Hydraulic Service Crane

Released: 12/4/23

Availability: U.S. market

What's new? Stellar Industries is launching a new hydraulic service crane utilizing the exclusive CDTpro Control System with Range Finder technology to the marketplace. The new 14530 crane is a redesigned 14,000-pound class crane. With a sleek new design, this machine features a reduced weight of about 11% (350 pounds) as compared to the previous model. Additionally, the new design features increased strength, with a lifting capacity of 92,000 foot-pounds versus 82,600 foot-pounds. This ultimately creates more payload for the operator while increasing utility.

Specs: This crane features new octagonal boom design and a smaller boom tip, allowing the crane to maintain strength while the compact boom tip creates an easier reach for smaller spaces. The Stellar CDTpro Control System with Range Finder technology was designed to improve ergonomics and increase usability. With single-handed smooth operation and proportional control, operators can place loads more precisely while allowing for multiple functions to run at once. Additionally, users will be alerted that they are approaching maximum load capacity through vibrations, a key feature to help with safety on the jobsite.

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▲ HYDRAJAWS LIMITED

Hydrajaws M35+ Easi-Effort Dual Load Capacity Modular Digital Pull Tester

Released: 12/14/23

Availability: U.S., Canadian & European markets

What's new? The Hydrajaws M35+ Easi-Effort Dual Load Capacity Modular Digital Pull Tester is a lightweight pull tester enhanced by Easi-Effort technology, increasing testing frequency and reducing operator effort. It can test up to 35 kilonewtons (7,868 pound-force) or 65 kilonewtons (14,613 pound-force) on the same device, with an easily configurable optional bridge setup, without needing a separate tester. The M35+ is an essential tool for carrying out pull testing procedures in line with all industry standards.

Specs:

- Easi-Effort technology — Maximum torque 9.8 newton meters at 35 kilonewtons and 18.8 newton meters at 65 kilonewtons.
- Modular dual load capacity — 35 kilonewton (7,868 pound-force) capacity in standard guise, and 65 kilonewton (14,613 pound-force) capacity with a further optional load spreading bridge.
- Advanced data logging — Equipped with free-to-use Hydrajaws Verify App via Bluetooth up to 10-meter range.
- Dual-scale (kilonewton and pound-force) rechargeable digital gauge.



▲ MINNICH MANUFACTURING

Single Gang Barrier Wall Drill

Released: 1/23/24

Availability: U.S. market

What's new? The Single Gang Barrier Wall Drill is a self-propelled, pneumatic drill that has been designed to optimize efficiency and safety during the process of securing concrete barrier walls by drilling a single hole with greater precision and in less time than multiple gang options. This product eliminates the time of making manual adjustments to align multiple drill hole measurements.

Specs: The 8.5-foot by 6.5-foot frame easily sits on a 9-foot flatbed trailer for easy jobsite transport. The 1,630-pound drill can be lifted and placed on a concrete barrier wall with a backhoe or compact excavator. The unit is equipped with an air-powered motor, which propels the equipment along the barrier wall from hole to hole. Manual intervention is further decreased with a tethered handheld remote that enables operator control at a safe distance from the machine during the drilling process.

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ADVERTISER INDEX

Advertiser Name Page

Bill Operations LLC Webinar	3
Dee Concrete	45
eMars Inc	27
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Hino Trucks	BC
JCB	11
Newforma, Inc. Webinar	5
Progressive Commercial Auto Insurance	IFC

Schweiss Doors	46
Thunder Creek Equipment	IBC
TVH/MinnPar	29

PRODUCT INDEX

Company Name Page

Hydrajaws Limited	46
Makinex	44

Minnich Manufacturing	46
Stellar	45

United Rentals	44
Yanmar	44

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- ☐ 12 General Contractor – Commercial
- ☐ 02 General Contractor – Residential
- ☐ 10 Construction – Special Trade Contractors
- ☐ 03 Highway and Street Construction
- ☐ 04 Water, Sewer and Utility Construction
- ☐ 05 Heavy Construction
- ☐ 06 Concrete Work
- ☐ 07 Excavation Work
- ☐ 08 Wrecking and Demolition Work
- ☐ 13 Architecture, Engineering and Construction Management Services
- ☐ 11 Consulting Contractor
- ☐ 99 Other (please specify)

2. Your primary job title is: (Check only one)

- ☐ 10 Owner, Partner, President, CEO, CFO, COO, Vice President, Director
- ☐ 11 General Manager, Manager, Foreman, Superintendent, Purchasing Agent, Controller, Accountant
- ☐ 12 Engineer, Architect
- ☐ 06 Consultant
- ☐ 99 Other (please specify)

3. Approximate annual contract sales volume:

(Check only one)

- ☐ 01 Less than \$500,000
- ☐ 02 \$500,001 – \$1,000,000
- ☐ 03 \$1,000,001 – \$2,500,000
- ☐ 04 \$2,500,001 – \$5,000,000
- ☐ 05 \$5,000,001 – \$10,000,000
- ☐ 06 \$10,000,001 – \$20,000,000
- ☐ 07 \$20,000,001 – \$50,000,000
- ☐ 08 More than \$50,000,000

4. Which of the following products/services are you planning to buy during the next 12 months?

(Check all that apply)

- ☐ 01 Earthmoving Equipment
- ☐ 02 Trucks, Trailers and Accessories
- ☐ 03 Compact Equipment
- ☐ 04 Lifting and Hoisting Equipment
- ☐ 05 Safety Equipment and Apparel
- ☐ 06 Attachments
- ☐ 07 Concrete and Paving Equipment
- ☐ 08 Survey and Site Prep
- ☐ 09 Compressors, Generators and Pumps
- ☐ 10 Financing and Accounting Services
- ☐ 11 Software and Technology
- ☐ 12 Insurance and Bonding
- ☐ 13 Training and Education
- ☐ 14 Telecommunications
- ☐ 16 Greases, Lubricants and Filters
- ☐ 17 Jobsite Lighting
- ☐ 18 Building Supplies
- ☐ 19 Rental Equipment
- ☐ 21 GPS Equipment and Security

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Annual Value of Construction Put in Place

November 2021/2022/2023 Annual Rate Comparison

This chart compares the two previous years' total value of construction put in place to an annual forecast based on November 2023 figures. (Millions of dollars. Totals may not add up perfectly due to rounding.)

	2021	2022	2023
Total Private Construction	1,273,607	1,426,382	1,594,950
Residential	796,308	868,039	896,758
Nonresidential	477,299	558,344	698,192
Total Public Construction	352,275	381,123	455,108
Residential	8,991	9,332	10,638
Nonresidential	343,284	371,791	444,471
TOTAL Construction	1,625,882	1,807,505	2,050,058

*Seasonally Adjusted Annual Rates. Source: U.S. Census Bureau

\$2,050,058

NOVEMBER 2023 TOTAL ANNUAL VALUE OF
CONSTRUCTION PUT IN PLACE

“This marks the seventh month in 2023 with a decline in billings. Over the past three months this pace of decline has accelerated, with firms in all specializations and in all regions of the country reporting weakening business conditions,” said Kermit Baker, Ph.D., AIA chief economist. “However, with signs that credit conditions are beginning to ease, firms are reporting an uptick in inquiries for future projects.”

AIA Architectural Billings Index (ABI)

National			*Regional - Billings				*Sectors - Billings			
Month	Billings	Inquiries	Northeast	Midwest	South	West	Multifamily Residential	Commercial/Industrial	Institutional	Mixed
Jun-23	50.1	56.7	50.6	52.4	50.5	48.6	47.4	47.8	55.4	48.8
Jul-23	50.0	54.5	49.3	51.6	48.9	49.6	45.4	52.7	51.2	46.3
Aug-23	48.1	54.8	50.6	48.1	49.9	45.8	44.1	51.5	49.4	46.9
Sep-23	44.8	53.7	46.4	49.3	46.2	44.3	43.5	45.0	50.1	46.2
Oct-23	44.3	48.8	42.1	48.9	48.5	40.0	40.1	43.7	49.1	44.0
Nov-23	45.3	56.9	44.4	49.0	46.7	39.5	42.1	45.7	46.6	42.7

For more information on the index or to subscribe to the complete historical data going back to 1995 for your internal analysis, please contact economics@aia.org. The ABI presents monthly construction billings data, using a base score of 50. A score of more than 50 indicates a growth from the previous month, and a score of less than 50 indicates a contraction from the previous month. A score of 50 indicates no change. Source: The American Institute of Architects (AIA), Architecture Billings Index (ABI).

*Regional and Sectoral indexes are three-month moving averages, due to small sample size. All data is seasonally adjusted.

**Every January, the AIA research department updates the seasonal factors used to calculate the ABI, resulting in a revision of recent ABI values.

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