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#### **Changing Specs:** The Proof is in the Pudding

BY JOHN MESENBRINK OF CONTRACTOR'S STAFF

NASHVILLE, TN — As a self-professed tech-forward company that is continuously looking to explore new technologies, Aaron Trask, ASPE, CPD, vice president, and his team at Parkway Construction Services, Nashville and St. Louis, left no stone left unturned when addressing the challenges associated with plumbing a new multi-purpose building on the campus > Turn to Changing, page 16



An external shot of the new living and learning center.

#### Watts Water Technologies Inc. to Acquire Bradley Corporation

■ SPECIAL TO CONTRACTOR

NORTH ANDOVER, MA-(BUSINESS WIRE)—Watts Water Technologies, Inc., (NYSE: WTS) ("Watts")—through its subsidiaries, one of the world's leading manufacturers and providers of plumbing, heating and water quality products and solutions-announced that it has entered into a definitive agreement to acquire Bradley Corporation ("Bradley") for \$303 million, subject to customary adjustments.

The net transaction value is approximately \$268 million after adjusting for the estimated

net present value of expected tax benefits of approximately \$35 million. The transaction will be funded through cash on hand and the remainder from Watts' existing revolving credit facility. The transaction is subject to customary closing conditions and necessary regulatory approvals and is expected to close in the fourth quarter of 2023.

➤ Turn to Watts Water, page 14

Women in Plumbing and Piping: **A Community of Support** 

#### UA and Andy J. Egan Co. Collaborate to **Develop New National Weld Procedure**

■ SPECIAL TO CONTRACTOR I

GRAND RAPIDS. MI — Mechanical contractor and fabricator Andy J. Egan Co. (Egan) has a reputation for being an innovator within the industry. From its worldclass fabrication shop to cutting-edge construction technology department, the company creates a culture

➤ Turn to UA, page 10



pose with a product of the new welding procedure.

#### **CONTRACTOR INFOCUS**

#### Manufacturing-Related Construction Spending June 2023: \$195.9 B \$ Billions Seasonally Adjusted Annualized Rate \$150 \$100 2014 2015 2019 2022 Source: U.S. Census Bureau; Note: Seasonally Adjusted

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#### **Pfister Faucets Unveils Season 4** of 'American Plumber Stories'

■ SPECIAL TO CONTRACTOR

LAKE FOREST, CA — AUGUST 22nd. 2023 — Pfister® Faucets, a pioneer in the plumbing industry, proudly announces the release of the fourth season of their docuseries. American Plumber Stories. Over the past three seasons, the series has captivated audiences across the nation, sharing the stories of plumbers who have defied odds to pursue their dreams in the plumbing trade.





Some of the stars of season 4 pose with an American Plumber Stories banner.

#### Sullivan Joins the PHCC Educational **Foundation Board of Governors**

■ SPECIAL TO CONTRACTOR ■

FALLS CHURCH, VA -The Plumbing-Heating-Cooling Contractors — National Association's (PHCC) Educational Foundation has named Joseph Sullivan to the organization's Board of Governors. This distinguished group—composed of leading contractors, manufacturers, and other industry partners who are major donors to the Foundation—is responsible for guiding the development of industry education and ➤ Turn to Joseph Sullivan, page 8



#### 14th Annual Sonnhalter Tool Drive Raises Over \$100,000 Worth of Donations

■ SPECIAL TO CONTRACTOR I

CLEVELAND, OH - Sonnhalter, a communications firm marketing to the professional tradesman in the construction, industrial and MRO markets, partnered with Greater Cleveland Habitat for Humanity for a 14th year during its annual Sonnhalter Tool Drive, which ran the entire month of August and collected over \$100,000 worth

➤ Turn to Sonnhalter Tool, page 12



The Sonnhalter crew with a truck full of donated tools and materials.

#### CONTRACTOR INFOCUS **ABC Construction Backlog Indicator & Construction** Confidence Index, Oct. 2019-Aug. 2023 10 80 CCI staffing levels ■CBI — CCI sales — CCI profit margins : Month of backlog 50 30 g ©Associated Builders and Contractors, Construction Backlog Indicator, Construction Confidence Index

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#### In Brief

**Flushmate** announced that its customers now have access to a nationwide network of 40-plus sales rep agencies across the United States to provide local resources for parts and products. Customers now have a resource to troubleshoot potential problems and expedite parts and product availability.

The **National Institute of Building Sciences** and **Fannie Mae** have developed the Resilience
Incentivization Roadmap 2.0 on
mitigation investment to help people
in America prepare for and respond
to natural disasters. On a national
average, natural hazard mitigation
saves \$4-\$11 in avoided future losses
for each \$1 invested.

StrataTech Education Group has announced the opening of the newest Tulsa Welding School (TWS) campus in Irving, Texas. Dallas Metro is the fourth Tulsa Welding School campus and the fifth trade school for StrataTech (which also includes The Refrigeration School, Inc. in Phoenix). The Dallas Metro campus will launch their Professional Welder and Refrigeration Technologies programs in August.

Height Safety expert **Guardian** has announced the company's expansion in Houston with a new 71,000 square foot distribution facility located near the company's Global Headquarters and Height Safety Center. The expansion is a key part of the company's multi-year strategic plan.

The Community College
Workforce Alliance, the workforce
division of Brightpoint and Reynolds
community colleges, have opened
three renovated labs in downtown
Richmond, VA. National Center
for Construction Education
and Research (NCCER) curriculum
is delivered during the certification
training that includes Level 1 HVAC,
Electrical and Plumbing courses.
Classes are offered in the FastForward
tuition assistance program, available
to all residents of Virginia.

The **US Environmental Protection Agency** (EPA) has released a new *Technical Reference Manual for WaterSense Labeled Homes*. The manual outlines the details of the WaterSense Labeled Homes Program from design through certification. It includes 20 standalone fact sheets focused on specific solutions for water efficiency.

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#### **Top Stories**

- Daniel Zrubak Joins Rinnai America Corp.
- Heather Ripley and Bradford White Launch Video Series
- Horizon Group Holdings Acquires Gervais Mechanical
- The Future of Remodeling with Augmented Reality and Virtual Reality

#### **Videos & Media Galleries**











For the latest news on the federal and local response, code and regulation developments, opinions and best practices from industry experts and more, bookmark CONTRACTOR'S Coronavirus News Page: www.contractormag.com/covid-19.

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## INDUSTRY PERSPECTIVES

- Want to know what is on the mind of Ed O'Connell, business coach and consultant?
- ► Want to know about how to get the flow rates right in hydronics from master trainer Steve Swanson?
- Want to know what the 14 characteristics are of a professional plumbing company? Matt Michel will tell vou.

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Want to converse with experts in the plumbing and hydronics industries? Then check out CONTRACTOR's Industry Perspectives, serving up thoughtful, conversational content from the industry experts you have gotten to know so well at www.Contractormag.com.



#### Rheem® RTGH and RTG Series Tankless Gas Water Heaters

With the same performance both plumbers and homeowners trust, the Rheem® RTGH Series Super High Efficiency Condensing and Rheem® RTG Series High Efficiency Non-Condensing Tankless Water Heaters now offer a new modern design. These smaller, lighter units were designed with contractors in mind to make one-person installation and servicing even easier. Plus, enhanced features deliver the continuous hot water, and energy efficiency homeowners want.





# The Digital Evolution: How + Why We Must Embrace the Shift

BY DOMINIC SIMS, CEO OF INTERNATIONAL CODE COUNCIL

n our constantly-evolving industry, we see technological advancements rapidly becoming integrated into every aspect of construction. As the CEO of International Code Council, I am acutely aware of the profound benefits that digital tools and solutions bring to contractors, reshaping practices, streamlining processes and yielding undeniable advantages. Digital tools will play a pivotal role in shaping the future of the construction industry.

At International Code Council, we integrated digitization into our 2025 Vision and Strategic Plan, creating a leadership role dedicated to innovation, information and digital content. This visionary role is tasked with nurturing a culture of innovation across the organization, spearheading digital solutions offered by International Code Council. Our digital solutions roadmap not only offers new, accessible ways of providing building safety

content but also digitizing codes themselves. We're able to offer online permitting, interactive training and professional development opportunities, credentialing and digital codes & standards.

We recognized then and now the importance of evolving the way we

allowing you to access information faster, in addition to improved quality and content. By embracing digital solutions, we're embarking on a transformative journey that will eliminate pain points and better prepare us for the future and industry changes to come.

Digital solutions offer:

## Digital tools will play a pivotal role in shaping the future of the construction industry.

do things, not only to keep up with technological advances, but also to contribute to the evolution of a more agile, resilient industry. Adopting digital solutions is no longer an option but is rather a necessity for contractors and other industry experts looking to thrive in today's landscape. Digital solutions offer heightened efficiency, 1. Improved Efficiency AND Quality. In an era defined by the need for speed and precision, digital solutions offer a compelling proposition—the ability to enhance both efficiency and quality simultaneously. Streamlined workflows and instant access to critical information empower contractors to make informed

decisions, ensuring that every facet of the construction process aligns with the highest standards.

2. More Autonomy for Contractors. Digital solutions herald an era of self-empowerment for contractors. These tools provide contractors with the autonomy to navigate complexities, from compliance with building codes to project management, independently. This newfound autonomy not only accelerates project timelines but also fosters a culture of collaboration, where stakeholders collaborate seamlessly and drive innovation collectively.

**3**. **Power in Professional Support.** While the autonomy offered by digital solutions is invaluable, digital tools provide an opportunity to access insights from industry professionals. For example, International Code Council's digital tools are supported by comprehensive personal consulting from our experts. Contractors can utilize these tools for effective problem-solving tailored to meet your needs.

**4**. **Contractors the Chance to Remain Competitive.** We're experiencing a digital renaissance, affecting every industry, and contractors must seize the opportunity to remain competitive. Digital solutions can provide the edge needed to confront modern challenges head-on, ensuring that contractors are well-prepared for the evolving landscape. The adoption of these solutions translates into improved collaboration, reduced errors, and heightened adaptability—crucial elements for sustained success.

Dominic Sims, CBO is the chief executive officer of the International Code Council. As CEO, Sims is responsible for the overall activities and financial performance of the association, including its six subsidiaries. During his 18-year tenure, Sims has also served as the Code Council's chief operating officer and senior vice president. Sims has worked in the building safety field since 1983.

## RPA, IGSHPA Sign Memoradum of Understanding to Advance Geothermal Heating and Cooling

ONTARIO, CA — The Radiant Professionals Alliance (RPA) and International Ground Source Heat Pump Association (IGSHPA) have entered into a memorandum of understanding with the mutual goal of promoting and advancing technological innovations of geothermal systems. The partnership will coordinate RPA, IGSHPA and its respective members with technical activities coordination, re-

search, education, advocacy, publications and leadership for more sustainable building operations and the green economy.

The RPA and IGSHPA will support the geothermal industry on providing opportunities to participate in codes and standards development, guide-



Two workmen drilling a residential geothermal field.

lines, policies, and position statements developed on technical subjects as they relate to geothermal and radiant/hydronic developments. They will collaborate in the development of research related to the design and construction of radiant systems for geothermal applications and promote research in

areas where results will add to the body of knowledge in the conservation of natural resources, increasing energy efficiencies and sustainability, and improving public health and safety.

#### Collaborating for Consistency

"This collaboration brings the geothermal industry together for consistency in the approach, installation, and guid-

ance of geothermal systems," IAPMO CEO **Dave Viola** said. "IGSHPA and RPA, as representatives of the geo thermal and radiant/hydronics industries, will work together to provide useable content that will not only help drive the industries forward but

➤ Turn to RPA, page 46

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#### Sullivan Joins the PHCC-EF Board of Governors

#### Continued from page 3

training programs for contractors and their employees.

After graduating from Boston College with a degree in accounting, Joe Sullivan served on active duty and then in the Army Reserve for six years. He then started on a career in finance at a national public accounting firm. In 1968, Joe's father convinced him to come work at the family business—J.J. Sullivan Plumbing. When his father passed away two years later, Joe found himself in charge of the family business at 28 years old.

#### **Legacy of Service**

To help get the knowledge he needed to be successful, Joe joined a local plumbing association—PHCC. In time, he took on leadership roles, including becoming president of the state association. He continued to be active and served as the PHCC of Massachusetts state treasurer for 20 years.

In 2001, Joe was asked about serving on the PHCC Educational Foundation's Scholarship Committee—a role he took on without hesitation. For the next 22 years, Joe would spend his summers reviewing the application materials of thousands of apprentices and students looking to earn a scholarship award.

J.J. Sullivan Plumbing and Heating is thriving as the firm takes on commercial and institutional jobs, working in schools and labs in the Cambridge, Massachusetts area. Joe's two sons, Patrick and Mike, are now helping to run the business as the third generation for the company. Joe's wife Ann passed away in 2005, and he remarried in 2008 to Jacqueline Piret, a retired microbiology professor. He still shows up for work regularly, but makes his own hours as he likes.

When asked about why he is

#### **Board of Governors**

joining the Foundation Board of Governors, he simply stated "I value the organization and I want to support it, to be a part of something bigger that is helping the industry that had supported my family for all these vears."

"Joe is one of the Foundation's great volunteers," shared Foundation Chair Kevin Tindall. "His work on the Scholarship Committee for more than 20 years is a reason the Foundation



#### **EDUCATIONAL FOUNDATION**

has been able to help so many apprentices with their training expenses. We are happy to welcome him to our Foundation family."

The PHCC Educational Foundation will formally recognize Joe and present him with his Board of Governors plaque and pin at the Foundation Donor Reception during PHCC CONNECT in Cleveland, Ohio on October 26th.



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## **UA and Egan Co. Develop New Weld Procedure**

#### ➤ Continued from page 1

that encourages employees to explore methods for delivering higherquality projects on expedited schedules. Fabrication Shop Foreman **Shane Shook** developeda timesaving weld procedure in partnership with the United Association of Union Plumbers and Pipefitters (UA), with a certification that will soon be available to all UA members and contractors. For many years, Egan has certified its own welders on a GTAW procedure the company internally refers to as "Hot Gas" for hand welding. This blend of 95% argon and 5% hydrogen is ideal for Egan's work on schedule 10 piping for

the process piping code.

Shook explains that it creates a hotter arc which helps to penetrate thicker-walled stainless piping. Travel speed can be increased, creating less heat input, which is an important feature when welding any stainless steel.



While the Hot Gas procedure originally started with hand welding, Egan now uses it in orbital procedures for many customers, allowing welders to complete their welds at a faster rate when compared to traditional GTAW procedures. The result is a significant time savings for a repeatable, high-quality weld. "The root welds look perfect," adds Shook.

Before purchasing new orbital welding equipment earlier this summer, Shook visited UA Local 174 Plumbers and Pipefitters for a training day. His former colleague **Robert Derby**, now a UA Training Specialist, was in attendance to support the training and suggested a collaboration between the UA and Egan. Derby wanted to ensure all UA members had the opportunity to get certified in the Hot Gas orbital procedure.

From there, Derby and Shook coordinated the required steps to make the certification available to the UA's more than 368,000 members. Derby visited Egan's Fabrication Shop in August to witness and document the procedure and expects that certification tests will be available to local training halls later this year.

"It's exciting to make this available to our members," says Derby. "Our goal is to ensure welders of all skill levels are successful with this mix of gas."





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#### Sonnhalter Tool Drive Raises Over \$100,000

#### ➤ Continued from page 3

of donations of tools and building materials. Since Sonnhalter began its efforts in 2010, it has collected \$517,000 in donations.

#### **Largest Donation Yet**

"Every year we are amazed at the amount of donations we receive from our clients and community to support Habitat for Humanity," said **Matt Sonnhalter**, Vision Architect at Sonnhalter. "This year, we collected more than \$100,000, making it our biggest donation since we started our tool drive initiative."

"Helping our community is extremely important to us and with the Sonnhalter Tool Drive it allows us to provide tools to work on our houses, in our tool shop and be sold to the general public," said **John Litten**, president/CEO of the

Greater Cleveland Habitat for Humanity.

Community participants in the 14th Annual Sonnhalter Tool Drive included Berea Recreation Center, Cuyahoga County Public Library, Berea Branch, Frangos Group, Rising Star Coffee Kapro, Lakeside Supply, NIBCO, Samsel Supply, Shop Supply & Tool Company, Sutton Industrial, Woodhill Supply and Wright.

County Public Library, Berea Branch, All donations that Sonnhalter col-Frangos Group, Rising Star Coffee lected benefited Greater Cleveland

Since Sonnhalter began its efforts in 2010, it has collected \$517,000 in donations to benefit the Greater Cleveland Habitat for Humanity.

Roasters, Skidmark Garage, St. Mary of the Falls, The Wine Spot and many individuals living in the community.

Trade industry participants in the 14th Annual Sonnhalter Tool Drive included Babcox Media, Buyers Products, General Pipe Cleaners, Jergens, Inc., Habitat for Humanity. The donated items will be used for Habitat for Humanity projects or will be sold at one of the organization's ReStores, recycled building materials and home furnishings stores. Proceeds from the ReStore sales are used to help Habitat build and



rehabilitate homes for those in need.

To learn more about Sonnhalter, visit www.sonnhalter.com.

To learn more about the Greater Cleveland Habitat for Humanity, visit www.clevelandhabitat.org.







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## Watts Water Technologies Inc. to Acquire Bradley Corporation

#### ➤ Continued from page 1 Bradley Co.

Bradley is a trusted provider and manufacturer of commercial washroom and emergency safety products serving commercial (primarily institutional) and industrial end markets for over 100 years. The company offers a comprehensive product portfolio that includes plumbing fixtures, washroom accessories and emergency safety products to a diverse customer base. Bradley has annual net sales of approximately \$200 million.

Watts' Chief Executive Officer **Robert J. Pagano Jr.** commented, "Today's strategic acquisition delivers on our mission to improve comfort, safety and quality of life for people around the world. Bradley's complementary portfolio will enable us to provide our customers with innovative water solutions, as it adds front-of-the-wall applications to our differentiated back-of-the-wall portfolio. We believe we can leverage the combined strengths of the two companies' sales networks and channel relationships to facilitate cross selling and accelerate growth."

#### Strategic and Financial Benefits

- Extends product portfolio and market leadership:
  Bradley's innovative front-of-the-wall portfolio includes a full suite of high-quality, specified and code-driven products.
- Increases end market exposure to secular growth themes: Strategically expands Watts' position in commercial (primarily institutional) and industrial markets. This is expected to accelerate growth as these markets continue to benefit from long-term secular trends such as water conservation, safety and regulation and energy efficiency.
- Leverages the One Watts Performance System and connected strategy: Achieves meaningful cost synergies through commercial and operational initiatives in addition to global sourcing savings.

- Enhances competitive positioning: Combines two leading brand portfolios with proven, longstanding track records of delivering high-quality, innovative products and solutions.
- Brings highly experienced management team and skilled work force: Adds strong leadership with deep industry expertise, including Bryan Mullett, Bradley's Chairman and CEO, who will join Watts as President of Bradley, a new platform within Watts' Americas region.
- Accretive transaction providing long-term financial benefits: The transaction is expected to be modestly accretive to Adjusted EPS in 2024 due to incremental interest expense and normal purchase accounting adjustments. The transaction value, net of the estimated tax benefit, represents less than 8.0x forecasted 2023 proforma Adjusted EBITDA after factoring in expected run-rate cost synergies. Adjusted EBITDA margins expected to be accretive by 2027.

#### **Tremendous Opportunity**

Bryan Mullett said, "We are very pleased to have Bradley join Watts and see tremendous opportunity for incremental value creation. This will help us capture the benefits from our diverse range of innovative and customized front-of-the-wall solutions and Watts' global reach, broad product portfolio and operational strength. I am looking forward to joining the management team to drive continued growth and support the integration of these two companies."

Pagano concluded, "Watts and Bradley complement each other well in terms of culture and shared vision, with proven track records of delivering innovative, high-quality products and solutions along with outstanding customer service."

Additional information regarding the transaction will be discussed during Watts third quarter earnings call in early November 2023.



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## Changing Specs: The Proof is in the Pudding

#### ➤ Continued from page 1

of Meharry Medical College in downtown Nashville. Parkway Construction Services won the bid for the new sixstory facility, which features 126 apartment-style units, flexible teaching spaces, a parking garage, retail spaces, offices and more.

A family-owned, union contractor that has been in business 30 years, Parkway Construction is in the business of solving problems. The Meharry campus project, in particular, was a fast-paced job and very tightly coordinated. Building information modeling (BIM) was used to facilitate this project because each room was its own system, and, as a result, added extra pipe to the job over a typical installation.

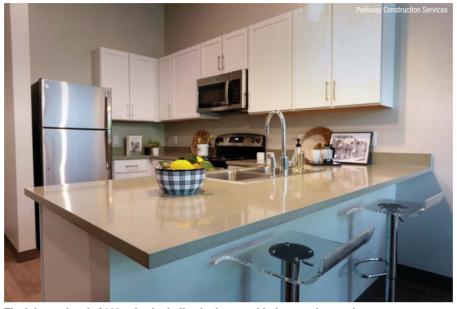
So, when the original spec for copper piping was replaced with PEXa piping, the proof needed to be in the pudding, so to speak. You see, when installing a plumbing system in a facility, the costs for the plumbing contractor often break down primarily into two categories: one, the materials—the initial cost of the piping and fittings, and two, the labor—the installation time, and the time to repair any leaks and finish the job.

#### **Changing the Spec**

"Changing a major aspect of a spec is never easy, and it usually isn't entertained unless there are significant cost savings," says Trask. "We proposed it as a value engineering option because we knew it would save money and add value to the project."

But even Trask was pleasantly surprised by the extent of the savings he accrued in labor costs—both in installation and final inspection—with the PEXa brand he selected. "We turned on the water to more than 4,000 connections with the REHAU RAUPEX pipe/EVERLOC+ fitting PEXa system and there were no leaks. None. Zero," says Trask.

And while the REHAU system didn't have any leaks, "That's very unusual," says Trask. "I would say with this number of fittings, 126 units with bathroom, kitchen and water heaters, and all the other spaces, that's a lot of plumbing, and 50 or so initial leaks



The job consisted of 126 units, including bathrooms, kitchens and water heaters.

Nashville-area Parkway Construction Services changes plumbing spec on college campus building to cut costs on material and labor.

would be pretty normal. But zero leaks means zero rework, and that's money in your pocket."

Moreover, while the scope of this project—with an average of six guys on the job—took almost a year to complete, "We did this during the COVID-19 pandemic so supply chain issues were prev-

alent, but we were able to get the product no problem."

While Trask is very familiar with PEXa products, he had never used RAUPEX pipe or EVERLOC+ fittings, but was confident in the recommendation of his supplier Kenny Pipe & Supply. "It was extremely easy for my guys to pick up," says Trask.

#### **Fast, High-Performing**

Once Trask and his team got rolling, they immediately noticed differences compared to their many prior PEXa installs, quickly gaining confidence



**EVERLOC+** fittings.

in the speed and confidence in the REHAU system that they were soon plumbing four rooms per day, not to mention having the added safety benefits of a flameless installation.

"RAUPEX pipe combined with EVERLOC+ fittings are not only the fastest installing and best performing PEXa system there is, they are also very competitively priced," says **Chris Richey** of Kenny Pipe & Supply. Trask concurs, "We definitely saved money in labor and material over copper and I would say the total savings were very significant."

The EVERLOC+ fittings are installed with a fast, consistent, nearly foolproof process requiring only two expansions and one compression, utilizing an easy-to-use proprietary tool. Basically, the installer expands the pipe, puts the fitting in, and the sleeve compresses the pipe over the fitting to create the seal. Further, the fittings have a textured PEXa compression sleeve with four sealing edges that protect against leaks.

And remember that proof in the pudding? "With the EVERLOC+ fitting, it just takes a few steps to create a true mechanical joint that doesn't solely rely on the memory of the pipe, so you can immediately see that the connection is made successfully and is leak-tight," says Trask, who also noted that the RAUPEX pipe with EVERLOC+ fitting system allows you to do a pressure test immediately without waiting for the pipe to naturally reform after expansion.

#### **Better All-Around**

An added bonus, Trask mentions that with other tradespeople on the jobsite,



**RAUPEX PEXa piping.** 

such as drywallers and the general contractor, they often watch the pressure test and prepare to help mitigate any typical ancillary damage that might occur from initial system leaks. "When we pressure test, we use small hydrostatic pumps usually; we will use air tests when we have to, but prefer water tests," says Trask.

And those other tradespeople on the jobsite? They seemed to be aware that there were no leaks at all, so people were surprised and talking about it. "And that reflects well on me and my company," says Trask.



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#### by AI Schwartz PLUMBING CONTRACTOR

# Got Lemons? Here's How Your Plumbing Business Can Make Lemonade

the old adage, "When life gives you lemons, make lemonade!" There is another old saw that factors into this topic, "It is an ill wind that blows no good." Those two adages pretty well sum up our national economic situation. Those two old sayings both have optimism at their cores; the ability to find some good or to try to make the best of a bad situation.

Having live through COVID and all the fallout from that fiasco, it isn't much of a stretch to predict either the depth, or longevity, of our current economic woes. Even the most pessimistic forecasters could not envision the housing crisis, mortgage rate explosion, credit crunch or the inability to find viable employees. Even so there are those who, although struggling, are making it in the current business climate.

The businesses that are still standing are doing it by combining good old-fashioned perseverance and modern day innovation. By thinking "outside the box" these companies are able to survive, if not necessarily thrive.

#### Looking for an edge

The "ill wind" analogy describes the current labor pool situation. We may be "waiting for the other shoe to drop" on our economy and no one knows if the economy has contracted as far as it is going to... or not. Our inability to get trainable people is something few if any could have predicted. Not only do we not have qualified candidates, we can't find any viable candidates. Suggesting that you might be able to raise the level of craftsmanship in your shop with newer, better trained people has become a joke. One that none of us is laughing at. So, a suggestion, how about up-training your existing people? Taking the rough edges off your peoples' skillsproviding intensive technical training to make your crews better able to work with the newer technologiesmight give you an edge to exploit in the marketplace.

In times past, when the economy was booming and the trades were a desirable means of making a living, the available labor pool was so narrow that most companies would simply place want ads and begin the hiring/ firing cycle until they had culled the best people available. This was not only time consuming and frustrating, but expensive as well. Many times, new hires were less than qualified, but they were avail-

able! Today, new hires are a liability to the company. Many times, new hires, if you can find one, is so bad that it



made you successful in business in the first place. Change where you have to but stick to your guns when that people that they could find. As crazy as this sounds, they set the criteria for new hires very high: new hires must hold valid plumbing licenses, and have at *least* 15 years of trade craft experience before they would even review the applications.

By adhering to these strict guidelines, and offering signing bonuses as well, the company was able to hire only the most qualified people, eliminating many, if not all, of the employment pitfalls that have haunted the industry for so many years. They did credit, criminal and other background checks and generally vetted prospective new hires about as thoroughly as present technology would allow. The end result, according to one trade source, is that the company now has the best crew in the state.

It is obviously not possible to say that they won't have some related labor issues with the new hires, but by setting their hiring criteria so high, they have effectively eliminated the vast majority of typical new hire problems. Assuming that everything flows the way it should, labor management and related cost control on the project will be greatly improved. This will save a lot of money and aggravation for the company. And also, the project owner will be getting a first rate job in the bargain.

Building on this assumed success, the company is positioning itself to be selected to bid on more projects of this type in the future based upon superlative performance and quality craftsmanship. A great way to push-off of the bottom and head for daylight.

The Brooklyn, NY-born author is a retired third generation master plumber. He founded Sunflower Plumbing & Heating in Shirley, N.Y., in 1975 and A Professional Commercial Plumbing Inc. in Phoenix in 1980. He holds residential, commercial, industrial and solar plumbing licenses and is certified in welding, clean rooms, polypropylene gas fusion and medical gas piping. He can be reached at omeletman01@gmail.com.

## There are those who, although struggling, are making it in the current business climate.

would have been better to under man a project or walk away from one, rather than man it with some of the people represented in our current labor pool. My how the times have changed.

#### Lemonade?

So, do you sit around wringing your hands crying, woe is me!? I don't think so! As I have said many times over the years, ours is a tough industry. If you are in it and have survived more than a few years in the business, you're in the best position to make it over the top to the new day that is just over the horizon... or at least that's what it says in the fine print, anyway.

Here's an aphorism for you: Advice is something that is given by the pound, but taken by the grain. So, here's my pound of advice: do whatever you have to in order to survive. If that means becoming a one-man shop because you can't find anyone to train, then do it. If it means not taking that proffered project because you can't properly man it, pass on it. Stick with what it was that

change threatens to overwhelm you. Modify, adapt... overcome.

#### The upshot

I heard a story through the grapevine about one large plumbing/HVAC company that was fortunate enough to have landed a good sized project. They found themselves in the position of needing to hire new people.

Now this particular company was pretty large to begin with. They had a long history of working with their employees to educate, train and advance from within. They placed a high value on training and retaining qualified people.

When the economy slowed, this firm was hit as hard as the rest, but they had a bigger footprint. Because the company was large, they were able to contract rather than go out of business. They laid off a lot of people, but they stayed afloat.

Once they got the job, the company made the conscious decision to aggressively recruit only the most qualified



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### The Future of Electric Boilers

BY STEVE SPAULDING OF CONTRACTOR'S STAFF

ne tactic in the fight to reduce greenhouse gas emissions has been to limit the use of fossil fuels. The push to adopt electric vehicles is one part of that approach. Another has been bans on natural gas, which range from banning the sale of natural gas-fired appliances to banning natural gas hookups in new construction.

Most of these bans have happened at the municipal level, with more than 76 US cities—mainly in California and the Northeast—passing such bans. In reaction some states—24 at last count—have passed legislation prohibiting such bans.

To discover what the push towards electrification might mean for those who specify, install and maintain boilers, we spoke with Dan Rettig, Senior Product Manager for Lochinvar, a leading water heating solutions provider based in Lebanon, TN.

\* \* \*

**CONTRACTOR:** Where do you think electrification is going? Do you think it's going to be a rapid adoption, a gradual adoption? Is it going to be based on geography?

Dan Rettig: If you can read that crystal ball, I sure would like you to let me know! As an organization, we're looking at what's going on in the different states, even within certain municipalities. But we look at it as a business opportunity. We feel that we're the leader in high efficiency gas products, so this is a great opportunity for us to transition our expertise and high efficiency to whatever the future holds. On the electrification/decarbonization side right now a lot of the emphasis is on heat pumps, so we're trying to prepare ourselves, make sure we have a product portfolio no matter where the market goes.

As for the pace of change, we've had some conversations with clients on the west coast. There's been a change in emphasis from the water heating to the hydronics side over the past seven years, and that's picked up pretty drastically. It feels like that pace is quicker on the hydronics side than it was on



#### CONTRACTOR talks with Lochinvar Sr. Product Manager Dan Rettig about decarbonization and what it means for the boilers of tomorrow.

the water heating side... All I can say is we see those numbers and the demand increase; quarter over quarter you see those numbers increase.

contractor: One criticism of electrification is that it's just passing the buck; that these appliances are getting their electricity from a plant that might be coalfired or oil-fired. Do you think that the push towards electrification can really deliver on carbon reduction targets?

**Dan Rettig:** If you look at the current state of our electrical

grid, where we're getting that power from, we have a lot of opportunity to improve as a country. We need to be honest with ourselves, face the facts, and start the difficult conversations we need to have.

But if we wait until the grid's completely clean before we come out with the product offering then, as manufactuers, we're behind. Either way,



A commercial electric compact boiler from Lochinvar.

somebody's going to be behind, either the manufacturers or the grid. So I think we'll get there and find out what that balance looks like at the end.

CONTRACTOR: Based on what you're hearing from your customers, what are some of the concerns of people that are installing and maintaining electric boilers?

**Dan Rettig:** First of all, something I would say a legitimate concern is a contractor used to working with a gas appliance that runs off

maybe just 115 volts, when you start looking at some of these electrical products, 480 [volts], high amperage, that can be pretty overwhelming. So you definitely want to get some electrical training, understand how to work safe, how to troubleshoot. One thing I was always taught is you have to understand what you're working on and respect what you're working on.

You have to know what it's capable of.

But really, we're heating water. If you've worked on a residential electric water heater—which is not super complicated—it's that same concept, but we'll say with a little more power behind it, more elements, but very similar in the way we would go about troubleshooting.

You're going to have probably more integrated controls, some processing boards, but we have those on the high efficiency gas-fired boilers that they're troubleshooting today. The learning curve is probably not as large as they think. Just understanding, hey, it's not really that big a step up. The electric boiler should be in your wheelhouse.

For those who are interested we have in-house training at our facility in Lebanon, Tennessee. All those dates are on our website. We have our online platform, where people can watch videos. Now, I would never say, "Hey, watch this video with this volt meter and you're going to be a professional that can go troubleshoot these large electric boilers." You definitely want to have somebody that's had some hands-on training. I can remember, back when I was installing, I started out working residential, and it was a significant amount of time before I felt comfortable working commercial.

**CONTRACTOR:** What do you think the future of electrification will look like?

Dan Rettig: So everybody knows, at Lochinvar we're fully invested in decarbonization, in electrification, and we're trying to keep fully engaged in what's going on to make sure we have the right product offering. If you look at our distributors, it's like they're trying to figure out this future too. "Can I handle a heat pump?" Right? "Is this new thing in my wheelhouse?" So I think not only are the contractors trying to figure out what their future looks like, but at the distribution level, at the rep level, and even at the manufacturing level—I think we're all trying to find our place in what it looks like moving forward.

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# Women in Plumbing & Piping: A Community of Support

The new group empowers women through mentorship, networking, education and recognition.

By Kelly L. Faloon

efore Women in Plumbing & Piping launched in November 2022, Executive Director **Kim Gill** and founding member **Susan Frew** (co-owner and president, Sunshine Home Services, Denver) began a campaign to bring together women working in the plumbing and piping industries.

The idea began in 2020, where, through her work at association management firm Civica Management, Gill helped manage the National Women in Roofing group.

"The group started with two women in the roofing industry who said, 'Hey, we need a women's group for this,'" she explains. "And they started creating the buzz, the excitement, getting people involved, bringing on sponsors, forming the actual organization. It didn't exist prior to 2017; since then, it has more than 2000 members and many sponsors."

Watching the roofing group continue to grow inspired Gill to see what other women's groups she could find in the construction industry: National Women in Construction, Women in HVACR, Women in Energy, Women in the Mechanical Industry. However, she found no group focusing on women in the plumbing/piping industry.

Why do women need their own groups when so many other associations exist in construction? As men and women are different, they have different experiences and challenges in the workplace. The construction industry and its various sub-industries, with primarily male workers and leaders, are no different.

Gill contacted Frew, and they agreed that a plumbing group for women was needed. Working together, they reached out to women they believed could help motivate other industry women to join the Women in Plumbing and Piping (WiPP) group, focusing on assembling the founding members/advisors through email, LinkedIn and other social media.



Founding members/advisors are **Lara Beltz**, coowner of Beltz Home Service Co., Findlay, OH; Frew, who also is a professional speaker; **Carol Longacre**, director of association management, Service Nation; **Tonya Reed**, owner of Henry Plumbing Co., Savannah, GA; **Lori Tschohl**, owner of Eagle Pipe Heating & Air, Port Ludlow, WA; **Angie Snow**, principal industry advisor at ServiceTitan; and **Lynn Wise**, founder and partner of Contractor in Charge, Tampa, FL.

"We were met with such excitement, not only from women who wanted to join the organization or be part of the leadership and see it grow, but also from women in other industries, such as Women in HVACR," Gill recalls. "Our founding advisors were very excited to be a part of the effort, to share the information with other women, and help to bring sponsors on board—which is crucial, especially in this first year."

#### **Four Pillars**

WiPP's mission is to "provid[e] a community of connection and empowerment for women in the plumbing and piping industries to thrive personally and professionally." Included in the mission is to "promot[e] the contributions of women as an essential component to the future of these trades."

To help accomplish this, Gill notes the trade organization is built around four pillars to support workforce development. "Our members are anywhere from owners of businesses to the apprentices themselves, to anyone in between working in the companies or suppliers and manufacturers or related industries," she says. "So, we are completely focused on the support and empowerment of women, and we do it through the pillars."

**Pillar 1: Mentoring.** WiPP is building its mentorship network of mentors and mentees, with mentors trained by the end of this year.



"Going into 2024, it's a cohort," Gill explains. "For the mentors and mentees for this particular starting point, it's all group mentorship. Next year, they will meet quarterly on specific topics. Mentors will talk about the topic, then break out into groups of three or more—smaller, more intimate groups to dig deeper into the topic and maybe add some personal examples."

She notes that mentoring may evolve into a oneto-one mentorship program, but WiPP's goal is to launch the group mentoring program next year and see where it goes.

**Pillar 2: Networking.** Gill notes that WiPP is launching state chapters to "have that networking in-person connection at the local level." Eight chapters with leaders have been established so far.

WiPP's online community is very similar to a "Facebook-type app where you go on this landing page, there's a feed, but also a directory, a way to connect with different people," she says. "We're trying to focus on getting people into the community and into different groups with specific topics or geographical locations where they can connect based on those commonalities."

**Pillar 3. Education.** "Our education pillar is all about personal development," Gill explains. "It's recognizing that we work in a unique, male-dominated industry, and certain challenges come along with it. We do not want to be negative in any way. It's recognizing the realities of some of the challenges and helping ourselves to become better at dealing with them."

Communication is a big issue as women and men communicate differently. Learning to bridge that gap goes a long way to establishing rapport with male co-workers and vice versa.

"It's our focus on the education piece," she says. "At some point, we may expand beyond that, depending on the interests of our group. So, if a strong contingent of business owners emerges, we may focus on owning a business and being successful."

**Pillar 4. Recognition.** "Part of recognizing or supporting women is identifying women heard doing unique things in the field," Gill notes. "We don't have specific awards set up yet, but we anticipate them coming soon."

Scholarships reside in this pillar, and Gill says that WiPP does put money aside from founding sponsors to fund them: Ferguson, Contractor in Charge, Fluidmaster, NIBCO, Power Women of the Trades and Service Nation.

"We're hoping as we launch chapters and they help us in this effort at the chapter level that we will bring more money in," she says. "Our advisors will work on creating what those scholarships look like for next year. And then we're hoping next May to launch the application process."

WiPP will broadcast a free virtual town hall Oct. 20 for members and nonmembers to gain insight into the organization and its goals. And at this year's PHCC Connect in Cleveland, WiPP is hosting a Women in Industry luncheon Oct. 25. *Visit www. womeninplumbandpipe.org* or email *hello@womenin-plumbandpipe.org* for more information.

"The more we grow and the more members we have, the more people sharing and communicating to make WiPP a worthwhile experience," Gill says. "We're educating ourselves, bettering ourselves, empowering ourselves, and realizing that a group of women, a community of support, is behind us, behind all women."

Kelly Faloon is a contributing writer to CONTRACTOR magazine and principal of Faloon Editorial Services. The former editor of Plumbing & Mechanical magazine, she has nearly 35 years of experience in B2B publishing, with 25 of those years writing about the plumbing, heating, cooling and piping industry. Faloon is a journalism graduate of Michigan State University. You can reach her at kelly@falooneditorialservices.com.

#### **FERGUSON:** Why Collaboration Matters

As the horizon approaches where the entire baby boomer generation will reach retirement eligibility by 2030, an exciting opportunity presents itself: the chance to redefine the skilled trades landscape. While the shortage of skilled professionals is being felt, the next five years offer a promising era for transformation.

With a building boom on the horizon, ongoing efforts to encourage young talent to explore trade careers gain traction. However, there remains a collective understanding that more work lies ahead. This pursuit demands innovation, the removal of barriers, and, most importantly, the integration of underrepresented groups, notably women. In an industry where women constitute just 10 percent of the US construction workforce, it's evident that there's untapped potential awaiting exploration. Stepping into this realm with fervor,

Ferguson has come forward as a founding sponsor of Women in Plumbing and Piping (WiPP), an organization poised to catalyze positive change by fostering community, empowerment and resounding success among women in the skilled trades.

"The timing for women to enter the skilled trades has never been better," explained **Melissa Hazelwood**, Director of Social Impact at Ferguson. "With the recent federal investments in upgrading our country's infrastructure, available training and just the sheer volume of career openings—the opportunities for women are limitless. We're thrilled to partner with Women in Plumbing and Piping to help attract more women to and support the women currently in the industry."

"While more women are joining the trades there remains less than 4% of women who work as plumbers and pipefitters," said **Kim Gill**, WiPP executive director. "There's a real opportunity to close



the skilled labor gap by creating awareness of these fulfilling careers, recruiting women into them and then supporting these women to keep them engaged. We are excited to work with Ferguson to attract and retain women into the industry with their support and through our collaboration."

#### WOMEN: THE CORNERSTONE OF PIPEI INF SUCCESS

A Solution to the Skills Gap: As the baby boomer generation retires, the gap in skilled trades professionals becomes more pronounced. Often underrepresented in these fields, women emerge as a dynamic force capable of addressing this disparity. By embracing diverse talent, the trades industry can leverage women's expertise to bridge the impending skills shortage.

**Diverse Skills, Fresh Perspectives:** The infusion of diverse viewpoints spurs innovation. Women bring unique

problem-solving approaches and fresh perspectives, which can drive creative solutions in an industry that often requires adaptability and ingenuity.

Enhanced Collaboration and Communication: Teams that reflect a spectrum of backgrounds and perspectives tend to collaborate more effectively. In an industry that thrives on teamwork, including women can lead to better communication, cooperation, and, ultimately, project success.

**Strong Role Models:** The presence of women in leadership positions within skilled trades can serve as aspirational models for younger generations. When women s ucceed in these fields, it paves the way for others to follow suit, creating a self-sustaining diversity cycle.

#### **COLLABORATION MATTERS**

Ferguson's collaboration with Women in Plumbing and Piping (WiPP) is more than an alliance; it's a commitment to shaping a more inclusive future for the skilled trades. The Women in Plumbing and Piping initiative is poised to transform the skilled trades landscape. Its four pillars—mentorship, education, networking and recognition—reflect a comprehensive strategy for integrating more women into the industry. This multifaceted approach attracts women and equips them with the tools needed to excel.

With a forward-looking approach, Ferguson's collaboration exemplifies the positive change that's possible. Integrating women in skilled trades isn't just a step towards gender equality; it's an investment in a more resilient, innovative and prosperous industry. Through initiatives that foster community, empowerment and growth, the trades can undoubtedly create a brighter future with women at its core.

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#### by Patrick Linhardt HYDRONICS MANAGER AT CORKEN STEEL PRODUCTS CO.



#### **Oil-Fired Boiler Twofer**

il fired boilers are not very common in the Cincinnati market. The local gas company did a very good job of covering the major metropolitan market through the years. So I was surprised one day when I had two calls that each had oil-fired boilers.

The first call was in the heart of Cincinnati. It is an area that had a lot of commercial greenhouses back in the day. The navigation was taking me on a one lane road that was winding its way past the shells of abandoned greenhouses and the chimneys of the coal fired boilers that used to heat them.

The further I went, the more rural the landscape became, until the road came to an end. The view looked like a remote hollow in Kentucky, not five miles from downtown. The contractor came over to my car and said, "It's oil fired steam," like he just found Sasquatch.

#### **Conversion Pros and Cons**

Up the hill was a brick house from the late 1800s, with an ancient steam boiler that was originally coal fired, piped to a one-pipe steam system added to heat the house in the early 1900s. The homeowner was interested in replacing the boiler because of a leak above the waterline, allowing steam to escape into the basement, rather than travel up to the radiators. He asked a lot of questions. I referred him to my Field Guide.

We discussed the merits of keeping it oil or putting in a propane boiler, since natural gas was probably a quarter mile away. The idea of converting the system from steam to hot water was also discussed, but with one pipe systems, a separate return piping system would have to be installed. That is a lot of labor, material and disruption to the home.

By the time we got away from the homeowner, the contractor admitted that his installation crew was down a couple of veterans and that he would be passing the job to one of my other customers. His guy that worked on oil had retired and his guy that did the piping was on injured reserve, probably indefinitely. I may be reporting more about this job at a later date.



There is a weighted check valve in the supply main visible at the top of the picture, which was common for mid-century hot water jobs.

That means extra-large cast iron sections with huge flue passages, kinda like the "new" three pass oil boilers that make cleaning so much easier. I especially liked the home made pipe guard around the oil burner

#### **A Lot of Mass**

There must be two tons of cast iron beneath that sheet metal jacket. That means that every time the boiler gets a call for heat, it has to warm up the cast iron before it can warm up the water. That's a lot of mass. When it's very cold outside, the cast iron stays pretty warm since the calls for heat come on a pretty regular basis. Operating efficiency is highest when the weather is coldest.

But when the weather is more moderate, which is the majority of the heating season around here, it takes a while to heat up two tons of metal, even with the hot fire but reached into his pockets and amazingly pulled out an array of wrenches and whatnots. Within a minute he had the nozzle in his hand, a 2.25 gallon per hour. That was larger than the size he originally thought. Glad I asked.

One gallon of fuel oil roughly equals 140,000 btus of input, so this baby was using 315,000 btus of input to heat the home. The boiler I quoted inputs up to 400,000 btus, while the next size down inputs less than the 315,000. The contractor wanted to stick with the original size, although the output of the next size down is actually a bit more than what would be expected from the 2.25 nozzle.

I'm too old to argue about exact sizing anymore and with the modulating fire of the high efficiency boiler, the natural gas burner will input just what's needed to warm up just one eighth of the mass of the original boiler to heat the water circulating through the system.

## I was surprised one day when I had two calls that each had oil-fired boilers.

#### Re-pipe Review

The photos in this column are from the second job. This one wasn't in a valley, but high up on a ridge with great views. The local gas company hadn't run a gas line up there back in the 1950s when the original five houses were built, but did run the line when twenty or so additional houses were added in the 1990s. This homeowner finally decided to hook up to gas this year.

The contractor wanted to review the re-piping that would be required to install the new high efficiency gas hot water boiler. The homeowner let us in, then left to go play golf. She wasn't as interested in the process as the first homeowner. We went downstairs to take a look around.

The boiler is most likely original to the house, with a newer oil burner. This one looks like it was originally automatically oil-fired, although the boiler design is from the hand-fired coal days. of burning oil. Therefore, the standby loses are greater and the seasonal/operating efficiency goes down. How low depends on a few factors. With a flame retention burner, the efficiency doesn't drop as much as with a gas atmospheric draft burner without a flue damper. The combustion air for that style boiler just drafts right up the chimney, cooling the cast iron sections between calls for heat.

#### **Double-Check**

I had forgotten how we originally estimated the size for the new boiler when I quoted this job a year ago. My memory is getting worse by the day. The size of the one on the quote seemed large, even for this large house. I asked the contractor the size of the oil nozzle and he immediately had an answer, but I asked him to actually check the one in the burner, since you don't get many chances to be right about these things.

He didn't have his tool bag with him,

#### What Are We Looking At?

A few notes about what you see. That's the expansion tank to the left of the boiler, standing on end. I see that every so often and wonder how the air separated by the dip tube air separator at the outlet of the boiler is going to float downhill to the tank. The original expansion tank was still in the ceiling, disconnected.

There is a weighted check valve in the supply main visible at the top of the picture, which was common for mid-century hot water jobs. The idea was to keep the heat in the boiler when the pump shut off, so the house wouldn't overheat from gravity circulation. We use them now with multiple zone pumps to prevent circulation in the zones that aren't calling for heat.

Patrick Linhardt is a forty-year veteran of the wholesale side of the hydronic industry who has been designing and troubleshooting steam and hot water heating systems, pumps and controls on an almost daily basis. An educator and author, he is currently Hydronic Manager at the Corken Steel Products Co.



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## TRU-Building Walks the Walk for Energy Efficiency with System M

SPECIAL TO CONTRACTOR

ICHITA, KS — There's a 68 year-old home in suburban Wichita that's a lot younger than it looks. The mid-60s, mostly-brick ranch home began to be an eyesore in the neighborhood. That is, until one of the city's visionaries had an inspiration.

Certified Passive House Consultant and builder, **Jeff Jones**—president and owner TRU-Building, Inc. (TRU), based in Wichita—is one of the Midwest's leading energy efficient and sustainability-focused construction experts. The portfolio of energy efficient homes confirm the innovative passion he and his team embrace.

In a growth mode recently, TRU-Building needed a new headquarters for the growing team to call home. Jones had already acquired a property and completed architectural planning to build a facility when the old home and property, just half a mile from their existing building, came to his attention.

Jones learned that the old home just down the road had been vacant for almost a decade. Yet, he saw that it was an ideal opportunity to showcase the capabilities of his firm. It offered great potential as the ultimate expression of sustainability.

#### **Good Bones and Bad News**

The six-month renovation began in August of '22—resulting in an all-new appearance and expansion from 2,700 s.f. of residential space to 3,200 sq. ft., now repurposed for commercial use.

One of the reasons the property was chosen, Jones shared, was that the foundation was solid, and that it had "good bones." Built in 1955, the home had a poured concrete foundation with steel I-beams supporting the main floor—both, exceptionally rare at the time—which helped to explain its still-standing, solid condition.

As can be expected with renovation projects, unpleasant revelations came with the discovery of termite and water damage, and mold. Renovations came to a halt while the team shifted into



Built in the mid-60s, the building had a poured concrete foundation with steel I-beams supporting the main floor.

## Sustainable construction company's new HQ features a fully-packaged, integrated, air-to-water heat pump solution.

demolition mode, removing sheetrock and some framing.

The biggest surprise of all came a few weeks later when Jones took a call from a friend and business colleague, **Jeremy Hobbs**, branch manager of the manufacturer's rep firm, J. M. O'Con-

ner, with offices in Wichita and Kansas City. Hobbs and his team were attending a presentation by Taco Comfort Solutions. He spoke about Taco's latest technology, System M, an innovative air-to-water heat pump system that provides comfortable, efficient heating,



In the "cave," describing some of the fine points of System M.



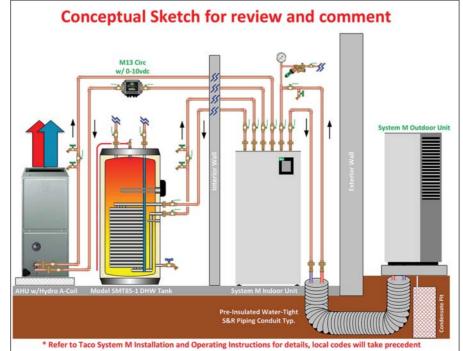
Another view of the mechanical room, next to the buffer tank.

cooling, and domestic hot water. "It's a fully-packaged system that's super easy to install, and 400+ percent efficient," explained **Brice Walsten**, O'Connor's outside sales engineer.

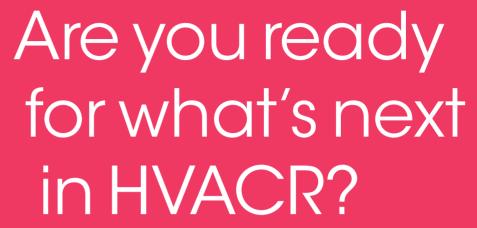
Before the call ended, Jones agreed that the appliance would be perfect for the new/old building as he could see how System M could be a focal point to showcase TRU-Building's emphasis on energy efficiency, sustainability and electrification.

"We gladly walk the walk to demonstrate what we mean by our actions, rather than by what we say," he added.

➤ Turn to TRU-Building, page 32



A schematic showing how the different pieces of System M work together to provide a complete heating, cooling, hot water solution.







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Presented in partnership with Radiant Professionals Alliance

#### TRU-Building Walks the Walk for Energy Efficiency with System M

#### ➤ Continued from page 28 The Crown Jewel: System M

Invariably, every tour of TRU-Building's new facility makes a stop in "the cave," the comfortable sitting area located in the lower level. "That's where visitors and prospective customers find a source of real intrigue," explained **Dave Trotter**, Taco's regional manager of wholesale products.

Trotter and a team of Taco pros were on hand for a well-attended open house event held at TRU-Building's new facility in April. "We had a chance to talk to a lot of good folks during the event—from employees and business partners to prospective customers," he said. "There was a *lot* of interest in System M."

One of those most intrigued with the System M's capabilities was **Chris Highfill**, owner of Wichita-based Frederick Plumbing, Heating and Air.

"Jeff Jones and I have worked together on a wide variety of projects for 20 or 25 years," said Highfill. "We've become the preferred HVAC installer for TRU-Build. "When he called to tell me about System M, and that it would be used for their new facility, I was eager to help."

Highfill explained that System M is an ideal solution for home and business owners seeking an exceptionally versatile, high-efficiency hydronic heating and cooling system—with the added benefit of providing domestic water heat.

"Taco's air-to-water heat pump system is a complete, integrated heating, cooling, and domestic hot water solution," agreed J. M. O'Connor's Walsten. "The technology provides up to 44,000 BTUh and 3½ tons of cooling."

"Out of the box, System M is solar PV and smart grid ready," he added. "Water is the most efficient and natural energy transfer medium on the planet. In a nutshell, it's everything most homeowners need for heating and cooling—and it heats domestic water, too."

"There are so many uses for the technology, from radiant heat to low-temp baseboard and panels, to radiant cooling," continued Highfill. "My impression with this first experience with it is that it's built for the long haul, is solid, and has so much



The TRU-Building crew at the grand opening of their new HQ.

going for it in its ability to provide super-high-efficiency comfort."

Highfill added that, for TRU-Build's facility, System M's indoor unit was connected to only one zone served by a programmable thermostat. Both floors of the facility were ideally met with no need for multiple zones. "Come to think of it, for facilities or homes with multiple zones, connecting the indoor unit to them would undoubtedly save installation time," added Highfill.

The outdoor portion of the heat pump comes with inverter technology and a quiet, variable speed fan. The factory-assembled indoor "hydrobox" unit contains an integrated hydronic thermal storage buffer tank, user interface with smartphone app control, and a high-efficiency, dual-ECM pump module.

"Jeff Jones and TRU-Build chose well, as the heat pump provides heat for all types of distribution—via radiant, hydro-air coils, or panels," said Trotter. "It should serve their customers well."

"System M is an ideal fit for the type of people who're naturally drawn to TRU-Building—and, among them, a high percentage of Net Zero'ers," added Walsten. "They're the early adopters, folks who've devoted their dollars to achieving higher efficiency and sustainability."

"We're very pleased with System M's performance and efficiency," added Jones. "We had a long string of hot days in July, each of them over 100 degrees

consecutively. The heat pump's comfort was ideal.

"It helps to protect our bottom line because of its energy efficiency, and we also appreciate that it's a fully-packaged unit—not a bunch of parts and pieces assembled here with the hope of performance," he added.

#### Walking the Walk

The renovations at 101 N. Ridge Road, Wichita are now complete and Taco's System M has since fulfilled its expectations, too. "We're well into our first year of super-efficient comfort," said Jones. "The staff loves our new home; we couldn't be more pleased with every aspect of the new facility—from its higher-visibility location and enlarged space, to the coziness and efficiency of the system that now maintains our comfort."

Hearing this from Jones isn't idle talk. He and his staff are immersed in the business as a long-standing partner with the US Department of Energy on the Zero Energy Ready Home program. Jones is also the only Certified Passive House Consultant (CPHC) in the state of Kansas.

The company also holds a position at the leading edge of a growing trend toward the type of ultra-efficient buildings and homes that Jones predicted years ago to be the next, big construction and renovation wave in the Midwest. Now, that prediction has come to pass.

Though headquartered in Wichita,

the company also has an office in Muncie, IN. Professionals at both locations focus on higher-end, innovative commercial and residential construction and renovation.

"Our business pros have found that the topic of energy efficiency is a bit like a bell curve," explained TRU-Building Brand Ambassador, **Janie Moore**. "Initially, people did not have the information to fully understand the additional cost of energy-efficient building. With energy prices continuing to rise, the government and DOE have begun to speak loudly in favor of improving energy efficiency while offering incentivizes for it.

"Our customers quickly learn the various interconnected facets of every building envelope component—from insulation and windows, to siding and HVAC," she explained.

According to Moore, home and business owners alike are now far more receptive to conversations about energy efficient construction and energy renovations—much like the work TRU-Building did at their own facility. "We've now built many energy efficient homes and continue to tell the story so more people are learning the benefits of energy-efficient building and renovation," she explained.

"Building energy-efficient homes offers a multitude of advantages that extend beyond just lowering energy bills," added Moore. "Improved insulation, energy-efficient appliances and smart technologies ensure optimal comfort year-round, with stable indoor temperatures and exceptional indoor air quality. Also, energy-efficient homes tend to hold their value better over time while also attracting environmentally-conscious buyers. By embracing these construction practices, homeowners contribute to a more sustainable future while enjoying long-term cost savings and improved living standards."

According to Jones, the company's mix of business—commercial construction, residential construction, and renovation—is fluid, year to year. Last year, the emphasis was on commercial, and this year, that role is reversed. "It's just the nature of the market, adjusting to post-COVID circumstance. It'll stabilize in time," he said.

## What If Water Heaters Had Tinder® Profiles?





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#### by Patti Feldman computer Authority

## 3 Options for Better Field Service

era™ field service management software (Sera Systems, www. sera.tech, 888/302-6228) is a SaaS platform for HVAC, plumbing, and other home services businesses. It has three main components: a Customer Hub that sits on your website; the Tech App, accessible in the field; and the Admin Portal, which acts as the command center of the business for dispatchers, office managers, and owners and includes the Dynamic Dispatcher for automatically assigning the right technician for each job based on priority, capability and availability of the technician.

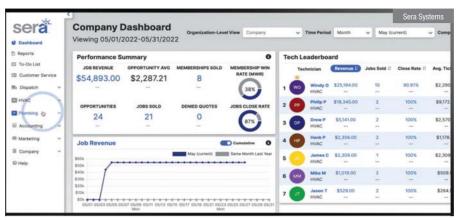
The Customer Hub booking widget affords customers the ability to schedule (and reschedule) service appointments and receive immediate confirmation and updates and also check service history, accept estimates, and view invoices and pay them.

The Tech App, with multi-quote presentation of *good*, *better*, and *best*, and two-column quoting to show membership savings, includes a task-picker that helps technicians with suggestions and add-ons during the quoting process.

The Admin Portal offers tracking of real-time metrics, with 100+ live KPIs on the dashboard and real-time financial and KPI reporting. Management can see profitability categories such as average ticket price, service plans sold, and job closing percentages. An intuitive Dispatch Portal for viewing schedules and manually assigning or changing jobs allows dispatchers to check the status of technicians and track all aspects of work orders.

The software allows contractors to find efficiencies by tracking each minute of an employee's time and features location GPS services allowing notification of real-time updates to customers about tech arrivals.

Sera Tech integrates with Quick-Books CallRail (www.callrail.com), a platform for call analytics to improve customer acquisitions); pulseM (https://pulsem.me), an online review platform for home services (see February 2021 column); Bluon (www.bluon.com), an HVAC platform for technicians contractors, and distributors (see April 2021 column); Global Payments (www.



The Sera Customer Hub.

# Reviews of field management software, including the Sera SaaS platform, the Service Pro platform, and the ServiceDeck management solution.

globalpayments.com) payment solution; JB Warranties (https://jbwarranties.com), a national provider of extended warranties to HVAC and plumbing industries; and Sera Payments, powered by Stax (www.sera.tech), an app supporting customer payment in the field, the office, and online; and other software solutions.

**Pricing:** monthly subscription with annual contract, scaled by number of field technicians (administrators and owner are free), and includes set-up with input/assistance from onboarding specialists when importing your data (history, customers, price book); a customizable HVAC or plumbing price book; live training for your technicians and office staff; and unlimited access to Sera Academy for training new hires.

#### **Service Pro**

**Service Pro** (www.msidata.com) is an end-to-end, cloud-based field service management platform for automating field service work. Suitable for commercial and industrial service organizations, the platform (desktop and mobile) supports management of the entire field service lifecycle, from calls, quotes, and scheduling to mobile work orders for technicians and invoicing.

An intuitive and flexible Schedule Board features a drag-and-drop visual scheduler to digitize and optimize scheduling and dispatch the "best" tech for every work order. The platform also includes parts and inventory management, and management of service contracts and preventive maintenance.

Additional modules that can be added to the core platform include Business Intelligence, to identify, track and improve critical business KPIs; Technician Tracker to ensure knowing where your technicians are at all times and improve customer communication when enroute; a Customer Portal that gives clients access to their service history and provides a path to request and manage service requests; and APIs, connecting Service Pro with your ERP, CRM, or other software, allowing for third party applications to pull and push information between solutions.

**Pricing:** per agent license per month, billed annually, plus one time set-up fee based on the number of licenses.

#### ServiceDeck

**ServiceDeck** (www.servicedeck.io, 800/459-2666) is a field service management solution, suitable for small and medium-sized businesses, featuring smart dispatching and field worker management tools, a mobile app for technicians, a customizable customer portal, and an AI-powered marketplace

that can be tailored to your business.

Dispatching takes advantage of "smart scheduling," enabling visualizing your company's daily workload and availability of technicians and teams when assigning and scheduling jobs. The software can track labor and hours for use in invoicing and reporting.

The Customer Portal, free for your customers, allows them to view and manage open requests, quotes, invoices, and job status and communicate with you via online chat.

Invoicing features include the ability to single-click to convert a job into an invoice and to customize invoices to fit your brand identity. ServiceDeck lets each customer choose a preferred method of payment (i.e. cash, credit card, checks).

The Mobile App gives workers the means to review their schedules, update timesheets including their status on the field, request time off, and update job-related files with notes and photos.

Document management enables storing job-specific document in one place and lets team members attach project images on the go.

An integrated Visual Questionnaire, crafted to streamline the initial quotation process, serves as a guided form, collecting crucial project details. Through a conversational AI assistant, potential clients can convey their project specifics, allowing service providers to deliver precise, prompt price estimates without the need for direct human interaction.

An AI-powered marketplace connects service providers and buyers, with algorithms matching clients with providers.

ServiceDeck offers email templates and the ability to create your own for sending quotes, invoices, invites, and other communications.

**Pricing:** free for one user; Team: fee per user per month. Enterprise, featuring on-premise set-up and customization.

Patti Feldman writes articles and web content for trade magazines and manufacturers of building products. She can be reached at productpad@yahoo.com.



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### by Matt Michel MARKETING AUTHORITY

# **Leading With Positivity**



s business leader, you set the tone for your organization. Show a little fear and your team feels terror. No matter how you feel, you must present a positive image. Here's how.

### **Limit Your News Consumption**

The news is bad. It has always been bad. Thomas Jefferson used to complain about the print media of his day. "If it bleeds, it leads," is true. So while you might need to know what is happening in the world, do not immerse yourself in the news to the point of letting it affect your attitude.

Instead of the national news, pay attention to the news of the plumbing trade. Read CONTRACTOR Magazine. Follow leading plumbers in social media. Watch videos about the trade and that present the trade in a positive light.

Ultimately, being a positive leader is the result of a decision you make. Decide to be positive.

### **Program Your Mind**

The late motivational speaker, Zig Ziglar said, "You can change who you are, you can change what you are, by changing what goes into your mind." Feed your mind positive material. Study successful businesspeople. Listen to motivational speakers while driving. Program your mind with positivity and your outlook will inevitably reflect it.

### **Practice Positive Self-Talk**

Related to the content you consume is your self-talk. Practice positive self-talk. Build your self-image up in your mind. When facing a challenge, tell yourself you will find a way to overcome it, even if you do not know how.

Positive self-talk extends to what you tell your team. Tell each person



what he or she can do, not what they cannot. Build people up. Do not tear them down.

### **Compartmentalize**

Fear, uncertainty, and doubt inevitably creep into the thoughts of every business owner. If you can't block them, compartmentalize them. Block time for worry. Set aside 15 minutes to worry about everything you can. When you find yourself starting to worry during the day, tell yourself that now is not the time. You will worry when scheduled.

Chances are, you will be unable to fill 15 minutes with worry. But if you don't watch it, you can take 30 seconds of worry and stretch and repeat it enough to fill an entire day.

### **Keep the End in Mind**

In business and life, setbacks are inevitable. Don't let temporary setbacks become permanent. Keep the end goal,

the big picture in mind. Where do you want to take your company? When you focus on the end, setbacks won't stop you. They will annoy you.

### **Share the Vision**

Solomon was the wisest man who ever lived. He said, "Where there is no vision, the people shall perish." Your team needs your vision. Do not keep it to yourself. Share it with your team. Get the team to buy into your vision, to understand the big picture.

### **Sharpen Your Saw**

In his landmark book, Seven Habits of Highly Effective People, Stephen Covey tells the story of two woodcutters who were competing to see who could cut the most wood. The woodcutter who was more successful paused during the day to sharpen his saw. The other woodcutter worked hard without stopping. The lesson is that we can increase our effectiveness if

we pause from time to time to sharpen our saws.

Take time out from your business to attend conferences and seminars, to visit another plumbing contractor, or to simply get away from the business. This is not time off, but time away. It is time to recharge your batteries, to allow your subconscious mind to work, to sharpen your saw.

### **Decide to be Positive**

Ultimately, being a positive leader is the result of a decision you make. Decide to be positive. When you catch yourself slipping, tell yourself, "That's not like me." Then, conduct a do-over.

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t's been more than one year since

the US government signed into law

the Inflation Reduction Act of 2022

(IRA), its largest climate investment

initiative in the nation's history. More than \$430 billion was invested to spark

clean energy innovation, mitigate cli-

mate change and lower energy costs for

American businesses and homeowners.

ward electrification by calling for the

reduced reliance of fossil fuels and

increased dependence on more environmentally friendly, alternative

sources of energy. The IRA is projected to reduce greenhouse gas (GHG) emis-

sions by 31% to 44% below 2005

Addressing the amount of energy

buildings consume is critical as the

transition to a lower-carbon future gets

underway. This is especially true since

the World Economic Forum reports

buildings are responsible for roughly

40% of global energy consumption and

levels by 2030.

The IRA prompted a giant step to-

### by Chris North and James DeBerry OF MITSUBISHI ELECTRIC TRANE HVAC US.

# **How Contractors Can Benefit**





Household boiler room with heat pump, storage tank and circulators.

### Here are some ideas on how to push electrification forward and take advantage of the monetary savings and benefits.

approximately 33% of GHG. By maximizing incentives offered by the IRA, contractors are empowered to drive new commercial and residential business, while helping both groups reduce their carbon footprint and energy bills. There's no better time for contractors like you to expand your marketing efforts by educating others on IRA tax incentives, cost-saving rebates and programs and implementation of new technology, so they can take part in the electrification movement.

Here are some ideas on how to push electrification forward and take advantage of the monetary savings and benefits.

### **Spread the Word**

Contractors should ensure government community organizations are aware of IRA incentives and tax credits for installing energy-efficient equipment, including all-electric, all-climate heat pumps.

Contact your city and state chambers of commerce along with your local Community Action Agency (CAA)—a

non-profit organization responsible for the poverty-fighting Community Action Program (CAP). By educating your CAA and other agencies on the benefits of installing all-electric heat pumps and energy-saving appliances, they can, in turn, pass this information on to consumers and businesses that can benefit from the IRA.

Specific to homeowners, the High Efficiency Electric Home Rebate Program (HEEHRP), a provision of the IRA, allows households making up to 80% of local median income to become eligible to receive a 100% rebate of up to \$8,000 on the cost of heat pump installation. Significant extension and expansion of the Energy-Efficient Home Improvement Tax Credit (25C), also part of the IRA, allows qualified households to deduct 30% of the costs for buying and installing a qualified heat pump, up to \$2,000 annually through 2032.

Under the IRA's HOMES Rebate

Program—likely to begin late this fall single and multifamily homes with a:

- 20% energy reduction can get a \$2,000 maximum rebate or half the cost of a retrofit project whichever is less.
- 35% energy reduction are eligible for collect a \$4,000 maximum rebate.
- 35% energy reduction and qualifying as lower incomeless than 80% of local median income—can receive an \$8,000 max rebate.

Be proactive and add IRA incentives to your marketing materials to help pique the interest of homeowners looking for an HVAC upgrade, particularly low- and middle-income households that can benefit the most.

Homeowners aren't the only ones benefiting from the IRA. For example, the 45L ITC benefits multifamily building contractors that build and





**James DeBerry** 

sell homes and meet specified energy-efficiency requirements. In doing so, they/you can receive \$500 per unit that meets ENERGY STAR standards and \$1,000 per unit for zero energy ready units. If certain labor standards are also met, incentives could increase to \$2,500 and \$5,000, respectively. That's potential green in your pocket for going green.

### **Understand New Governmental Guidance**

In July, the US Department of Energy (DOE) announced new appliance standards that could save Americans \$20 billion over 30 years while cutting down on carbon emissions. Among the advantages, the commercial sector could save \$149 million per year for energy-efficient water heaters, while consumers could save \$926 million annually for energy-saving pool pumps and boilers.

With so many changes in equipment and appliances, it's crucial for contractors like you to familiarize yourself with new legislation and consider potential training for those on your teams installing such equipment.

The DOE is now accepting applications for state and territory implementation of the two Home Energy Rebate programs created by the IRA. The DOE has also issued guidance for these governments for the Home Efficiency Rebates and the Home Electrification and Appliance Rebates.

### **Get Ready for Refrigerant Change**

Contractors should be aware, too, that refrigerant changes are underway and will affect HVAC choices soon. The reason? Refrigerant leaks add to fugitive emissions—the release of gases or vapors into the atmosphere that contribute to air pollution and climate warming.

Even though refrigerant leaks are a substantial component of a building's fugitive emissions, refrigerant

➤ Turn to How, page 42

# Saniflo **SFA**

### **Manufacturing Drain Pumps for Over 50 Years**







### by Bruce Magee REGION PROJECT DEVELOPMENT MANAGER, UNITED RENTALS

## 7 Trench Safety Misconceptions

eteran construction workers can pass a lot of valuable information down to newer employees, but when it comes to following OSHA's trench safety regulations, it's wise to double check the standards. Long-time supervisors may believe they understand the ins and outs of OSHA excavation standards when in fact they've been doing things wrong for years.

The results can be deadly. In 2022, 39 construction workers were killed in trench-related incidents. That's a significant increase from the average of 21 trench-related deaths per year between 2011 and 2018.

In a recent trench safety webinar, **Bruce Magee**, United Rentals region project development manager, discussed the misconceptions about trench safety he's heard most often during his decades in the industry.

### 1. Misconception:

### RPE stamps are required only when a trench is deeper than 20 feet

It's true that every trench deeper than 20 feet needs a protective system designed and stamped by a registered professional engineer (RPE) unless you're using a manufactured system such as a trench box (in which case the manufacturer's tabulated data serves as the engineer's plan). But protective systems for trenches that are 20 feet deep or less may also need RPE approval given certain site conditions—for example, if a spoil pile is adjacent to the trench or the excavation is close to a roadway.

In these cases, the OSHA specifications may not apply, or the engineer stamping the tabulated data did not factor these surcharges into the calculations. If the surcharges have not been considered in the loads, then an RPE should approve the protective system to ensure it complies with the OSHA standards.

Contractors using a trench box or other manufactured protective system in a trench of any depth can follow the manufacturer's tabulated data rather than consulting an RPE, but if any unusual conditions exist at the site, check with an engineer to determine if the tab data still applies.



## Understand the facts to better protect your workers in the trenches.

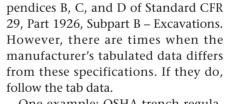
An RPE is also required to approve all manufactured protective systems for which there is no tab data, including cantilevered or braced steel sheeting, beam and plate, and beam and lagging.

### 2. Misconception:

### OSHA regulations always supersede manufacturer's tabulated data

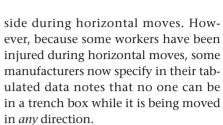
OSHA outlines specifications for various trench protectives systems in ap-

One example: OSHA trench regulations specify that no one can be in a trench box while it is being installed, removed or moved vertically, but they don't prohibit workers from being in-





Protective systems for trenches that are 20 feet deep or less may also need RPE approval given certain site conditions.



### 3. Misconception:

### Tab data takes surcharge loads into account

A surcharge load is the downward pressure on soil due to a heavy weight adjacent to the trench, such as from heavy equipment, a large spoil pile or tractor trailer traffic on an adjacent highway. Contractors often don't realize that manufacturers' tabulated data for trench boxes are not designed for those surcharge loads.

For example, the tab data for manufactured systems may allow for 0 to 72 pounds of weight per square foot (psf) on a site, but a trench adjacent to a highway may have a surcharge load of 72,000 pounds or more. When a surcharge load is involved, consult an RPE to determine the limitations of the trench box when the load is included.

### 4. Misconception:

### Shield boxes can be moved by pulling on the spreader bars

Pulling on the spreader bars to move shield boxes is a common practice, but most manufacturers now state in their tabulated data that spreaders should be used only to hold the box walls in place, not for pulling the box up or relocating it in any way.

### 5. Misconception:

# Arch spreaders are interchangeable with pipe or beam spreaders when calculating the allowable depth of a trench box

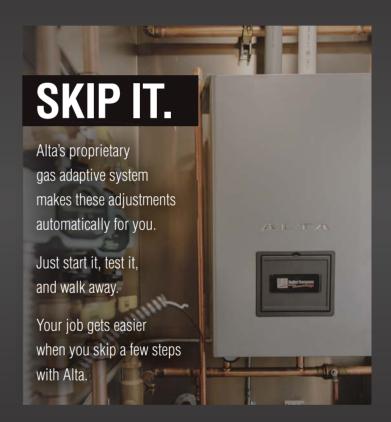
Although arch spreaders serve a purpose similar to that of pipe or beam spreaders in supporting the walls of a trench box, they carry the load differently. Pipe and beam spreaders are located lower in the shield; the upper spreader works in tension, and the lowest spreader works in compression to keep the shield walls apart. Because an

Turn to 7 Trench, page 42



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### 7 Trench Safety Misconceptions

### ➤ Continued from page 40

arch spreader generally carries the load up and over large pipe or structures. The geometry is different, and this often results in larger boxes, or boxes with PSF ratings, to be downgraded. Compare the tab data of the shield to that of the arch spreader—the arch spreader data will tell you the maximum PSF they can bear, which can be used to determine the depth rating. The competent person may need to consult with an RPE.

### 6. Misconception:

### Because trenches are open at the top, atmospheric testing is never required

Most trenches don't require atmospheric testing, but testing may be necessary when trenching projects involve work in and around sewers, gas utility systems, landfills, refineries, chemical plants or hazardous waste dumps. Testing may also be needed when certain



Spreaders should be used only to hold the box walls in place, not for pulling the box up or relocating it in any way.

# How Contractors Can Benefit from Today's Electrification Trends

### ➤ Continued from page 38

management is often overlooked as an important part of decarbonization. They should not be ignored.

The US has ratified both the American Innovation and Manufacturing (AIM) Act and the Kigali Amendment, making A2L refrigerants mandatory for most HVAC systems, including heat pump systems, beginning Jan. 1, 2026 for commercial buildings and Jan. 1, 2025 for residential buildings. A2Ls are a class of non-toxic, mildly flammable refrigerants. To meet new global warming potential (GWP) standards, the HVAC industry will change from using traditional high-pressure refrigerants like R410A to A2L classified refrigerants with lower GWP.

### Consider Hybrid Variable Refrigerant Flow Solutions

To comply with this part of the decarbonization countdown, HVAC suppliers including Mitsubishi Electric Trane HVAC US (METUS) have introduced Hybrid

Variable Refrigerant Flow (HVRF) airconditioning and heating solutions as additional offerings to standard VRF units. HVRF systems use less refrigerant than conventional VRF solutions and are a key technology in the movement to electrify and decarbonize buildings.

All-electric VRF technology offers a cleaner, more efficient and sustainable way to heat and cool buildings, as they are fossil-fuel-free, reduce HVAC operating costs and improve occupant comfort.

VRF technology divides a building into zones with individual set points based on usage, occupancy and user preferences. Using an INVERTER-driven compressor and continuous fan operation, a VRF system keeps each zone's temperature steady while consuming minimal energy. Building owners and tenants benefit from low, predictable utility costs, precise comfort control and easier compliance with building codes and local laws restricting building emissions. Choosing a VRF zoning

system can also create opportunities to qualify for utility incentives and sustainable building certifications.

### Set Yourself Up for Greater Success

As the movement toward electrification progresses, contractors should keep abreast of new and changing legislation. Familiarize yourself with updates to the IRA and other guidance, like recent standards for appliances and refrigerants.

Consider educating local and state agencies as well because in doing so, you can become the "go-to" contractor of choice—one who's pushing electrification of homes and commercial buildings forward in the name of sustainability—and in the name of maximizing your profits.

Chris North is program manager, Residential Product Marketing, and James DeBerry, is manager, Commercial Marketing, both of Mitsubishi Electric Trane HVAC US.

activities, such as welding or mixing chemicals, take place in the trench.

### 7. Misconception:

The only way to get authoritative information about trench safety is wading through the OSHA standards

If you're uncertain how to apply trench safety rules to your excavation or want to confirm that your protective system complies with OSHA excavation standards, consulting the United Rentals Trench Safety group is a good place to start. United Rentals has years of experience in trench safety and a team of in-house RPEs to assist with protective system design and provide approval.

Other good sources of trench safety information include:

- OSHA Standard 1926 Subpart P, which outlines excavation regulations.
- OSHA Standard 1926.652, which covers the requirements for trench protective systems.
- The Federal Register. It has a searchable website that provides information about the intent behind the OSHA rules.
- The OSHA Technical Manual. It has a chapter on hazard recognition in trenching and shoring.
- OSHA's Trenching and Excavation Safety Fact Sheet. A Spanish version is also available.
- OSHA's Quick Card on Working Safely in Trenches, available in English and Spanish, which provides at-a-glance, high-level reminders about trench safety.

Don't take chances with worker safety by assuming that what you've always heard or assumed about trench safety practices and procedures is correct. Doublecheck your protective system plans to ensure they meet the requirements set out by OSHA and, when applicable, the system manufacturer. That simple step could mean the difference between a safely completed project and an unnecessary tragedy.

Contact the United Rentals Trench Safety group for help with all your excavation needs.

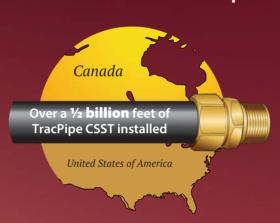


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### **DOL Announces Proposal to Extend Overtime Protections**

WASHINGTON, DC — The US Department of Labor has announced a notice of proposed rulemaking that would restore and extend overtime protections to 3.6 million salaried workers. The proposed rule would guarantee overtime pay for most salaried workers earning less than \$1,059

per week (about \$55,000 per year).

"For over 80 years, a cornerstone of workers' rights in this country is the right to a 40-hour workweek, the promise that you get to go home after 40 hours or you get higher pay for each extra hour that you spend laboring away from your loved ones," said

Acting Secretary **Julie Su**. "I've heard from workers again and again about working long hours, for no extra pay, all while earning low salaries that don't come anywhere close to compensating them for their sacrifices."

The announcement follows months of extensive outreach to employers,

workers, unions and other stakeholders, which included the department holding 27 listening sessions with more than 2,000 participants to inform the proposed rule.

The proposed rule would do the following:

- Restore and extend overtime protections to low-paid salaried workers. Many low-paid salaried employees work side-by-side with hourly employees, doing the same tasks and often working over 40 hours a week. But because of outdated and out-ofsync rules, these low-paid salaried workers aren't getting paid timeand-a-half for hours worked over 40 in a week.
- · Give workers who are not exempt executive, administrative or professional employees valuable time back. By better identifying which employees are executive, administrative or professional employees who should be overtime exempt, the proposed rule will better ensure those who are not exempt will gain more time with their families or receive additional compensation.
- Prevent a future erosion of overtime protections and ensure greater predictability. The rule proposes automatically updating the salary threshold every three years to reflect current earnings data.
- Restore overtime protections **for US territories.** From 2004 until 2019, the department's regulations ensured that for US territories where the federal minimum wage was applicable, so too was the overtime salary threshold. The department's proposed rule would return to that practice.

### **Next Steps**

Upon publication in the Federal Register, the notice of proposed rulemaking will be open for public comment for 60 days. The department will consider all comments received before publishing a final rule. Learn more about the proposed rule and instructions for submitting comments by visiting www.dol.gov/ regulations. G

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### **IWSH Completes Septic System Project in Navajo Nation**

BACA-PREWITT, NAVAJO NATION, NM — As part of its ongoing collaboration with the DigDeep Navajo Water Project, the International Water, Sanitation and Hygiene Foundation (IWSH) recently designed and installed two pressurized mound septic systems in the Baca-Prewitt area of the Navajo Nation, about 40 miles east of Gallup, New Mexico. These two sites will now serve as a demonstration for Navajo Nation authorities and members of the community so they can see how engineered systems could be selected, designed and utilized on the reservation. The community is now also able to learn about the functionality, maintenance, and appearance of pressurized systems.

### **Navajo Nation**

Navajo Nation is the largest land area held by a Native-American tribe in the US. More than 30 percent still don't have a tap or toilet at home—Navajo are 67 times more likely than other Americans to live without running water or a toilet. The Indian Health Service (IHS) has committed to funding pump trucks for certain Navajo communities and septic tank disposal facilities, but there is a great need to repair or replace failed, conventional septic systems.

"Many of the homes in the Baca area either have failing septic systems or have no system at all," said **Cindy Howe**, Navajo Water Project director. "Failed septic systems are affecting the quality of life of Navajo people and will continue to impact the health of the community, particularly for children and the elderly residents who are the most vulnerable. The two demonstration projects IWSH designed



The mound systems are able to treat wastewater from the homes as well as eliminate the leach line ponding that had become a common occurrence.

and installed help to inform our community and local decision makers about different and effective ways to implement sanitation programs."

### **Woolsey Plumbing**

Knowing that soil conditions dictate the type of septic system that would be suitable for the area, IWSH contracted with **Sam Woolsey** of Woolsey Plumbing in Waupaca, Wisconsin; a licensed soil tester who is also a member of Plumbers & Steamfitters UA Local 400 in Kaukauna, Wisconsin. Woolsey assessed the soil at several homes in the Baca community, and then with DigDeep's guidance, designed two septic system plans for a four- and five-bedroom home.

"Based on the soil tests, I determined that pressurized, mound systems could work for the two homes," said Woolsey. "It was incredibly special to be able to

bring the mound design—which was invented in Wisconsin—to the families on the reservation. Their systems were failing and creating leach ponds near their houses, but now they have brand-new mound systems to treat all the effluent from their homes."

### **Partnering for Change**

Infiltrator Water Technologies, through its distributors at Dahl Plumbing, in Albuquerque, New Mexico, donated the septic tanks and the EZflow synthetic aggregate, which is used to filter the effluent in the drain field. These components, coupled with the exterior plumbing materials purchased from Winsupply of Albuquerque—a long-standing supporter of IWSH's community plumbing efforts on the Navajo Nation—and the specific washed sand purchased locally, enable the mound systems to treat wastewater from the home. This helps eliminate the leach line ponding that has become a common occurrence for homes in the Baca area.

"It's important to support access to safe sanitation for homes on the reservation," said **Eric Berquist**, senior sales representative at Infiltrator Water Technologies. "With IWSH's leadership, we were able to get involved and provide tanks and leach field pipes that were used to demonstrate how an engineered septic system can be used in this area of the reservation. The EZflow synthetic aggregate was easy to deliver to the community and replaces washed stone that is expensive and difficult to locate in this region. We are grateful to provide a valuable service to homes where conventional systems have not been working properly."

Learn more about the DigDeep Navajo Water Project at https://www.navajowaterproject.org/.

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# RPA, IGSHPA Sign MoU to Advance and Promote Geothermal Heating and Cooling

### ➤ Continued from page 6

also protect the health and safety of the public."

"With the expected rapid expansion of the geothermal (ground source) heat pump industry, consistency of design and installation will be crucial to ensure quality installations and sustained growth," IGSHPA Executive Director **Jeff Hammond** said. "This collaboration helps leverage the strengths of both organizations to provide the best resources of the radiant/hydronic and geothermal industries to our members."

### **IGSHPA**

Founded in 1987, the International Ground Source Heat Pump Association (IGSHPA) is a nonprofit, member-driven organization established to advance ground source heat pump (GSHP) technology on local, state, national and international levels. With its access to the most current advancements from the ground source/geothermal heat pump industry via its diverse membership base of over 800 members and its industry alliances, IGSHPA is the ideal bridge between the latest technology and the people/organizations who benefit from these developments.

### **RPA**

Headquartered in Ontario, California, the Radiant Professionals Alliance (RPA) is an international trade association established for the purpose of providing superior leadership and fostering the awareness of innovative technology through comprehensive educational activities, products, codes and standards, and public awareness initiatives with regard to the radiant and hydronic heating and cooling industry.

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### Pfister Unveils Season 4 of 'American Plumber Stories'

### ➤ Continued from page 3

As the series embarks on its fourth season, American Plumber Stories shifts its narrative to tackle the "solution-based approach" in becoming a plumber. This season delves into recruitment and retention of the next generation of plumbing professionals, illuminating their journeys from aspirants to accomplished plumbers. With an engaging blend of heartwarming stories and practical insights, Season 4 continues to inspire, educate, and entertain those seeking success in the plumbing industry.

### **Craig Morgan Returns for Season 4**

For the fourth consecutive season, American Plumber Stories welcomes back country music icon and Army Reserve Soldier, **Craig Morgan**, as the show's charismatic host. Morgan's genuine enthusiasm and deep-rooted connection to the stories of tradespeople make him the perfect guide on this journey of discovery and inspiration.

"I'm proud to be a part of American Plumber Stories for my fourth season," Morgan said. "The series continues to showcase the incredible dedication and spirit of plumbers across this great nation. Their stories inspire us all to overcome challenges and chase our dreams."

### Strong Alliance Partners: RIDGID Tools and New Partnerships

RIDGID, a prominent manufacturer of innovative tools for professional trades, continues to stand shoulder to shoulder with American Plumber Stories





Craig Morgan introduces Season 4 of American Plumber Stories.

The acclaimed docuseries returns, featuring reallife tales of plumbers' triumphs, with an innovative focus on solutions that created the life of their dreams through a career in plumbing.

as the series' key partner throughout the seasons.

"RIDGID is celebrating our 100 year anniversary this year, and we've had a lot of fun sharing stories with plumbers from the past, present and future," Becky Brotherton, Director of Brand & Engagement Marketing for RIDGID said. "American Plumber Stories, and the work Pfister® Faucets is doing with this program, have helped a wider audience hear stories like these, and get to know and appreciate the hard work that goes into this profession. We're excited to continue to support this show and its mission."

In addition to RIDGID, American Plumber Stories proudly introduces four new partners in Season 4:

**Cintas:** A leading workwear and apparel company for the trades, Cintas equips plumbers with the attire they need to tackle challenges

while looking and feeling their best.

**Oatey:** Known for its reliable, high-quality products, Oatey serves as a pillar of support for both residential and commercial plumbing endeavors.

**A. O. Smith:** Renowned globally for water heating and treatment solutions, A.O. Smith partners with American Plumber Stories to shed light on the role of advanced water systems in modern plumbing.

**State Water Heaters:** A provider of high-efficiency water heaters and systems, State Water Heaters complements American Plumber Stories' mission of showcasing cutting-edge solutions within the plumbing industry.

### **Support from Industry Leaders**

The Plumbing-Heating-Cooling Contractors — National Association (PHCC), a premier trade organization for plumbing and HVAC professionals, stands behind American Plumber Stories and supports its message on a national level. PHCC's commitment extends to its members, as well as state and local chapters throughout the country.

### A Journey of Inspiration

With Season 4, Pfister® Faucets evolves American Plumber Stories into an inspirational beacon for aspiring plumbers and industry professionals. From quaint towns like Newberry, South Carolina, to the bustling metropolis of New York City and the excitement of Las Vegas, the series continues its mission of empowerment, education, and entertainment.

View the trailer to Season 4 by visiting: *youtu.be/g2p7SGMsz0M* 

View the trailer to Season 4 by visiting: *youtu.be/g2p7SGMsz0Mtories.com*.

For more information and to watch the new episodes of Amerian Plumber Stories, visit: www. americanplumberstories.com.

Interested plumbers who would like to share their own story can do so by visiting: www.american-plumberstories.com/pages/i-am-an-american-plumber

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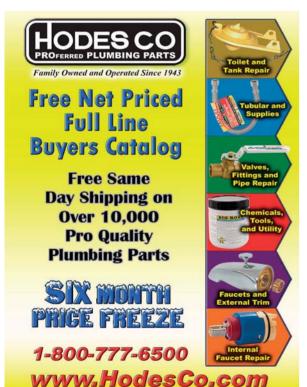
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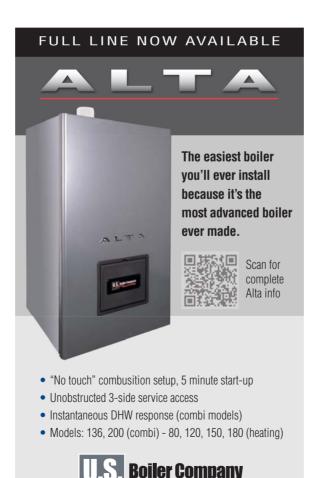


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Here is a selection of 5 articles that will help you navigate this labor turbulence and enable you to develop and maintain your 21st century workforce.



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# **WORKFORCE**DEVELOPMENT



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# Download the Best of Pat Linhardt

Patrick Linhardt is a thirty-seven-year veteran of the hydronics industry who has been designing and troubleshooting steam and hot water heating systems, pumps and controls on an almost daily basis.

Pat has been a regular monthly columnist for CONTRACTOR Magazine since 2019, where his column has become the cornerstone of our Hydronics & Radiant section. We are proud to publish this selection of his recent work,

and hope these columns serve to educate and inspire a new generation in the industry.

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### by Steve Spaulding EDITOR-IN-CHIEF

# The Outstanding Customer Experience



ust this week I took a quick trip out to Apple Valley, Minnesota to attend the grand opening of Uponor North America's new Experience Center. The 4,500 sq. ft. facility boasts interactive displays worthy of a highend theme park. There are professionally produced videos that tell the Uponor story and illustrate the applications of various products.

But the heart of the Experience Center is an education and discovery space that allows the company's customers to get hands-on with the products. The space can be adapted to suit almost any type of work. You can layout radiant tubing in a mockup of a residential installation. You can perform a heat fusion on sections of large diameter plastic pipe in a simulated commercial installation. Fittings, manifolds, controls—it's all there to play with.

Except no one is wasting your time. Uponor gathers as much information on the customer prior to their visit so they can tailor the experience exactly to the type of work they perform and the specific things they want to learn.

Later, as I was taking pictures of the ribbon cutting ceremony (well, they're a plastic piping company so they did the ceremony with a section of tubing) it occurred to me how many manufacturers are now offering their customers "experiences" to complement their products.

There's the RIDGID Experience where attendees get a factory tour and get to make their own wrench. Bradford White has the For the Pro Training Academy. Lochinvar has Lochinvar University.

There are a few reasons so many manufacturers are offering experiences these to the skilled trades there are limits to what can be taught with textbooks and screens. Sooner or later you need hands-on, in-person instruction.

I think, ultimately, manufacturers are finally learning what service professionals have known for a while now: customers want experiences. It is no longer enough to say, "here's what I offer, here's what I charge," and have that be the reason a customer chooses you over your competition.

People want the feeling of a genuine, positive interaction with another human being. They want someone to listen to their problems and empathize. They want a customized solution, tailored to their individual wants and needs. And they want it all on their timetable, not someone else's.

Companies—whatever their business might be—who can offer those things don't just get to charge a premium; they establish long-term relationships with their existing customers while building a reputation that draws new customers in.

# Manufacturers are learning what service professionals have known for a while now: customers want experiences.

Oatey Co., for example, offers its Intern Experience program: a 12-week "immersive, multifaceted, and experiential program," created to provide interns with a bridge from their formal education to a meaningful professional career.

Watts now offers instructor-led training either virtually, in person at one of the company's training facilities, or via their "Lunch and Learn" program where the instructor comes to your facility. All of it tailored to the customer's needs, all of it built around the customer's schedule.

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days. I think so many people are working remotely—a trend the pandemic accelerated—that there's a new premium on in-person interaction. Part of *CONTRACTOR*'s parent company's business is events—conferences, conventions and so forth—and if the uptick in activity that side of business has seen is any indication, there is real desire out there to get face-to-face with people.

Part of it is the skilled worker shortage and the training programs that have been built to address it. When it comes

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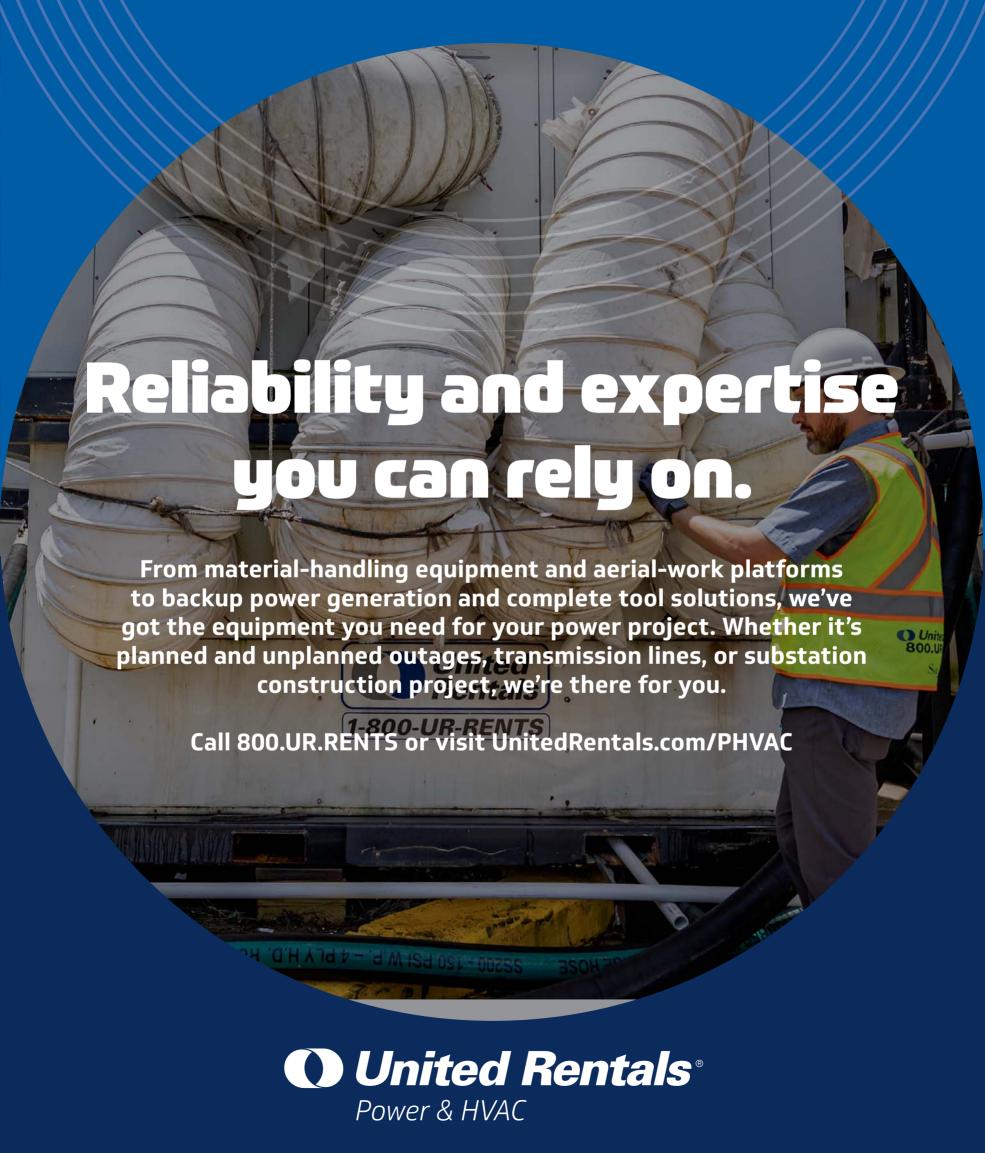
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