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The Impact of the Digital Transformation

Our Shield Wall Media team recently returned from our second annual Post-Frame Builder Show in Manheim, Pennsylvania. You'll see more about that in the pages inside. The show had a record turnout, and the mood of the show and conversations with attendees indicated a general sense of optimism.

While some economists have predicted an economic downturn because of the tariffs, the opposite has been happening. The U.S. just signed trade deals with Japan and the EU, and the stock market is climbing. It looks like short-term pain will lead to long-term gain. The biggest challenge may be the labor shortage. Time will tell.

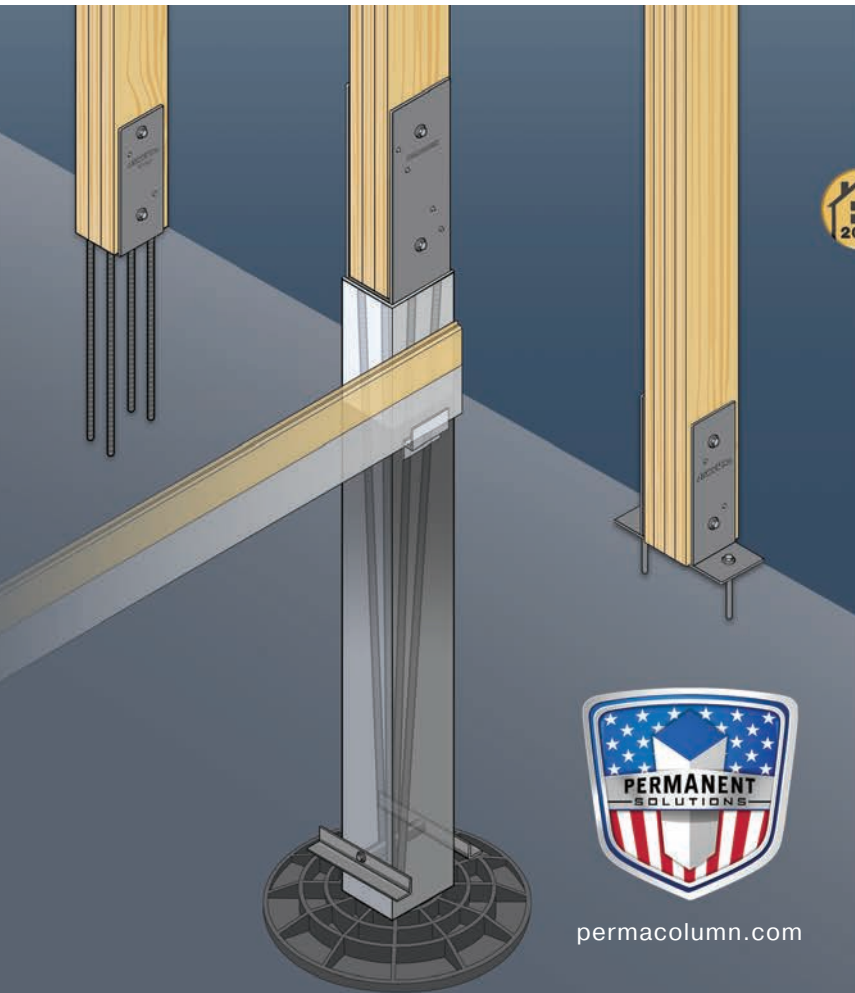
This issue takes a look at how the digital transformation impacts construction. For example, smart locks are replacing padlocks on storage units. Builders should be familiar with them, as in some cases, they can install the locks for an additional revenue stream. Also, cloud-hosted, AI-powered "all-in-one" construction management software can increase efficiency. For example, it can help

create estimates much faster and more accurately than manual estimates, and that could help builders win more bids. After all, if you're able to put together a bid in minutes, but your competitor takes several days, you have a distinct advantage. These "end-to-end" apps can also greatly improve communication, tracking, and reporting among all stakeholders and tie all those functions together in a single platform.

I'm old enough to remember life before email. I think back to how letters had to be sent through the mail and could take a week to make a round trip from sender to receiver and back. (True, faxes were used, too, but on a more limited basis). Compare that to instantaneous digital communication now. What an astounding difference!

With the adoption of AI in everyday life, we're bound to see the same level of transformation in construction. Buckle up. It's going to be an exciting ride!

— Dan Brownell



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CONTENTS

features

- 6 MIKE ROWE WORKS FOUNDATION**
Turn Personal Challenges Into Opportunities
- 10 2025 POST-FRAME BUILDER SHOW HIGHLIGHTS**
A Look at Shield Wall Media's Record-Breaking Event in Manheim, Pennsylvania
- 16 2025 GOLD KEY OF EXCELLENCE AWARDS**
Companies Receive Awards at Second Annual Post-Frame Builder Show
- 25 TIPS FOR CONSTRUCTION SAFETY**
Construction can be a dangerous job, but these suggestions can help reduce accidents on the job.
- 26 METALCON LAUNCHES VETERAN RETREAT PROJECT**
"Eagles Landing" Steel-Frame Building Begins in Las Vegas, Bound for Montana
- 28 DIGITALLY STREAMLINE YOUR CONSTRUCTION COMPANY**
How All-in-One Construction Management Software Can Increase Efficiency
- 32 PREPARING A FOUNDATION FOR A GRAIN BIN**
Their Unique Characteristics Require Special Considerations
- 36 SMART LOCKS FOR STORAGE FACILITIES**
What Builders Need to Know About Smart Storage
- 47 CUSTOMIZATION MAKES AMERIPAK NIMBLE**
The Right Attitude Makes It Possible
- 50 TIMBER FRAME HORSE BARN**
Riding Lessons Lead to Equestrian Career and Horse Barn Centerpiece of Equestrian Center
- 56 FLASHBACK**
CCA Will Continue in Post-Frame — But in Which Applications?

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DEPARTMENTS

Editor's Note	3
Industry News	39
New Products	46
Business Connections	52
Construction Survey Insights	59



INDEX OF ADVERTISERS

Company	Page #
Acu-Form	52
American Garage Door Factory	13, 54, 55
ASC Machine Tools Inc.	31, 54
ASCO USA, Inc.	53
ASTA America by Janus International	11
Atlas Building Products	41
Aztec Washer Company	43, 54
BECK America, Inc.	55
Chief Buildings	33
Coil Spot/WildCat/SpeedLap	54
Dalam Welding	53
Direct Metals, Inc.	54
Dripstop™	7
Dynamic Fastener	60
E-Impact Marketing LLC	52
Everlast Roofing, Inc.	17, 53
Flack Hill Machine	52
FootingPad	39
Formwright	53
Golden Rule Fasteners	52
Grandura Distribution LLC	52
Gutterdome Manufacturing	54
Hixwood	23, 43
Janus International Group	15
Marion Manufacturing	53
Maze Nails	IFC
Metal Rollforming Systems	29
Perma-Column LLC	3, 52
Pine Hill Trailers	54
Planet Saver Industries / GreenPost	53
Plyco Corporation	21
Postsaver Europe Ltd	53
Powerlift Doors	35
Red Dot Products, LLC	55
rFOIL Reflective Insulation	42, 52
Rigidply Rafters	37
Roll Former LLC	44
Schweiss Doors	55
Starwood Rafters	44
Steel Dynamics Inc.	9
SteelGrip SAMM, Inc.	53
Stockade Buildings	55
Storage Xpress Corp.	54
Triangle Fastener Corporation	27
United Steel Supply	52
Wick Buildings	46

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Gary Reichert,
Publisher, Shield Wall Media



Turn Personal Challenges Into Opportunities

Look for stepping stones...the mikeroweWORKS Foundation Scholarship for example

BY LINDA SCHMID

Have you ever known anyone who just couldn't sit still? That was Joseph Rullo Jr. as a youngster. He was a good kid; he obeyed the rules, played baseball, and got As through most of his grade school and high school career. However, his ADHD just wouldn't let him sit and concentrate, so he knew pretty early on that he did not want extended schooling or a career that would keep him sitting at a desk for the rest of his life.

Rullo liked being outside and working with his hands. His dad drives a truck, and his mom works for a pool chemistry company. Neither of them pushed him in any particular direction. Rullo started down the path toward joining the Marines, but his uncle, an electrician, told Rullo that he needed to think about what he really wanted to do. He began researching careers. He was looking for a job where he would be busy, well-paid, and he didn't have to attend four years of college. Naturally trade positions caught his attention.

Rullo considered HVAC as a possibility and he consulted with his uncle who pointed out that a 6'3" guy would probably not enjoy this type of work, having to climb into crawl spaces and attics in the heat. Rullo thought maybe outdoor work such as electric work would be a better fit. He discovered that his grandpa had been a lineman, and he talked to other people he knew who had joined the union. They told him the IBEW Local Union 126 was a great organization, and so was the pay.

THE FIRST STEP

Other students in his graduating class, with the exception of

just a few, went on to college. Rullo went to work for a contractor where he got a taste of what electrical work was like. After a year, he signed up at Southeast Lineman Training Center (SLTC).

Rullo loved his training at SLTC. He said they taught everything from the basics to advanced electrical theory, and the instructors were all former journeyman linemen from across the country. There were three campuses and every week a different instructor would teach them a new subject. Rullo missed home, but he made some good friends, and he hit his stride; he was at the top of his 300-400 student class in every subject. He won an award for his work ethic and scholarship money to help pay his way; the mikeroweWORKS scholarship solidified for him that he was on the right path.



TOEING THE LINES

After he graduated from lineman training, he applied for, tested for, and was accepted into the Northeastern Apprenticeship Training program. He had "Bootcamp" the first couple of months for field practice, and now he is apprenticing under the supervision of a Journeyman Lineman. He has classes on the weekend, and every month he attends the Union meeting. This is all in preparation to advance to a Journeyman, for once an apprentice has successfully completed training along with 7,000 hours of apprenticeship work, they advance to the Journeyman level and become a member of the International Brotherhood of Electrical Workers (IBEW). Once a lineman has achieved the Journeyman level, often in 3 to 3 1/2 years, they may choose to discontinue

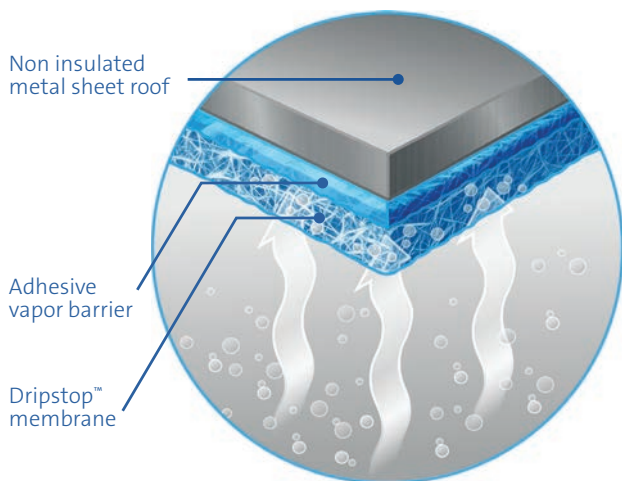


As a result of a collaboration with mikeroweWORKS Foundation (www.mikeroweworks.org), *Rural Builder* is featuring profiles of Work Ethic Scholarship recipients in each of its issues. Over 2,000 scholarships have been awarded to trade-school students who value hard work and taking personal responsibility. *Rural Builder* applauds these students and wants to acknowledge their choice to apply their talents to skilled trades. Thank you, mikeroweWORKS Foundation, for your continuing efforts to close the skills gap and "reconnect the average American with the value of a skilled workforce."

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formal training, however, they must be prepared to supervise and mentor apprentices in their turn. Mentoring is important Rullo said.

“This is serious work; if a lineman makes a bad decision, they could die,” Rullo said. “The journeymen I know have been very encouraging, but they will tell you when you mess up. They can be tough at times,” Rullo said. “It’s like dealing with a coach who wants to get the most out of you. You have to be able to take the criticism and learn from it,” he added.

As an apprentice, Rullo said that the Area Director of NEAT for Local 126 assigns him to the companies he apprentices at. Currently he is with Carr and Duff Contractors learning as much as he can. He is working on traffic signals, whether placing new wire or rewiring, adding speed or red-light cameras and signage. Learning wire splicing is Rullo’s favorite part of the work; he finds all the effort that goes in behind the scenes to make one signal light work fascinating.

IS LINEMAN WORK FOR YOU?

First, Rullo stipulates, you must have no fear of heights. You must be willing to work in the elements, whether hot, humid, or freezing; extreme temperatures are part of the job. In the apprentice phase you may be required to help out in local, regional, or national disasters, and that means 16 hours on and 8 hours off work until the problem is under control, so it takes a lot of dedication to the job. However, once you reach the Journeyman level you are usually not required to participate in disaster work, though many do.

“You can’t get discouraged if it takes a while to get where you want to go,” Rullo said. “Keep a good attitude during your apprenticeship. You have to focus; don’t be talkative or off-task because the area director will probably hear about it, and you can be penalized or lose your apprenticeship.”

“On the plus side,” Rullo said, “this is a very rewarding line



of work; it’s very fulfilling knowing that when times are tough, people will need your help. Electricity is essential for hospitals, nursing homes, at-home invalids, and more. Linemen put their lives on the line to help others, and the best part is knowing you have helped so many.” Rullo added, “The money is great too!”

He said that many, if not all of the linemen he knows, have families. “Once they are journeymen they don’t have to participate in storm duty and travel much, and whether they have established families, are starting families, or are just getting married,” Rullo said, “this career helps workers support their families. Meanwhile knowing that your skills are so needed, and the work is interesting... A lineman job can be the opportunity of a lifetime.” **RB**



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2025 POST-FRAME BUILDER SHOW Highlights

A Look at Shield Wall Media's Record-Breaking Event in Manheim, Pennsylvania

Shield Wall Media's second-annual Post-Frame Builder Show, held June 25-26 in Manheim, Pennsylvania, marked the highest attendance of any of the company's previous trade shows and doubled 2024's inaugural Post-Frame Builder Show in Branson, Missouri.

Over 1,100 attendees had the opportunity to visit almost 100 exhibitor booths. Guest speakers presented information sessions on Wednesday and Thursday morning from 8 a.m. to 10 a.m. before the show floor opened, allowing attendees to expand their knowledge, ask questions, share experiences, and network with others in the construction industry.

One of the highlights of the informational sessions was Wednesday morning's "Barndominium Business Panel" Q&A, hosted by Randy Chaffee of Source One Marketing; T.J. Norris of The Barndo Co.; Keith Dietzen of SmartBuild Systems; Stephanie Caffee of First Federal Bank of Kansas City; and Trent Wagler of Graber Post Buildings.

NEXT POST-FRAME BUILDER SHOW

The third annual Post-Frame Builder Show will be held June 24-25, 2026, at UPMC Arena, York Expo Center, York, Pennsylvania.

HIGHLIGHTS OF THE 2025 POST-FRAME SHOW

Following are highlights from the show in Manheim. **RB**



Wednesday morning's "Barndominium Business Panel" Q&A session was well attended. It was hosted by industry experts Randy Chaffee of Source One Marketing; T.J. Norris of The Barndo Co.; Keith Dietzen of SmartBuild Systems; Stephanie Caffee of First Federal Bank of Kansas City; and Trent Wagler of Graber Post Buildings.



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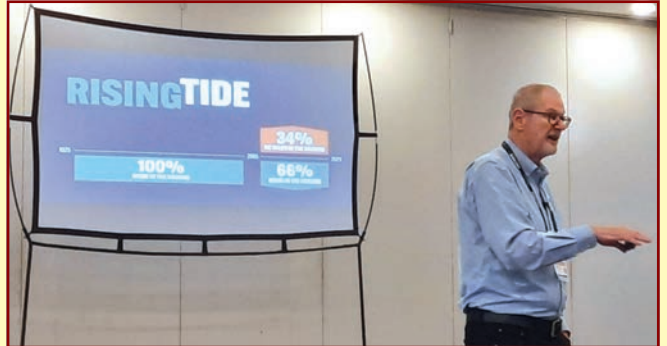
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Attendees get breakfast before the opening informational sessions. Shield Wall Media shows are known for their excellent catering.



Mark Stover of Perma-Column discusses why post-frame's greatest strength is the post in his seminar "Post-Frame Foundations."



Titan Steel reps explain their product benefits to several attendees.



Show attendees had in-depth discussions with exhibitors with the opportunity to examine products in person.



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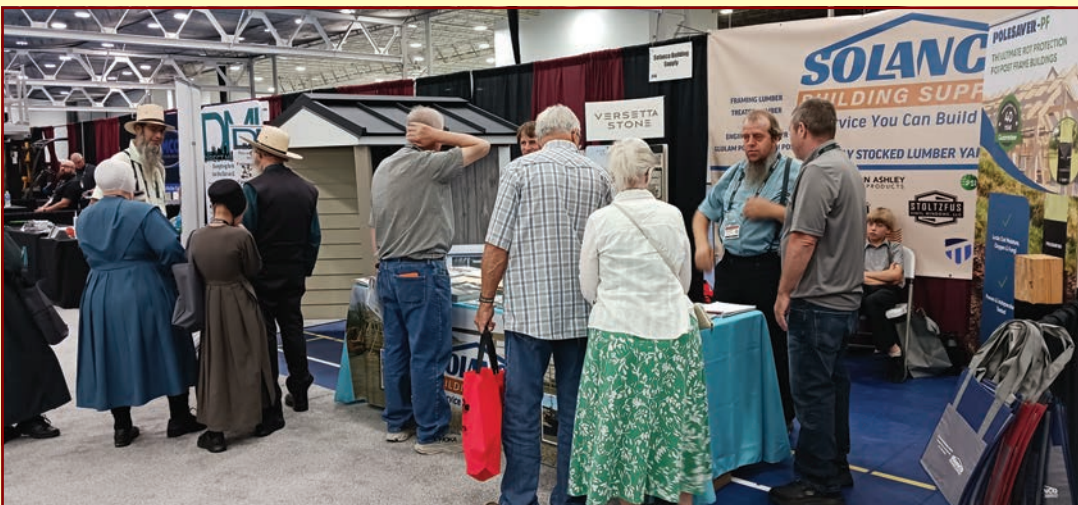
Superior Trusses brought a scale model home showing how their truss system works.



SmartBuild Systems is a complete design system for buildings, airports, barndominium interiors, roofing, and reroofing. The software quickly generates a 3D model, material lists, pricing, proposals, and construction documents.



Stephanie Caffee of First Federal Bank of Kansas City explains the details of barndo financing and what builders need to know about its unique niche.



Solanco Building Supply, located near Manheim, sells a wide range of building materials.



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BY RURAL BUILDER STAFF



Gold Key of Excellence Awards

Companies Receive Awards at Second Annual Post-Frame Builder Show

A number of companies were presented Rural Builder Gold Key of Excellence Awards at Shield Wall Media's second annual Post-Frame Builder Show, held June 25-26 in Manheim, Pennsylvania. Metal Roofing Metal of Honor Awards were also presented.

In just a few months, you will once again see the Gold Key of Excellence nomination ballot in Rural Builder. If you believe any of your suppliers deserve to be on the ballot, and they have been in Rural Builder within the past year, send the nomination to dan@shieldwallmedia.com with the subject line: Gold Key of Excellence 2026 Nomination. **RB**



Wayne Troyer (left) and Grant Miller (right) accept the Rural Builder Gold Key of Excellence Award and the Metal Roofing Metal of Honor Award on behalf of Acu-Form.



From left to right, Keri Kelly, Shaté Santos, Clint Renninger, Bonnie Beck, Olivia Holmes, Jeff Angelo, and Spencer Davis accept the Rural Builder Gold Key of Excellence Award and the Metal Roofing Metal of Honor Award on behalf of Everlast Roofing.












Ken Dearing (left) and Mark Stover (right) accept the Rural Builder Gold Key of Excellence Award on behalf of Perma-Column LLC.

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Kellen Anderson accepts the Rural Builder Gold Key of Excellence Award on behalf of Trac-Rite.



From left to right, Mike Eshelman, Shannon Zimmerman, Caitlyn McVey, Claudia Conard, and Mike O'Hara accept the Rural Builder Gold Key of Excellence Award and the Metal Roofing Metal of Honor Award on behalf of Levi's.



From left to right, William Hartman, Karlee De Cerio, and Cameron Woyurka accept the Rural Builder Gold Key of Excellence Award on behalf of W.E.H. Supply.



Kelly Myers accepts the Rural Builder Gold Key of Excellence Award on behalf of rFoil Reflective Insulation.

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Chris Glick (left) and Amos Lichtenberger (right) accept the Rural Builder Gold Key of Excellence Award and the Metal Roofing Metal of Honor Award on behalf of Snap Z.



Metal Roofing and Frame Building News editor Karen Knapstein (right) presents Ken McDonnell (left) with the Rural Builder Gold Key of Excellence Award on behalf of Post Protector.



From left to right, Kevin Fox, Trent Wagler, Matt Meredith, Delmer Wagler, and Tim Fox accept the Rural Builder Gold Key of Excellence Award and the Metal Roofing Metal of Honor Award on behalf of Graber Post Buildings.



From left to right, Brad Wasley, Sadie - Chief Morale Officer & Lead Generator, and M.J. Wasley accept the Rural Builder Gold Key of Excellence Award and the Metal Roofing Metal of Honor Award on behalf of AceClamp.



Don Benson (left) and Joel Mackey (right) accept the Rural Builder Gold Key of Excellence Award on behalf of Plyco.

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From left to right, John Knable, Barry Broxterman, Bob Nelson accept the Rural Builder Gold Key of Excellence Award and the Metal Roofing Metal of Honor Award on behalf of MWI Components.



David Quehl accepts the Rural Builder Gold Key of Excellence Award on behalf of Direct Metals.



Chuck Bloom (left) and Merle Auker (right) accept the Rural Builder Gold Key of Excellence Award on behalf of Red Dot Products.



Scott Jelleman accepts the Rural Builder Gold Key of Excellence Award on behalf of Palram Americas.



Noah Oberholtzer (left) and Matt Wilson (right) accept the Rural Builder Gold Key of Excellence Award and the Metal Roofing Metal of Honor Award on behalf of Hixwood.

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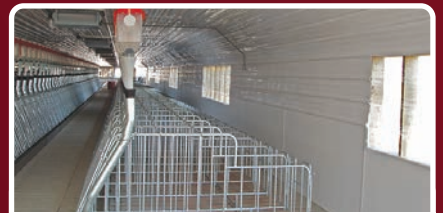
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Chris Davis (left) and Robert Christman (right) accept the Rural Builder Gold Key of Excellence Award on behalf of Dripstop.



From left to right, Joey Constant, Tim Easley, and Tony White accept the Rural Builder Gold Key of Excellence Award on behalf of Dutch Tech Industries.



From left to right, Joe Dewes, Peyton Mattis, Kelly Gillmore, and Steve Heberling accept the Rural Builder Gold Key of Excellence Award and the Metal Roofing Metal of Honor Award on behalf of United Steel Supply.

Tips for Construction Safety

Being a construction worker is one of the most dangerous and potentially fatal jobs. There are roughly 150,000 construction jobsite injuries each year, and 1 in 5 deaths among U.S. workers is in the construction industry. But despite bulky safety gear and protocols that are meant to keep construction workers safe, they're still prone to accidents that could cause serious injuries or even be fatal. Here are a few tips to stay safe on the job, and keep your family safe while working in the industry:

UTILIZE SAFETY GEAR AND EQUIPMENT

Suiting up is one of the most important steps before beginning a job. Safety gloves, hard hats, safety goggles, ear plugs, and other necessities should always be worn. Take the few extra minutes to ensure you have on injury preventing gear to keep yourself safe. Be sure to utilize safety technology as well.

The clothes you wear can also be part of your gear. Wear durable clothes that can protect your body from potential hazards. Reflective vests can ensure you're visible if you're working at night or on the side of the road, long sleeved shirts and long pants that cover every inch of your body can protect you from cuts and scrapes, etc. Don't just protect the obvious areas of your body (eyes, head, hands) but keep your entire body safe from danger.

UPDATE YOUR GEAR

Tools are used daily as a construction worker, and after constant use, they're likely to need replacing. Be sure to recognize what tools are worn and which aren't working as they should be and get them replaced. Not only can this make the job go more smoothly but can also decrease your risk of potential injury. Take the time at the beginning or end of the day to assess the condition of your tools and update them when necessary.

TAKE YOUR TIME, DON'T TAKE SHORTCUTS

While your end goal might be to move on to the next job, rushing can not only mean you do a botched job and end up having to come back later but can also put you at risk. Taking shortcuts can lead to accidents that can put you in a dangerous situation, expose you to hazards, and get you hurt. Take a few extra minutes to be sure the job is done right and safely – you'll end up thanking yourself later.

With experience and wisdom often comes ways to save time

and still achieve quality work, however sometimes when it comes to safety, shortcuts are dangerous. Stick to the fundamentals. So, climbing a ladder as you were taught early on, or using a harness when working at higher heights can make a major difference in safety. Following the basics is tried and true.

RECOGNIZE FATIGUE

When working in places with no controlled temperature for hours, it's important to recognize when you need to take a step back from the job. Take a minute or two away from the job to cool yourself down (or warm yourself up). Staying hydrated and fueled up throughout the day can ensure you're in the best physical condition to handle a job. You know yourself best, and if you begin to feel light-headed, over-heated or tired, remove yourself from a potentially dangerous situation until you feel better.

ASSESS BEFORE BEGINNING

Not all jobs are the same, so evaluating the situation before beginning can save you trouble in the long run. Take a few minutes to assess the work area for potential hazards such as slippery surfaces, exposure to dangerous chemicals or wires, temperature changes, etc. Rushing to get into a job to get it done can not only put yourself at risk but can give you more work to do in the end. Inspect the entire area such as cords, equipment, etc. to notice any defects that may be a hazard. By taking a look at what the job requires, you can avoid dangers and will be able to determine what gear you'll need.

GET AD+D INSURANCE COVERAGE

AD+D coverage, otherwise known as Accidental Death + Dismemberment insurance is important to protect your family financially if something happens to you. If you're the sole, or only person working in your household, this is especially important for your family to be able to pay bills, cover medical costs, and other expenses. Whether your accident is fatal, or you're stuck in bed recovering for months, the right AD+D insurance can give you and your family peace of mind.

Tip: When you do go shopping for AD+D coverage, make sure you look at the types of accidents covered because not all policies cover all types of accidents **RB**

Omar Kaywan is Co-Founder and Chief Growth Officer at Goose insurance (gooseinsurance.com).

METALCON Launches Veteran Retreat Project

“Eagles Landing” Steel-Frame Building Begins in Las Vegas, Bound for Montana

This year, the only global event dedicated exclusively to the application of metal in design and construction is proud to launch a heartwarming project: a full-scale steel frame for a future veteran retreat in Hall, Montana, an inspiring new initiative for METALCON 2025. This special build will be showcased during the show, October 21–23, at the Las Vegas Convention Center, marking the first phase of creating a lasting place of healing for those who have served.

In partnership with Scottsdale Construction Systems, The Barndominium Company, Sheridan Metal Resources, The Expo Group, and Evergreen Roofing & Construction, METALCON is proud to launch the construction of Eagles Landing — a 2,500-square-foot, steel-framed barndominium. Once completed, it will become a permanent healing retreat for our nation’s combat-wounded veterans.

The project is being delivered in collaboration with the Military Warriors Support Foundation, a national 4/4 star-rated non-profit dedicated to supporting combat-wounded veterans and Gold Star families through payment-free homes and vehicles, life skills training, financial education and leadership development.

A SHOW FLOOR BUILD THAT MAKES A DIFFERENCE

Before the show opens, Scottsdale Construction Systems and its partner companies will prefabricate and assemble the steel frame of the barndominium in the METALCON exhibit hall. Throughout the event, attendees will be able to:

- Tour the structure
- Discover the materials, technologies and techniques used
- Learn about the mission behind the project
- Connect with the builders, designers and sponsors bringing it to life

“This project goes beyond showcasing products — it’s about using our collective skills and resources to serve a greater purpose,” said Judy Geller, Vice President of Trade Shows for PSMJ Resources, Inc., producers of METALCON. “Together with our partners, we’re creating something lasting for those who have sacrificed so much.”

AFTER THE SHOW: EAGLES LANDING HEADS TO MONTANA

Once METALCON wraps up, the structure will be disassembled, transported, and rebuilt at its permanent home in Hall, Montana. Site preparation will be completed in advance to ensure a smooth installation, with timing carefully aligned to accommodate fall and winter conditions. Set in a serene natural setting with access to fishing, hiking, and other outdoor activities, Eagles Landing will provide a peaceful retreat for U.S. veterans — a place of rest, reflection, and renewal.

DESIGNED FOR PURPOSE

The structure was designed by Stacey Lynn, founder of The Barndominium Company and widely known as The Barndominium Lady®. Her personal connection to the military community — her family is fourth generation military — fueled her commitment to this project. Collaborating with the Military Warriors Support Foundation, she designed Eagles Landing to balance modern aesthetics with functional, veteran-focused living, ensuring it serves as a sanctuary for those it serves.

HOW TO GET INVOLVED

METALCON invites companies and individuals across the industry to support the mission. There are a variety of ways to contribute to Eagles Landing:

- Donate Building Materials or Services
- Make a Financial Contribution

All contributions will directly support the creation of a lasting home for our nation’s heroes.

MEET THE FOUNDING PARTNERS

These organizations have taken a leadership role in launching the Eagles Landing initiative and making this mission a reality:

- Military Warriors Support Foundation – Non-profit organization offering a variety of programs for our nation’s combat-wounded veterans and Gold Star families. They are approaching 1000 mortgage-free and gift-tax-free homes gifted to our nation’s heroes, as well as over 200 payment-free vehicles, in all 50 States.
- The Barndominium Company – A leading barndominium



design firm in the country, specializing in custom-designed, steel-framed and post-framed homes.

- Scottsdale Construction Systems – A world leader in next-gen rollforming technology and light-gauge steel framing by integrating design, engineering and CNC manufacturing

- Sheridan Metal Resources – Experts in precision tools and training for metal construction.

- The Expo Group – METALCON’s general services contractor, managing on-site build logistics.

- Evergreen Roofing & Construction – Proudly providing roofing solutions — from single-family homes to large-scale commercial projects — to the Montana community.

Together, these partners — along with

additional contributors — are donating materials, services, logistics and expertise to ensure the success of the project both

at the show and in Montana. Learn more or get involved at: <https://metalcon.com/barndo>. **RB**



A rendering of the Eagles Landing, a 2,500-square-foot, steel-framed barndominium that will be erected in the METALCON exhibit hall. When the show ends, the structure will be disassembled, transported, and rebuilt at its permanent home in Hall, Montana. The Eagles Landing will provide a peaceful retreat for U.S. veterans — a place of rest, reflection, and renewal. RENDERING COURTESY OF "THE BARNDOMINIUM COMPANY."

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Digitally Streamline Your Construction Company

How All-in-One Construction Management Software Can Increase Efficiency

Constructing a building is a complex process from start to finish, including takeoffs, estimating, bidding, and contracting; managing documents, change orders, building schedules, subcontractors, materials, and crews; inspections; and back office administrative functions throughout the project, such as cost tracking, payroll, billing, invoicing, and much more. All of these tasks are time- and labor-intensive and require close communication and coordination.

For generations, these processes were done manually. With the advent of the computer, programs were developed to handle specialized tasks, such as estimating or accounting, but the information in those specialized programs are separate and not easy to integrate. Over the years, software companies began produc-

ing integrated, “all-in-one” packages that made the construction management process more efficient because the information is all connected. The interconnection allows many processes to be automated and streamlined and reduces errors caused by manually transferring information from one program to another. The automation also allows employees to dedicate more time to higher level skills, rather than tedious tasks.

AI-POWERED CONSTRUCTION SOFTWARE

Artificial intelligence, or AI, has recently been incorporated into construction software. AI has been evolving slowly in the background for decades, but it hit a turning point in November 2022 with Open AI’s launch of the ChatGPT chatbot. In just two

months, ChatGPT reached 100 million monthly users. By comparison, it took Facebook more than four years to reach that number.

The advent of ChatGPT is widely considered the point at which AI reached critical mass because that's when it became widely accessible to the general public. From that point, it has rapidly been integrated into a vast range of applications, including construction management software.

AI takes construction software to a whole new level in speed and performance, although most are currently only partially AI-powered. AI construction software blends conventional computer processing with AI's ability to process and analyze a vast amount of data in seconds. One of AI's other defining characteristics is that it is self-learning. It gathers feedback on its performance, evaluates it, and fine tunes it for improved function over time.

TWO TYPES OF SOFTWARE DELIVERY

There are two main types of software delivery: "on-premise" and "cloud-based." On-premise software is hosted on the user's own servers, whereas cloud-based software uses a third-party

provider's infrastructure and is hosted on the Internet.

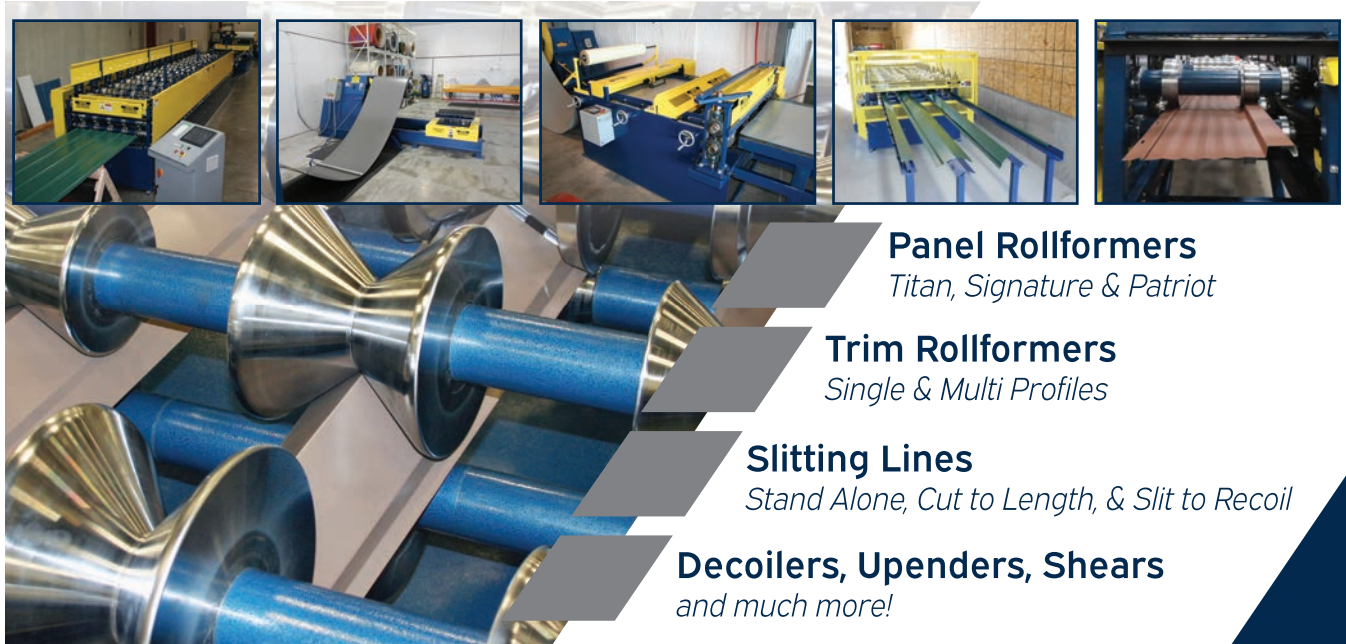
On-Premise Software

On-premise software operates from a central location, such as the construction company's main office, where it can be managed in a physical server. In those situations, field employees can't access the information through the Internet unless they have an additional remote desktop solution to provide a secure internet connection to the server. Without the additional remote service, employees have to return to the office to access the information. The benefit of the on-premise option, however, is that it can provide more security, control, and customization than cloud-based software.

The primary cost of on-premise software is the initial investment of the server and related equipment and the ongoing manpower cost to maintain the server system in-house.

Cloud-Based Software

With cloud-based versions, information is accessed through the Internet, allowing all stakeholders — office employees, roving



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project managers, work crews, subcontractors, suppliers, the client, and others — to access and communicate online in real time so everyone stays updated. Each stakeholder can be provided with access and permissions tailored to the appropriate level for their needs.

Cloud-based access greatly improves speed and accuracy of communication. When all relevant stakeholders can see the same message at the same time, that reduces the need to send a chain of emails or texts. Also, it allows digital approvals and signatures, which also speeds the management process. In addition, software updates can be done faster.

Cloud-based software operates on an ongoing subscription cost.

AI has introduced such amazing new capabilities that some people have expressed concern that it will replace their jobs. However, in the construction industry, the labor shortage is so severe, and progressively getting worse, that it's unlikely this will happen. What AI will do is allow construction companies to do more with the workers they have, which can help them stay competitive. Jennifer Castenson, VP of Public Relations at Buildxact explained how AI actually helps free builders to do the things they would rather do. "AI is your friend. AI is positioned to do all of the tasks that you cannot do and might not like doing. AI cannot go install a new window, redo someone's kitchen cabinetry, or build a pole barn. What it can do is create material lists, write communications, create timelines, do takeoffs, and get you out from behind the desk to start enjoying the parts of the job that bring you the most satisfaction."

MORE ON AI AND THE LABOR SHORTAGE

One of the biggest pain points in construction is the labor shortage. While this isn't a problem software can mitigate directly, it can help address it indirectly. Increased efficiency can help companies use their limited manpower more effectively. For example, streamlining the communication between project managers and suppliers could help prevent material delays, lessening downtime for work crews. In the office, an estimator may be able to create estimates much faster, so fewer hours are needed, allowing the estimator to do more estimates. And finally, a company that manages its schedule efficiently will develop a better reputation and may attract more and better workers and retain them longer. Crews want to have a reliable work schedule and income. If one company regularly sends crews home without work because of material delays or conflicts with subcontractor scheduling, but another company doesn't, crews will understandably want to jump ship to work for the more efficient, more reliable company.

COMMON ALL-IN-ONE, CLOUD-BASED SOFTWARE

Following is a list of common "all-in-one" software designed

for small- to medium-sized construction companies. (Large construction companies likely have in-house IT staff to identify software solutions that meet their needs). This is not a complete, definitive list. There are other lesser-known companies, and with the speed of growth in AI software, no doubt new services will become available. This is simply a starting point for becoming familiar with software that's on the market.

All-in-one software solutions are cloud-based by design, as that allows the functionality necessary to provide remote access for all stakeholders and for end-to-end service.

BUILDXACT (BUILDXACT.COM/US)

Buildxact is designed for small builders and remodelers. It offers unlimited users and three payment tiers. According to the company, its main competitive advantage is in its AI-powered estimation tools:

- Takeoff Assistant
- Estimate Reviewer
- Estimate Generator
- Assembly Assistant

The Takeoff Assistant can pull in pricing data from whatever supplier catalogs the contractor chooses to use to speed up the estimation process.

The Estimate Reviewer is unique in that it compares an estimator's project to a large database of similar projects that have previously been completed to check for missing items. This can be especially helpful when a company does a lot of "one-off" projects rather than standard projects that the estimator is familiar with.

Buildxact says that builders often pay for their subscription with their first project and double their business in a year.

BUILDERTREND (BUILDERTREND.COM)

Buildertrend is designed for small- to medium-sized home builders, remodelers, and specialty contractors. CoConstruct was designed for custom home builders and remodelers, especially in the luxury market but merged with Buildertrend in 2021. (CoConstruct is still mentioned online, but it now operates under the Buildertrend name.) Buildertrend offers unlimited users. Pricing is done by custom quote.

JOBTREAD (JOBTREAD.COM)

JobTread is designed for home builders, specialty contractors, commercial contractors, remodelers, and roofers. It has no tiers of service. All subscribers have access to all features, but beyond the base subscription, each user pays a subscription fee.

HOUZZ PRO (HOUZZ.COM/PRO)

Houzz Pro is designed for residential remodelers and designers. It offers three service tiers, 3D floor plans, and has strong marketing options, such as targeted advertising, a custom web-

site, email marketing, and a premium business profile.

CONTRACTOR FOREMAN (CONTRACTORFOREMAN.OM)

Contractor Foreman is designed for residential and commercial general contractors and, according to the company, it can be used by small companies with one user to large companies with more than 300 employees. It offers five tiers of service with quarterly and annual billing options. The subscription fee is for the whole company rather than by individual subscriptions.

FEATURES TO CONSIDER FOR COMPARISON

Each construction company's budget and needs are different, so one size won't fit all. Following is a list of features and options to consider. They vary from one software package to another, so they will need to be researched carefully to determine the option that is the best overall fit for a company's business model.

- Product features
- Pricing tiers available and features included in each

- Subscription options
- Number of users per subscription
- Stakeholder access
- User friendliness
- Integration with other software (such as QuickBooks)
- Training and support
- Free demo
- Free trial period
- Money back guarantee

CONC USION

Construction management software is becoming increasingly important as the labor shortage intensifies and construction becomes more competitive. These tools, increasingly adding AI-powered features, are helping to improve efficiency and, ultimately, the bottom line. As smaller construction companies adopt these tools, those that don't will gradually lose ground. With that in mind, it would be wise for companies to explore and consider using these digital solutions. **RB**

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BY JACOB PRATER

Preparing a Foundation for a Grain Bin

Their Unique Characteristics Require Special Considerations

Storing grain is a necessary part of growing commodity crops. While not all operations require a grain bin for storage, it may be among the best options for some operations.

SIZE MATTERS

As with most storage buildings, if finances allow, putting up a larger grain bin is usually a good idea for a couple reasons. First, operations and businesses almost always grow. Second, there is usually a decreasing cost for each added square foot or, in this case, added volume. If your client builds a structure that only meets their current requirements and needs to

expand later, they'll have to add a whole new structure when maybe they could (and should) have built one a bit bigger to begin with.

WHY GRAIN BINS ARE ROUND

Grain bins are unique structures, given their round shape. It's this shape, though, that allows them to store a large quantity of grain efficiently because it makes their contents flow easily. The round shape also allows the steel sides to contain the grain through their tensile strength. In addition, the round design means the outward forces push equally in all directions.

This wouldn't be true with square or rectangular buildings because they would

generate massive shear forces at the base of walls and on fasteners along the walls. That doesn't mean you can't adapt post-frame structures to store grain on a small scale, but if your client needs to store a lot of grain, a round bin is really the only practical option for large-scale, long-term use.

PREPARING A GRAIN BIN FOUNDATION

While a grain bin is the ideal long-term storage structure, it's critical that the site is prepared for the bin and the foundation is up to the task of supporting the grain bin and all the grain.

First, as with almost every structure, site selection and grading are important

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considerations. The site will need to be dry and graded so runoff and snow melt are directed away from the structure. In addition, equipment traffic flow around the structure should be considered as well (more on this later). Once a good site is selected, a well-designed and installed foundation has to be constructed.

Most builders are familiar with grading but may not be as knowledgeable about ensuring that the soil is well drained. This isn't only about soil texture (sandier soil holds less water), but also about depth to a seasonal water table. That seasonal water table may create a challenge with the foundation. Builders can consult a soil map or dig or auger a hole as long as they know what to look for.

Seasonal water tables leave telltale signs in what soil scientists call "redox features." These are mostly the colors of the soil left by changes to the iron in both oxidized and reduced forms. Oxidized iron creates red or orange colors, while reduced iron produces gray or washed-out colors.

If gray colors are found in shallow areas, that indicates that the site is wet for a significant amount of the year. If there are only a few orange streaks or spots, that indicates that the water may get that high but doesn't persist there long. Ideally, you wouldn't want either of these conditions to extend down to the full depth of the foundations. Indications of water contact with your foundation aren't a dealbreaker, but they do mean that there could be challenges, such as differential settling and issues with freeze/thaw cycles.

If the soils are wetter where the bin is being constructed, then it may be necessary to install trench-style or subsurface drains around the foundation. During times when there is a high-water table, they would divert ground water away from the foundation

PLANNING FOR THE COMBINED WEIGHT OF BIN AND GRAIN

The weight of the grain in a bin may require a soil-bearing capacity as high as

5,000 lbs. per square foot. This exceeds what is required in most circumstances. Where I live in Wisconsin, a soil-bearing capacity of 2,000 lbs. per square foot is required for normal construction. Most soils meet that criteria unless the building requires engineering.

With a grain bin, we have a heavy building, plus a large footprint under high pressure across the entire footprint of the building. And to cap it off, the structure will be repeatedly loaded and unloaded, which will massively change the pressure applied to the ground over a short period of time. All these things combined require good site preparation and a well-constructed foundation for the grain bin.

Other than the odd site that has perfect conditions, it's likely that the soil will need to be prepared (including excavating

and bringing in material) and compacted to meet the required bearing capacity of the bin. The soil around the base of the bin also needs careful consideration, as it will produce large shear forces on the foundation below the bin walls. As such, backfilling around the foundation must be compacted as well.

CONCRETE FOUNDATIONS

A concrete foundation and pad are the best choice for longevity, pest control, and damage prevention. While there are other options, they're all inferior for reasons related to anchoring, pest entry prevention, corrosion, and avoiding differential settling and water issues. If a client balks at all that concrete, at least use a concrete ring foundation. Standard concrete can handle pressures of 2,500-4,000 psi, but

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that still needs to be reinforced and plenty thick to avoid cracking if and when some settling occurs.

The concrete foundations may be 12 inches or more thick (up to 24 inches for large bins) with an additional sub-base of 12 inches of compacted gravel beneath it. And they may be 12 to 24 inches wide, depending on the size of the bin (check on what is recommended for the size you're building), and 18 to 24 inches for a 30-to-48-foot bin, with smaller bins using 12- to 18-inch-wide footings. The concrete pad in the center is often 6 inches thick, but thicker may be better for very large bins.

Rebar should be added to the concrete according to the grain bin manufacturer's recommendation (often at 18-inch spacing or less). It's a good idea to add a vapor barrier below the concrete pad and above the compacted gravel to reduce moisture intrusion into the bin through the concrete pad. If you're pouring the pad and footings as one unit, make sure the vapor barrier material doesn't extend into the footing, as this could weaken the footing. It may be desirable to embed conduit in the footing and pad for running any elec-



Seasonal water tables leave telltale signs called "redox features." These are mostly the colors of the soil left by changes to the iron in both oxidized and reduced forms. Oxidized iron creates red or orange colors, while reduced iron produces gray or washed-out colors. If gray colors are found in shallow areas, that means the site is wet for a significant amount of the year. If there are only a few orange streaks or spots, that indicates that the water may get that high but doesn't persist there long.



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To compensate for potential high wind loads, shorter, wider grain bin may be a better option than taller, narrower ones, although they'll need a bigger footprint and more concrete for the foundation and grain pad.

trical wiring for sensors or fans.

You may want to consider adding a rodent barrier to the concrete foundation. This is primarily to keep them from burrowing underneath the foundation and pad, rather than from keeping them out of the grain, as the concrete footings and pad will usually do that. This rodent barrier can be a concrete curtain or 1/4-inch hardware cloth or a combination of the two, but it should extend 36 inches below ground level to stop rats. Having gravel or a concrete apron around the bin will also help discourage rats.

PLANNING FOR DIFFERENTIAL SETTLING

Differential settling needs to be avoided but also planned for. Due to the large size of the grain bin and the imperfection of the site, it may be necessary for the grain bin foundation and

the grain pad to be separate structures. In cases where differential settling might occur due to nonuniformity in the prepared site (the bigger it is, the more difficult it becomes to make the site uniform) or with soils that expand and contract a bit, it can be beneficial to support the bin and the grain with separate foundations. In this situation, there is a ring-shaped foundation for the bin and a separate unconnected pad to carry the load of the grain.

This strategy helps to keep the grain bin plumb and level but allows the grain pad some movement, which is better than having differential settling occur to the bin itself. Of course, there may be required maintenance (such as mud jacking or foam injection) if the grain pad moves too much, but at least this shifting won't be on the structure itself. Obviously, avoiding differential settling by doing the best site preparation possible is the goal.

Depending on the soil materials and their depth, you may have to construct pilings to direct the pressure of the foundation to deeper, stronger soil materials. This is more cost-effective than excavating

a large amount of soil material and then bringing in and compacting fill. In this case as well, the grain pad will likely need to be separate from the bin foundation.

If you're building a very large bin, it's worth getting engineering analysis of the site and soil materials to ensure a stable and long-lasting grain bin.

ANCHORING THE BIN

Along with countering the shear forces applied to the soil around the foundation (mentioned earlier), it's critical that the bin be properly anchored to the foundation. Don't do less with anchoring than the manufacturer recommends, but the anchors could certainly be longer or heavier than required. The anchors are bolts embedded or drilled into the concrete foundation and may be up to 15 inches long and either 5/8-inch or 3/4-inch diameter. Whatever size or type you use, make sure they meet the manufacturer's specification at a minimum.

Anchoring the grain bin to the concrete foundation isn't just about controlling shear forces at the base of the grain bin, but also for countering wind lift and suction when the bin is empty. The foundation must be firmly attached to the ground and the bin firmly attached to the foundation so it won't blow away. Additionally, anchoring the bin to the foundation helps prevent wind suction damage, as it reinforces the rigidity of the whole structure. (Other features may be required, too, such as rings and stiffeners further up the walls.)

While the concrete foundation and anchors provide the majority of the protection for the bin during a wind event, choosing a wind-sheltered location is ideal. While most grain bins are designed to handle 105 mph winds and some even up to 140 mph, it's better to take measures to reduce the windspeed where feasible. If it's an option to move things around on the property and there isn't existing grain storage on the farm already, or if this is new or satellite expansion, select a sheltered location when possible. If the area is

prone to high winds, a shorter, wider bin may be preferable to a taller, narrower bin.

ADD-ONS AND OTHER SITE CONSIDERATIONS

It's also important to consider grain bin loading, unloading, and drying features. Much goes into preparation for the foundation, but just as much thought should go into the traffic and traffic pattern around the bin. If drying infrastructure is planned, there also must be a foundation for the drying equipment (out of the way of traffic). In addition, the traffic areas for loading and unloading must be properly graded and compacted for the size of trucks that will be using them. The road surface should be considered here as well. Since it is a heavy use area with large loads, a hardened surface is best, and wa-

ter shedding is critical. Consider adding a concrete pad where vehicles will be loading and unloading.

CONCLUSION

Grain bins are specialized structures with unique foundation characteristics that need to be carefully considered and planned for. While this is just an introduction to the topic and more detailed information is needed for each individual project, it provides a good starting point for understanding the logistics and planning involved. **RB**

Jacob Prater is a soil scientist and associate professor in Wisconsin. His passion is natural resource management along with the wise and effective use of those resources to improve human life.

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BY DAN BROWNELL

Smart Locks for Storage Facilities

What Builders Need to Know About Smart Storage

For decades, the storage unit rental process was slow and cumbersome. Customers had to meet facility staff in person to sign lease contracts before they could move in. The staff also had to regularly patrol the facilities to lock delinquent customers out and unlock them when they paid. Over the last few years, however, the situation has changed. Storage units can now be accessed remotely through smart locks, and the demand for these locks is growing.

“Smart locks are quickly becoming an industry standard for operators looking to have long-term growth, facility differentiation, and operational efficiency,” said Nick Noethe, Passport Locking Solution representative. “Some key benefits to having smart locks at a facility include remote management, enhanced security, keyless entry, operational efficiency, and higher revenue potential.

“Smart lock adoption continues to grow and is expected to reach 60% of facilities by end of 2025,” Noethe added. “Based on a recent study, it was determined that 92% of owners, operators, and managers believe that new technology will enhance their competitiveness and operational efficiency at their facility.”

Early versions of smart storage locks were available as early as 2007, but the industry faced technical and logistical challenges with hardwired systems, installation, and cost. A number of companies have overcome those initial hurdles with wireless options, streamlined installation of locks or pre-installed locks, and lower costs, which has promoted wider adoption.

The decreasing cost of smart locks and growing demand from the digitally native younger generation is expected to translate into exponential growth of smart locks in both new storage facility construction and for retrofitting locks in pre-existing facilities. In many cases, smart lock companies license storage facility builders to install and program their locks, which can provide the builders with an additional revenue stream.

For both facility owners and customers, the technology offers many advantages over traditional hasps and padlocks.

SMART LOCK BENEFITS FOR CUSTOMERS

- Customers don't need to visit a storage facility office or meet an owner or manager at the storage unit to sign a storage unit



A Passport smart lock secures this Trac-Rite storage unit door. Trac-Rite has partnered with Passport, powered by Onity, a leading smart lock company with proven technology. Its locks are used not only on storage units but in other applications as well, in more than 30,000 properties in over 2,000 cities across seven continents. Smart locks allow storage facility customers and facility managers alike much more convenience than traditional padlocks.

lease. A lease can be created and paid for online at any time so customers can begin a move-in within minutes.

- Renters can lock and unlock their units with a smartphone, so they don't need to worry about forgetting or losing a physical key.

- Users can share access via digital permissions with family, friends, movers, employees, and others, and can grant or revoke access instantly.

- Renters can view access data online 24/7, so they know who is in their unit and when.

- A smart lock can improve security, as it has no padlock to cut off, and it offers entry and usage data for remote monitoring. Data points to better security. According to Janus International's website, the company says that “[Facility] operators have reported 95%+ fewer break-in claims on smart units vs. traditional.”

SMART LOCK BENEFITS FOR FACILITY OWNERS

- Smart access allows storage facility staff contactless lease

management. Because staff don't need to be on site, their time can be optimized for marketing and contracting leases to maximize profits.

- Based on customer demographics and demand, facility owners may be able to charge premium rates for units equipped with smart locks.

- Facility owners and managers can remotely overlock (lock out) delinquent customers and release the overlocks immediately after payment is made.

- Smart access allows business scalability. Because owners aren't tied to a physical location, they can manage multiple sites, even while on vacation in a different state.

- Smart access provides detailed audit logs to analyze customer behavior. Audit logs identify storage access information, such as when units have been unlocked and by whom. If items are stolen from a unit, the audit can determine who had access during the time in question. The data can also provide insight into how renters are using the storage units. When renters remain in their unit for long periods, that may suggest that they're attempting to sleep or live in their units or are possibly surveying other units for potential attempted break-in.

- Digital management allows staff to analyze usage patterns to identify when price increases might be feasible. An increase in the frequency of customer access to their units may indicate that the leases have enough value to them that they may be willing to accept a price increase.

THE TRANSITION FROM TRADITIONAL LOCKS TO SMART LOCKS

Storage facility owners don't have to offer an all-or-nothing option for digital versus traditional locks. They can provide a mix of digital and conventional locks within a single facility to match market demand. For example, 50% of units could be equipped with digital latches, and 50% with conventional padlock latches, and that mix can be adjusted as demand changes.

LEADING COMPANIES IN SMART LOCKS FOR STORAGE FACILITIES

A common business model in the storage facility smart lock market is for roll-up door manufacturers to partner with large, well-known smart lock companies because the technology required is highly advanced and specialized, and the research and development takes years and a huge amount of investment.

The following are the most common roll-up door/smart lock partnerships.

TRAC-RITE PASSPORT LOCK POWERED BY ONITY

Trac-Rite, based in Sun Prairie, Wisconsin, has been in business since 1981 and is a leading manufacturer of roll-up doors.

Onity is headquartered in Salem, Oregon. The company is more than 80 years old, and its locks are used in more than 30,000 properties in over 2,000 cities across seven continents.

Trac-Rite uses Onity's Passport locks. "The Passport locks operate wirelessly using a lithium battery and Bluetooth connection to a tenant's smartphone. No active Wi-Fi or network needed to access the unit," said Noethe.

Trac-Rite doors are designed to work together with Passport smart locks to provide maximum security. "As an industry leader in roll-up door manufacturing, Trac-Rite designs doors with durable corrugated steel construction, precision-fit guide tracks, and reinforced door edges — all of which provide a strong foundation for integrating Passport smart locks,"



Noethe added. “The tight tolerances and secure fit reduce pry points and prevent tampering, while the Passport system adds encrypted access control and real-time activity monitoring. Together, they deliver a robust, high-security solution built for today’s self-storage demands.”

STEELBLUE SMART LATCHES POWERED BY PTI SECURITY SYSTEMS

SteelBlue Building Components was founded in 2021 and is headquartered in Pittsburgh, Pennsylvania.

PTI Security Technology is owned by the global company ASSA ABLOY, headquartered in Stockholm, Sweden. ASSA ABLOY has more than 61,000 employees and operates in over 70 countries.

SteelBlue offers two smart lock options: ProEdge and DoorBoss.

ProEdge is a smartphone-accessible lock. DoorBoss, on the other hand, is an option for those who don’t want to use a smartphone to access to their unit. DoorBoss users enter a PIN code at the facility gate, which then opens the lock on their unit. When leaving, users enter the PIN code again to relock the unit.

NOKĒ SMART ENTRY BY JANUS INTERNATIONAL

Janus International, founded in 2002 and headquartered in Temple, Georgia, has nearly 400,000 of their Nokē smart devices installed in self-storage facilities globally. The company offers two smart door lock options: Nokē ONE and Nokē Ion. Nokē ONE is a smartphone accessible lock mounted to the outside of the storage unit door. Locks can be retrofitted on doors in the field or shipped preinstalled on Janus doors.

Nokē Ion also provides smartphone access, but this solution fits on the inside track of the door. It operates using a low-voltage, hardwired system with battery backup. It allows an upgraded addition of motion sensors and LED lights.

“Janus International is unique in that we provide a battery-powered smart door lock solution (Nokē ONE), a hardwired smart door lock solution (Nokē Ion), and smart entry control devices (Nokē Pad and Nokē Screen) for facility entrances. It’s a complete smart security solution,” said Christine DeBord, Janus International Chief Commercial Officer. “We’re also the only smart lock manufacturer to provide in-house project management and installation for our smart locking systems.”

OPEN TECH ALLIANCE INSOMNIAC SMARTLOCK

Open Tech Alliance is a technology company that provides automation, call center, and online auction services for the self-storage industry. It was founded in 2003 and is headquartered in Phoenix, Arizona.

It offers three INSOMNIAC SmartLock models: O, R, and S. Two of the locks can be used on most existing roll-up doors, so



Janus International is unique in that it offers a battery-powered smart door lock solution (Nokē ONE), a hardwired smart door lock solution (Nokē Ion), as well as smart entry control devices (Nokē Pad and Nokē Screen) for facility entrances.

they’re not limited to a particular roll-up door brand. However, in April 2025, Open Tech Alliance announced that SteelBlue Building Components had entered a partnership to provide pre-punched doors for seamless installation of its locks. Pre-existing roll-up doors can be retrofitted with the locks, but it requires the holes to be drilled accurately, which can create some alignment challenges if not done carefully.

SmartLock O works with existing tenant locks and controls vacant and delinquent units without changing the tenant’s experience with keypad or Bluetooth access.

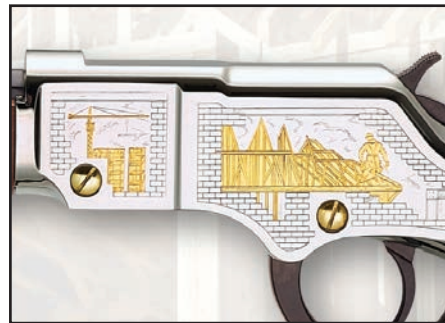
SmartLock R and SmartLock S provide both keypad and mobile access to the tenant through the Storage Genie app, automating unit access and security.

SmartLock R and SmartLock O are retrofitted over existing door hasps. SmartLock S completely replaces the hasp.

CONCLUSION

For so many years, the self-storage process was unwieldy and limiting, but with the advances in remote lock technology, facility operators and customers can take advantage of its greatly increased speed and convenience. As the digitally native population grows and costs decrease, the trend is bound to accelerate, unlocking limitless potential. **RB**

BY RURAL BUILDER STAFF



■ HENRY REPEATING ARMS RECOGNIZES THE AMERICAN CONSTRUCTION INDUSTRY

Henry Repeating Arms, one of America's leading firearm manufacturers, is building on its legacy of acknowledging its most valued constituencies with the launch of the American Construction Industry Tribute Edition, a new addition to its lineup of collectible Tribute Edition rifles that honors the men, women, and companies who build America from the ground up.

"America runs on the backs of its builders," said Anthony Imperato, Founder and CEO of Henry Repeating Arms. "This rifle is our celebration of all the skilled tradespeople who work on everything from blueprints to brick and mortar to shape our city's skylines, put roofs over our heads, build roads, bridges, and most importantly, the foundation of our lives and future. This new rifle is our way of saying thanks."

Andy Wickstrom, President of Henry Repeating Arms, said, "We are proud to acknowledge the demanding and dangerous work, which requires a diverse range of skills. From carpenters and plumbers to electricians and engineers to ironworkers and excavators, the construction industry plays a vital role in shaping our communities and creating spaces for growth and progress."

Built on the award-winning Henry Golden Boy .22 S/L/LR platform, this lever-action rifle, like the rest of Henry's Tribute Edition rifles, features highly detailed engraved embellishments that pay tribute to some of the country's most fundamental workforces and constituencies.

The right side of the nickel-plated receiver cover features a 24kt gold-plated

"Proud to Build America" plaque, an engraving of the American flag, and a portrait of three construction workers standing proudly in front of steel I-beams. The left side shows a residential framer at work on a rooftop and a tower crane erecting a skyscraper — a nod to the vast scope of the construction trades. Both sides are bordered by a brick motif, symbolizing the industry's foundational role in America.

The rifle's American walnut buttstock

features a hand-painted yellow construction helmet beside a scroll banner reading "American Construction Tribute," providing a lasting symbol of pride for those in the trades. It is chambered for .22 Short, Long, and Long Rifle. It features a 20" blued steel octagon barrel, brass buttplate and barrel band, adjustable sights, and the legendary smooth action Henry firearms are known for.

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■ AMERICAN WOOD COUNCIL RELEASES UPDATES TO CONNECTION CALCULATOR

The American Wood Council (AWC) released an updated version of its Connection Calculator. The Calculator supports users by calculating capacities for single bolts, nails, lag screws and wood screws based on the provisions of the 2024 National Design Specification for Wood Construction (ANSI/AWC NDS-2024).

Key updates include adding the design provisions for calculating fastener head pull-through for nails and wood screws and the addition of explicit lateral design provisions for smooth shank metal hardware nails and deform shank nails. The updated provisions for nails include Roof Sheathing Ring Shank nails and Post-Frame Ring Shank nails. The fastener head pull-through calculations were added to align with the required check in the side member where nails and wood screws are loaded in withdrawal from the main member.

An additional update includes the removal of the diaphragm factor for nailed connections in Chapter 11 as its effect on shear wall and diaphragm design values are already included in the 2021 Special Design Provisions for Wind & Seismic (ANSI/AWC SDPWS-2021).

The Calculator can determine both lateral (single and double shear) and withdrawal capacities and includes adjustment factors for temperature, wet service, varying load durations and end grain. Additionally, multiple types of connections including wood-to-wood, wood-to-concrete and wood-to-steel can be calculated using sawn lumber, glued laminated timber, cross-laminated timber, and wood structural panels.

“Consistent updates to the Connection Calculator help users ensure that the information they access is up to date with the most recent editions of the NDS and the 2024 International Building Code,”

said Phil Line, AWC Vice President of Codes & Regulations.

The updates to the Connection Calculator follow last year’s updates to the AWC Heights and Areas Calculator which is based on the provisions in the 2021 International Building Code. The updated version now includes the new Type-IV mass timber construction types and heights and areas specific to the 2019 California Building Code.

The Connection Calculator is available online or as an app on Android, iOS and Windows devices at awc.org/calculators/connection-calculator.

■ MFM BUILDING PRODUCTS CREATES MFM FLOORING DIVISION

MFM Building Products, a manufacturer of a full envelope of waterproofing and weather barrier products for the building industry, has merged with National Applied Construction (NAC) Products, Inc., to strengthen the company’s interior flooring crack isolation, sound control, and waterproofing products. NAC will now serve as the MFM Flooring Division.

NAC Products has been an industry leader in flooring and surface protection systems for more than 40 years. NAC revolutionized the market in 1983 with the introduction of their ECB (elastomeric crack bridging) anti-fracture membrane to prevent tile from cracking in commercial and residential applications. Since that time, many other innovative flooring products have been developed for sound control and general waterproofing.

MFM Building Products has served as the manufacturing partner for NAC’s self-adhering membranes for more than four decades. MFM’s commitment to producing quality and performance-based products has enabled NAC to provide environ-

mentally-friendly, safe, and cost-effective flooring solutions.

According to Brian Petit, MFM Flooring Division Director, “The merger is a win-win solution for our customers who will still receive the same products and services in a more streamlined fashion. MFM is able to provide added technical support, R&D capabilities, and customer service resources which will benefit our customers.” Tony Reis, MFM President, added, “Our relationship with NAC made this a logical move for both companies. We have always been focused on exterior waterproofing products. Now we can offer our customers interior solutions as well.” MFM is a 100% employee-owned company, and all manufacturing is done in the USA.

■ COMBILIFT AND CMETB CELEBRATE 10 YEARS OF PIONEERING ENGINEERING TRAINEESHIP

A landmark celebration was recently held at Combilift’s global headquarters in Monaghan, Ireland, marking the 10th anniversary of the highly successful OEM Engineering Traineeship — a collaborative initiative between Combilift and the Cavan and Monaghan Education and Training Board (CMETB). The event, which welcomed past graduates, current trainees and local educators, underscored the programme’s evolution from a local skills initiative to a cornerstone of regional industrial development.

Launched in 2015, the OEM Engineering Traineeship was born from a shared vision to tackle the skills gap in engineering and manufacturing with an industry-led approach. Today, with over 150 trainees having passed through its doors to achieve a QQI level 5 qualification, and with job placement rates above 80%, the program stands as a model for how industry and education can collaborate to mutual benefit.

Combilift, a global leader in materials handling solutions, has been central to this success. As the primary industry partner, Combilift has not only provided cutting-edge workplace experience but



**Brian Petit, MFM
Flooring Division
Director.**



Representatives of past graduates, CMETB, Monaghan Institute, and Combilift.

also ensured the course content remains aligned with real-world demands. “We wanted to create more than just a training programme—we wanted to build a pathway into meaningful careers,” said Combilift Managing Director, Martin McVicar. “This traineeship has delivered exactly that, time and time again.”

The nine-month programme blends 26 weeks of classroom-based learning at Monaghan Institute with 12 weeks of hands-on work experience in Combilift. Over the years, the course content has evolved to reflect changes in the manufacturing landscape, now including modules in Hydraulics, Lean Manufacturing, and, more recently, Mathematics to prepare students for greater work or educational opportunities.

CMETB has played a vital role in coordinating and delivering the educational aspect of the program. Their ongoing commitment to adapting the curriculum, securing government funding, and expanding the scheme to include other regional employers from 2025 reflects their strategic approach to workforce development. “It’s about staying ahead of the curve,” said Sinead McKenna of CMETB. “We’ve created a flexible, forward-looking course that equips learners with in-demand skills and supports local industry at the same time.”

One of the most compelling aspects of the program is its accessibility. Fully funded through government and EU support, it removes financial barriers for participants and trainees are offered a weekly

bursary per week during practical placements within Combilift. Trainees also benefit from additional qualifications, including City & Guilds module in Hydraulics and a Lean Six Sigma White Belt.

The 10-year milestone was marked not only by reflection but by ambition for the future. Attendees at the celebration event heard first-hand from past graduates who have gone on to build thriving careers — many still with Combilift, some even progressing to degree-level study or engineering apprenticeships.

With enrolment now open for the September 2025 intake, both Combilift and CMETB are doubling down on their commitment to the next generation. As Martin McVicar put it, “The demand for talent in this sector is only growing, and we’re proud to continue building that talent right here in Monaghan.”

■ MALCO TOOLS CELEBRATES 75 YEARS OF HVACR TOOL MANUFACTURING

Malco Tools, one of the nation’s leading solution developers and manufacturers of high-quality tools for the HVACR and building construction trades, celebrated its 75th anniversary on May 17, 2025,



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with a ribbon cutting ceremony and open house at its newly remodeled building in Annandale, Minnesota.

The celebration was attended by Malco employees, Annandale community members, and local dignitaries and representatives from the U.S. Senate, Wright County and the City of Annandale, which officially proclaimed the date “Malco Tools Day.”

Malco Tools was founded in 1950 by Mark W. Keymer, a young steel supply salesman, who invented a pipe crimper for installing sheet metal ductwork used in forced air heating systems. The company started in a small garage in Minneapolis before moving to its current headquarters in Annandale, where the company now employs 170+ associates. Keymer was later inducted into the Minnesota Inventors’

Hall of Fame in 2007.

Malco recently completed a substantial building remodel as part of its “Look Good, Feel Good, Do Good” initiative, and welcomed the community to experience the updated workspaces and see how Malco manufactures and ships its products from Central Minnesota.

“Malco’s 75th anniversary serves as a tribute to 75 years of hard work and progress — a true celebration of American manufacturing, rooted in Minnesota and powered by our people,” said Rich Benninghoff, CEO of The Malco Group. “This milestone also serves as a celebratory turning point as we look ahead to the future. We are all energized by what’s ahead for The Malco Group.”

Malco became an employee-owned

ESOP in 2015 after the Keymer family sold their final shares back to the company. The company remained employee-owned until late 2024, when Malco Tools was acquired by Aspen Pumps Group, providing significant value to the hundreds of employee-owners who are still employed by Malco today.

With a continued focus on people, Malco Tools was named as a Top Workplace by The Star Tribune in 2024 and was also one of just 1,500 companies nationwide to receive a Top Workplace recognition from USA Today in 2025 — further demonstrating the company’s commitment to creating an outstanding culture and workplace.

Now, Malco looks ahead to its next 75 years in business as part of The Malco Group, a specialized portfolio of North American brands providing high quality products and solutions to professionals in the HVACR industry.



Malco Tools celebrated its 75th anniversary during a ribbon-cutting ceremony on Saturday, May 17, 2025. Pictured, from left to right: The Malco Group CFO Mike Hemmesch, Wright County Commissioner Tina Diedrick, Annandale Mayor Shelly Jonas, The Malco Group CEO Rich Benninghoff, members of the founding Keymer family: Gerry, Dave and Paul Keymer, former Malco executive Don Schmidt, and The Malco Group director of engineering Greg Guse.

■ USDA INVESTS \$200M TO EXPAND U.S. TIMBER PRODUCTION

U.S. Secretary of Agriculture Brooke L. Rollins has announced a bold \$200 million investment to implement the U. S. Department of Agriculture (USDA) Forest Service’s National Active Forest Management Strategy, a key initiative to increase timber harvest, improve forest health and productivity, reduce wildfire

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risk, and support rural prosperity in forest communities.

The strategy supports President Trump's Executive Order: Immediate Expansion of Timber Production by streamlining burdensome regulations, leveraging emergency authorities, and expediting project approvals — ensuring faster access to critical timber resources. Increasing the use of long-term contracts to carry out these projects, the strategy envisions a more stable supply of wood products, healthier forests, and stronger rural economies.

“President Trump is committed to cutting red tape, rolling back burdensome regulations and unleashing the potential of America's abundant natural resources. We are doing just that at USDA with this announcement to invest in timber production. This is a win for consumers

who will see better prices with American grown products, and a win for forest management which will help keep our forests safer and reduce wildfire risk,” said Secretary Rollins. “Not only will this help our staff on the ground better carry out the mission of protecting lives, livelihoods and resources, it will support jobs in rural America and reduce our reliance on foreign lumber imports.”

This work to increase domestic timber harvests implements Secretary Rollins' memorandum to the Forest Service to take immediate action in support. In response, the Forest Service has committed to increasing timber harvest (PDF, 285 KB) on national forests by 25%, with an overall goal of 4 billion board feet harvested annually by fiscal year 2028.

Using tools like Good Neighbor Au-

thority, this investment will support efforts to work across jurisdictions and property lines to improve forest health and grow economies in communities nationwide. This investment also focuses on innovative wood products like cross-laminated timber, which due to its strength in comparison to steel, is used in commercial building construction. Similarly, active management often creates byproducts with a low conventional wood market value, but are still useful in wood energy, pellets, and other biomass applications.

These investments have direct impacts on communities and businesses in the wood products sector, supporting jobs in timber harvest, at lumber mills, as well as in innovative wood products and energy sectors. These landmark investments secure a strong domestic timber supply, fueling



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■ AWIP ENHANCES CUSTOMER EXPERIENCE AND FULFILLMENT WITH NEW HIRES

All Weather Insulated Panels (AWIP) has announced the addition of three key team members: Mike Schuil as Director of Customer Experience, Chris Snell as Senior Manager of Logistics and Fulfillment, and Bo Bentley as Quality Service Manager. These strategic roles are integral as AWIP continues to advance its “Customer First” service and support objectives.

“We are thrilled to welcome Mike, Chris, and Bo into their new roles at AWIP,” said Greg Lusty, President and CEO at All Weather Insulated Panels. “Each brings valuable experience and



Mike Schuil



Chris Snell



Bo Bentley

All Weather Insulated Panels’ new hires: Mike Schuil, Director of Customer Experience; Chris Snell, Senior Manager of Logistics and Fulfillment; and Bo Bentley, Quality Service Manager. The roles are integral to AWIP’s “Customer First” service and support objectives.

leadership that will help us strengthen our customer service foundation, streamline logistics operations and elevate the overall customer journey.”

Schuil joins AWIP as Director of Customer Experience, bringing extensive expertise in customer experience management, platform programming, data visualization solutions, and consulting services. With a strong background in data-driven, customer-first innovation, Schuil will lead efforts to enhance customer relationships and drive improvement initiatives.

Snell, the new Senior Manager of Logistics and Fulfillment, brings a wealth of experience in logistics, distribution, and shipping operations. Throughout his career, Snell has held leadership roles in major national distribution and fulfillment operations across the retail, beverage, and e-commerce industries. He successfully

launched multiple fulfillment centers and served in key site leadership positions, gaining valuable experience in optimizing logistics operations and enhancing customer service. His deep knowledge of distribution operations and customer service excellence will be instrumental in optimizing AWIP’s order fulfillment systems and elevating service levels across insulated metal wall, roof, and deck solutions.

Bentley has been promoted to Quality Service Manager, where he will oversee customer case and claim management while driving timely and satisfactory resolutions. Prior to joining AWIP as an estimator, Bentley worked in quality services for a manufacturer of custom engineered steel building systems, handling claim issues efficiently and fairly. His prior experience makes him uniquely qualified to lead and grow this critical aspect of AWIP’s business, enhancing customer experience. **RB**

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BY RURAL BUILDER STAFF



FastenMaster's HeadLOK Structural Wood Screws now feature the TORX® ttap® Drive System for enhanced installation performance.

■ FASTENMASTER INTRODUCES HEADLOK STRUCTURAL WOOD SCREWS WITH NEW TORX® TTAP® DRIVE

FastenMaster, the leading manufacturer of innovative fastening solutions for decking and wood-to-wood construction, has introduced its popular HeadLOK Structural Wood Screws now improved with the TORX® ttap® Drive System for enhanced installation performance.

TORX ttap is a premium drive system, which combines the ease of a TORX drive with a patented ttap stability button. This innovative design provides superior bit engagement for a stable, wobble-free installation, while preventing fastener strip-out during installation. The drive system is also compatible with standard TORX T30 drive bits.

"HeadLOK has been a code-compliant, market leading fastener for nearly 20 years," said Nikki Long, vice president of the Structural Business Unit for FastenMaster. "This drive system change to the new TORX ttap came from listening to our PROs, enabling us to provide them the innovation and quality they expect from FastenMaster to make their jobs faster and easier."

HeadLOK fasteners feature a large flat head design with chamfer for increased strength, a sharp point for faster installa-

tion, aggressive thread design for maximum engagement and holding strength, and a 3/16-inch diameter shank that offers higher design shear than 3/8-inch lag screws. Not only are they suitable for both interior and exterior use without pre-drilling, but they also come with FastenMaster's exclusive ProjectLife warranty, which guarantees product performance for the lifetime of the project. Common applications include use in decks, fences, headers, stairs, ridged foam, cabinet installation, and many other wood-to-wood applications.

HeadLOK fasteners are available in lengths of 2-7/8-, 4-1/2-, 6-, 8- and 10-inches, with additional lengths available for special order. They are sold nationally at thousands of lumberyards and home centers in the U.S. and Canada. HeadLOKs are packaged in 12 pack clamshells, 50 pack boxes, and large quantity (i.e., 250–500 piece) buckets. A T30 ttap bit is included in each package.

■ TRAC-RITE LAUNCHES "RENEW-RITE" FOR SELF-STORAGE RENOVATION UPGRADES

Trac-Rite, a leading door manufacturer for over 40 years, has announced the launch of Renew-Rite, a new product and service line created in partnership with Accent Building Restoration, Inc. (ABR). This collaboration brings self-storage owners and operators a turnkey solution to repair, modernize, and revitalize aging and damaged facilities — combining Trac-Rite's industry-leading roll-up doors, hallway systems and metal fabrication capabilities with ABR's expert renovation services in all 50 states.

Renew-Rite is designed to help owners refresh their facilities with best-in-class, 100% American-made roll-up doors and metal building components — including jambs, headers, and other commonly replaced components — while also enhancing unit size, layout efficiency, and overall curb appeal. The program offers more than just doors; it's a full-service solution to revitalize your self-storage property.

"This partnership with ABR brings together two companies that share a dedication to quality and service," said Kellen Anderson, Director of Sales for Trac-Rite. "Renew-Rite gives facility owners a streamlined way to replace outdated or damaged doors, improve security, and maximize their rentable space and increase rental income — all backed by our reliable, 100% American-made products and ABR's trusted installation team."

Built with strength, longevity, and style in mind, Trac-Rite doors are manufactured from durable American steel and backed by an industry-leading warranty. As a 100% employee-owned company, Trac-Rite is proud to work alongside ABR to deliver long-lasting solutions that protect and elevate self-storage owners' investments.

"Having a trusted, proven door manufacturer like Trac-Rite as our partner means we can confidently deliver exceptional results to our clients," said Jon Fawcett, President at ABR. "Together, we're offering a full-service solution that doesn't just improve appearance, it adds long-term value and operational efficiency to every property."

Whether you're replacing worn-out unit doors or planning a full retrofit, Re-



Trac-Rite's "Renew-Rite" is a product and service line created in partnership with Accent Building Restoration, Inc. (ABR). The collaboration brings self-storage owners and operators a turnkey solution to repair, modernize, and revitalize aging and damaged facilities.

new-Rite offers a seamless path to modernization.

■ CENTRAL STATES SENTRY EXPANDS DOOR OFFERING WITH WIND-RATED MODEL 7500 ROLL-UP DOOR

Central States Manufacturing has announced a new addition to its roll door product line. The Central States Sentry™ model 7500 wind-rated roll-up door is now available anywhere Central States products are sold, including Metal Central retail locations, as part of Building Works complete metal building systems and self-storage building packages, and as an addition to Elevate Structures' construction services. This new model joins the 6500 door offering released earlier this year.

The Sentry 7500 wind-rated roll-up door features innovations that provide benefits for both end users and installers:

- **Strong:** The Sentry™ 7500 is designed to withstand the demanding wind loads of the coastal regions of the United States according to stringent ASTM E330 standards. The high-carbon galvanized steel alloy springs are fully coated prior to forming to ensure 100% corrosion protection. They are manufactured to ASTM A228 standards, which outperforms traditional oil-



The Central States Sentry™ model 7500 wind-rated roll-up door is designed to withstand the demanding wind loads of the coastal regions of the U.S. according to stringent ASTM E330 standards.

tempered springs in fatigue, shear, and tensile strength tests. The springs do not require greasing to ensure long service life. The superior 26-gauge, double-seamed curtain is durable and more resistant to environmental damage. The Sentry 7500 model includes additional fastening locations and 12-gauge wind clips as necessary to aid in wind load resistance.

- **Security:** The Sentry 7500 door can be ordered, delivered, and installed with wind clips that add an extra layer of security. The stainless-steel latches accept all commercial key locks and padlocks, with an available punch pattern that integrates with various Bluetooth® latches in the market.

- **Easy Install:** The slotted system does not require bolts to affix the door to the guide. The bracket and latch are factory installed and the hardware is unit packed and does not require sorting on the job site. Same-sized fasteners require fewer tools, which makes installation hassle-free and ensures a straightforward and quick installation process

- **Easy Match Colors:** The standard 32-color options include perfect matches of popular industry colors and has up to a 40-year limited warranty.

- **Lightweight and Durable:** An aluminum-extruded bottom bar with bulb astragal avoids rust, extending the door's life while providing a lighter touch.

“We are excited to introduce our new wind-rated door model,” said Andrew Wilson, Vice President of Innovation at Central States. “The Sentry family of products, including the new 7500 roll door, showcases our commitment to innovation and quality. This new line of doors entering the marketplace represents a significant advancement in strength, security, and ease of installation. Our customers can expect cutting-edge solutions that meet the highest standards of performance and reliability, ensuring they have access to the best products for their needs coupled with the high customer service standards we are known for.” **RB**

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BY LINDA SCHMID

Customization Makes Ameripak Nimble

The Right Attitude Makes It Possible

Bob Bowlin Sr. had a passion for engineering. He attended engineering classes and went to work for a local packaging manufacturer, a company that was streamlined for efficiency and profit. Bob, however, wanted to do application-driven customization; his vision was a company that developed and manufactured customized product packaging as a distributor.

In the beginning, 1986, Bob worked out of his garage, selling used stretch wrap and packaging material. When he had a custom job, he'd hire his friends' teenage sons and church peers, and they would gather in his basement helping him to build a customized machine to apply wrap to it. As he acquired more business, people from his previous job came to work with him and they brought a lot of experience with them. And while Bob dreamed of a small company, both nimble and intimate, the company just kept growing.

AMERIPAK ENTERS THE CONSTRUCTION INDUSTRY

In 1995, the company received a custom project for a horizontal stretch wrapper for a customer that had a rollforming machine and wanted to wrap standing seam panels, an improvement from what most companies in the "baby metal industry" were doing. They built four or five more machines in the next few years.

In 2002, the company moved 12 miles into the next county to the biggest building they had ever had. Moving was challenging, but it was a good change; it meant they could reinvest revenue into the company, rather than renting.

Hurricane Katrina had a large impact on the industry in 2007. Bowlin said it was hard watching some customers and competitors go out of business. It was a time of making do and watching money closely. Some people left and others absorbed their duties.

Then in 2010, the company attended their first construction show and started getting some exposure in the industry, though Rob Bowlin Jr., owner since 2004, said that it was about four or five years before they started getting good leads from the show. They have continued to attend shows, and word of mouth from customers has helped expand their reach. As this type of machine



has become more common in the metal industry, it has also become easier to sell them.

CHALLENGES ARE OPPORTUNITIES IN DISGUISE

Rapid growth brings its own set of problems with it. Sometimes, in their efforts not to disappoint anyone, they took on more orders than they could fill. In those cases, they worked with partners who took on some of the more time-consuming aspects of the build to alleviate bottlenecks. They have attained greater efficiency through rearrangement of their shop to improve workflow, and they acquired new machinery, using any resource they could find to provide timely delivery to their customers.

"As a small company navigating in a large market with bigger players, always fighting for market share," Bowlin said, "we were surprised that sometimes we could win jobs away from big players, and it's not because of price. We are very candid, accessible, and I am happy to say our customers believe in us."

Recently the COVID-19 epidemic challenged the whole industry. Ameripak was fortunate that when new sales went down, the demand for servicing of older machines and selling used equipment increased and they were able to react quickly.

Bowlin attributes their success through all their ups and downs to a dedicated team of people, some of whom have been with them for 10 or 20 years. The team is very experienced, really cares about customers, and has fun working together.

SERVICES AND PRODUCTS

The company has two main product lines: the metal construction industry and a line that covers consumables. They make protective films, packaging, dust covers, and equipment for these various applications. Because they do customized items, their products can be fluid. For example, they are located in LaGrange, Kentucky, the heart of bourbon country, and when COVID-19 hit and the bourbon makers all started producing sanitizer, Ameripak began producing the pumps to dispense it.

The company services any packaging equipment. They have everything from a hand taping gun up to an automated machine that fills and tapes the package closed. Their signature product is their horizontal wrappers for the construction industry.

Services include sales, machine servicing, and engineering. What sets the company apart is their ability to customize for almost any packaging needs.

Their primary customer base includes pole-frame building contractors who roll their own metal, particularly those who are just getting started in rollforming, and building contractors in the mason industry.

Ameripak has only one location and solid, heavy equipment, so historically their reach was regional. Today, they are a national company; they will deliver, or will travel to set up lines wherever needed across the USA.

THE PERFECT BUSINESS PACKAGE

Bowlin's guidelines for successful business are as follows:

1. Keep the customer's needs in mind when designing and quoting machinery.
2. Be cost conscious while producing high quality, robust equipment.
3. Deliver what you say you will.
4. Find the right employees. Attitude is more important than skills.

Attitude is more important than skills because skills can be learned if a person has the right attitude. Generous benefits combined with transparency about the company and its sales and position, and showing employees that you care is the company's recipe for retaining those positive-attitude employees. Management is accessible and works to ensure everyone is properly rewarded.

Everyone at the company has taken a personality profile test



and newcomers take it too. In this way, they understand some things about how each employee is wired and everyone is open about their expectations of each other.

Bowlin characterizes the employees as hardworking professionals who understand how to have a bit of fun throughout the day. There is great camaraderie. In winter, someone may make a chili lunch, and the company also provides occasional lunches. They also support charitable organizations together. When they came up short for the Salvation Army's Angel Tree, they gathered up some steel scraps, recycled them, and raised over \$600, enabling them to provide dinner for 25 families.

When they hire young people, as they usually do in the summer, they become their mentors. "We feel it is our duty to teach them a skill they can take with them. Some have learned how to build an electrical panel, some have learned how to use hand tools, while others might have learned to read blueprints," Bowlin



said.

No company is successful all alone and Bowlin is grateful for their customers and vendors. He finds Bradbury to be an amazing partner to work with. "They have identified the advantage of having our equipment downstream from theirs," he said.

"Graber Post is an amazing customer; they believed in what we were doing, and they have some of the original equipment that my father built," he added.

LESSONS LEARNED

Streamlining your production flow is important and better done sooner than later. Their quest for continual improvement began when they started measuring production and times. When conducting process improvement, you need to look at the process and analyze how to do it more efficiently. They found they had failed to improve efficiency by simply automating a process because they didn't pinpoint the exact point where things bottlenecked or went



off-track. For example, they were fabricating metal and storing it outside because the painting system was busy. By the time they brought the panels in, they had rust. Then they had to be sanded, cleaned, and recoated, adding on time and labor.

Sometimes business debt is necessary, but 10 years ago the company made the last payment on their building. They have operated as a debt-free company ever since and that gives them freedom to focus on other important matters like improvements.

WRAPPING IT UP

Bowlin and team are optimistic about the future. Their customer base is robust and they hope to grow it by hiring salespeople to expand some territories. They are constantly looking for ways to improve.

The metal industry as a whole is growing and technology is helping to make continued growth feasible. This team believes the economy will continue to strengthen and grow and they are ready to do their part. **RB**

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PHOTOS BY JANA BANNAN PHOTOGRAPHY, KENNETT SQUARE, PENNSYLVANIA

Timber Frame Horse Barn

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Ann Marie Snyder was taking her children to summer camp early in the summer of 2010. At drop-off they met another family who planned to attend a week-long horse camp at the end of the summer and they invited her daughter Audrey to join them. From that point on Audrey pestered her mother for weekly riding lessons.

After her first lesson that December, Ann Marie knew they were going to be in deep. She then made it her job to learn everything she could about horses. She did tons of research, attended every lesson, and volunteered whenever she could.

Riding non-stop since that first lesson, Audrey completed her junior career in the fall of 2021 with successes at both Equitation and Jumper finals. She is now 19, employed in the industry and continues to compete regularly, recently as a member

of Team USA at the Young Riders Nations Cup in the Netherlands.

Patriot Farm in Saddle River, New Jersey is just under 40 acres and includes some wooded areas as well as 13 paddocks, an outdoor riding arena, and a round-pen. The master construction plan was completed in stages, starting with the house, followed by some accessory buildings and finally the barn and indoor arena.

Ann Marie's husband built their previous home in the Adirondack style, which they wanted to continue at the new location, liking the natural elements: stone, wood and a rustic look. The house and barn have fieldstone on the first floors sourced from the property.

"I knew we needed an expert to design and build the barn," says Ann Marie. "A regular architect knows how to design a building, but when you are building an

equestrian facility, there are many details to take into account to provide what's best for the horses and their comfort and most importantly, their safety. Right around the time we purchased the property, my mother saw an advertisement in a magazine for B&D Builders. I called them and knew right away that we had found our barn builders — it was the start of a wonderful relationship and a very positive experience."

Additionally, they needed assistance in the overall design of the property — a quick Google search put Ann Marie in touch with Deborah Cerbone, a landscape architect specializing in equestrian properties.

"Working with equine specific experts allowed the picture in my head to become reality. Every day I wake up and see my vision right in front of my eyes." **RB**

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Building: Timber frame

Building Size: 30,000 sq. ft.

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Wall Panels/Siding: Western Red Cedar

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Walk Doors: Vintage Millwork & Restoration

Posts: Mid-Atlantic Timberframes

Windows: Kolbe

Ventilation: Vintage Millwork & Restoration

Insulation: Spray foam

Miscellaneous Features (Cupolas, Weathervanes, Shutters):
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Other Details:

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Stall Padding: Dandy Products

Aisle flooring: Abacus



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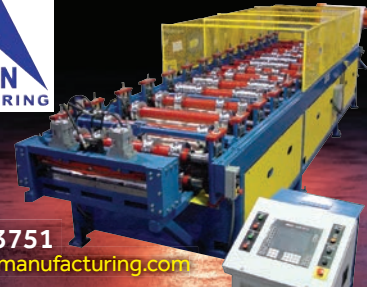
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BY HUCK DEVENZIO



Rural Builder, December 2003

Technical Focus

CCA Will Continue in Post-Frame — But in Which Applications?

FOR 50+ YEARS RURAL BUILDER has been providing the news, trends and resources builders need. Prior to the January 1974 edition, “Farm Building News,” as it was called, was in newspaper form. However, those old papers are not to be found in our Shield Wall library. We would love to see some of them... it's our lost heritage! If you have one/some of them please drop a line to me: dan@shieldwallmedia.com.

We'll publish a brief news story about you, your organization, and your projects in return!

Even though the transition in wood preservatives is nearly complete — wood treated with CCA (chromated copper arsenate) will not be produced for many of its common uses after December 31 — questions remain for specific applications, especially in post-frame construction.

Some questions are subject to interpretation. The wording of American Wood-Preservers' Association standards is being scrutinized as never before, since the price of wood treated with the new generation preservatives is noticeably higher than comparably protected CCA-treated wood.

Nonetheless, it's unlikely the future will be as chaotic as some critics fear.

The movement away from CCA is real and worldwide. When CCA manufacturers decided last February to revise their pesticide labels and eliminate certain non-industrial uses of CCA-treated wood, it was a reasonable response to an evolving market.

Manufacturers disagree with many of the unscientific assertions appearing in media reports and political speeches, but the effect has been an increasing demand for CCA alternatives, particularly in playground equipment, park structures, and

applications where children play. The major producers of playground equipment had already changed their specifications, as had a number of parks departments.

Rather than waiting for outside forces to control their destinies, the manufacturers chose to initiate a deliberate transition to wood protected by copper-based preservatives. Many uses will remain for CCA-treated wood, but distinguishing acceptable from unacceptable uses has generated confusion and frustration.

The overriding consideration was the ultimate use. The market showed little concern over CCA-treated wood installed by professionals where there would be minimal exposure to the general public. Therefore, there was no need to alter CCA labels for wood products sold to contractors or fabricators for industrial-type applications.

The label change was intended to remove CCA-treated wood from home centers and the do-it-yourself market, and, thereby, from applications to which the public is routinely exposed.

So how could a change in the CCA label be worded to separate the primarily residential applications from the primarily industrial applications?

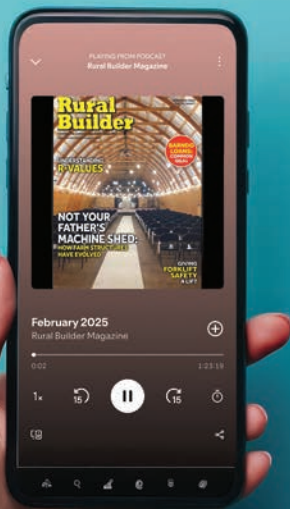
The 2001 AWPAs standards were chosen to distinguish treated products. The treating standards of the AWPAs were an imperfect solution, but they were seen as the best option short of a seemingly endless description of all uses of treated wood. AWPAs standards are well-established and widely recognized.

However, they were written principally to ensure effective preservation, not to define every treated commodity. Some products are clearly covered by a standard, while other uses could fall under more than one standard. This has long been the situation, but the versatility and economy of CCA-treated wood minimized the significance of most gray areas.

Just because CCA-treated wood is allowable does not mean it will be available. A good deal of the current uncertainty will probably become a moot point. Lum-



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ber dealers will have to decide if they want to carry inventories of both CCA-treated wood and new generation treated wood for the debated applications. Treaters will have to decide if they have the chemical tanks, pressure cylinders, and storage capacity to produce and market two treatments. Both groups, plus builders, will have to decide if a slightly lower cost for CCA-treated wood is worth the added risk of possible legal action.

The combination of these decisions will limit options for many buyers. Even if a treater, dealer, and builder feel comfortable with CCA-treated wood for a particular use, it may not be worthwhile for them to produce, stock, and install CCA material.

Our interpretations are not unanimously shared. I work for Arch Wood Protection. In combination with a sister company, we produce CCA and copper azole, a leading alternative to CCA. We have carefully considered the uses of treated wood and have determined what we feel complies with our revised CCA label. We think our opinions make sense, but they are not necessarily held by our competitors. Neither AWPA nor EPA has announced positions.

Nevertheless, we offer our judgments on continuing CCA acceptability for the following applications:

5X5S AND LARGER

Permissible if the timbers are used structurally and treated according to AWPA C24 (sawn timber used to support residential and commercial structures) with a minimum retention of 0.60 pcf.

4X4S, 4X6S

If they are used as structural members in agricultural settings at 0.60 pcf retention, CCA-treated wood is permissible when treated in accordance with C16 (wood used on farms).

BUILDING POLES

Permissible under AWPA C16 (wood used on farms) or AWPA C23 (round



poles and posts used in building construction).

PLYWOOD

Permissible at all retentions per AWPA C9 (plywood).

GLUE-LAMINATED TIMBERS

Permissible under AWPA C28 (structural glued laminated members and laminations before gluing) both for columns treated after lamination and for veneers treated prior to lamination.

NAIL-LAMINATED TIMBERS

Permissible if the wood components are treated in accordance with AWPA C22 (permanent wood foundation).

SKIRTBOARDS

Permissible if treated to AWPA C22 (permanent wood foundation). This applies only to ground-level boards which are structural. Higher, non-structural boards cannot be CCA-treated.

ROOF TRUSSES

CCA-treated 2-inch lumber is not per-

missible, use copper azole-treated wood.

Fence posts (round, half-round, quarter-round)

Permissible under AWPA C16 (wood used on farms) for agricultural use only.

CORRAL RAILS

Not permissible, use copper azole-treated lumber.

STALL WALLS

Lumber not permissible, use plywood or copper azole-treated lumber.

As mentioned, acceptability does not ensure availability. Some of the AWPA standards mentioned require retention levels, kiln-drying, and other measures to reduce the financial advantage of CCA-treated wood and discourage production.

RB

Huck DeVenzio is manager of marketing communications for Arch Wood Protection, a leading manufacturer of wood preservatives and related technology.

BY GARY REICHERT, PUBLISHER

Survey Data: What Do You Need to Know?

One of the nice things about a small company is it provides a degree of flexibility. We do our primary CSI-Survey in the fall. When special circumstances arise, we do additional market sentiment measures. We did one early this year to provide a comparison before and after the election. In past years we would also do a mid-year survey.

We have done surveys on everything from preferred metal roofing colors to what size footer plates builders use for post-frame building projects.

What information would help you?

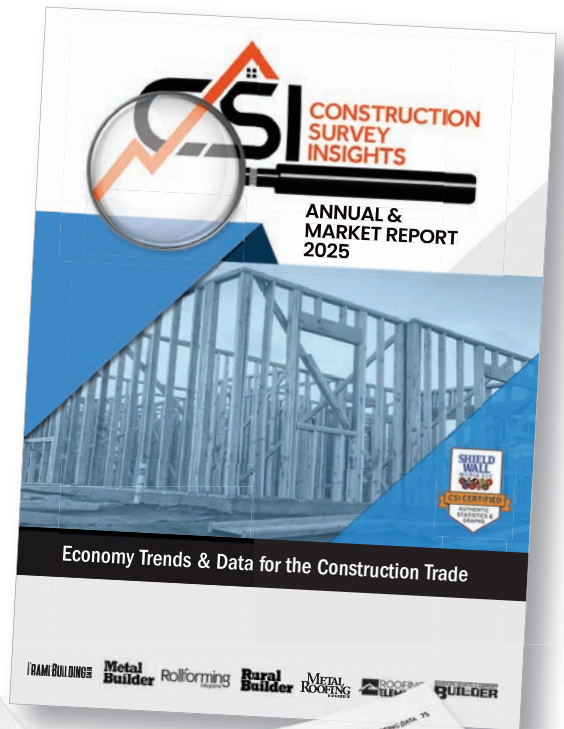
We are mid-year and have a gap in our schedule. I would like to fill it with a great survey idea. What should it be?

If you have an idea of a simple topic (it should be five questions or less), share it and maybe we will do your survey!

We can write the questions, we just need you to tell us what you want to know.

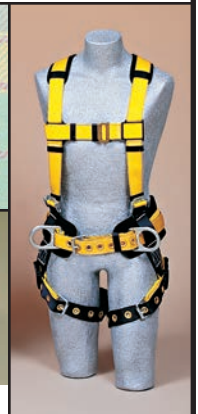
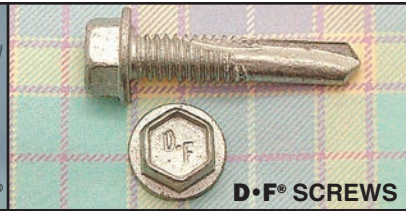
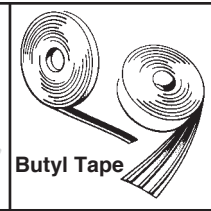
Thanks for your help. Send suggestions to gary@shieldwallmedia.com.

RB



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