NEWS



Feature 2019 'Contractors to Watch' Stress Innovation, Leadership Industrial Supersized Duct Delivers for California Hospital



Feature Celebrating SMACNA Members' Anniversaries

J.F. Ahern: Craning in prefab ductwork.

CONTRACTORS GRAVITATING TO PREFABRICATION The HVAC Issue

Prefabrication is far from a novel concept in the world of construction. Homeowners in the United States, for example, have purchased prefabricated houses for more than a century to live a more affordable version of the American Dream. *continued on page 8* >>

75° ANNIVERSARY

Developing Our Strengths by Learning from Each Other

How do we improve the way we work in our shops? How do we know what works and what doesn't, what new shop technologies to test and what not to waste our time on, and what's a good investment and what should we avoid at all costs? Most of the answers to these questions come from reading industry publications, attending educational programs or, perhaps most often, by talking to other contractors.



Whether through the establishment of a peer group, or your local chapter, engaging your fellow contractors for information is a wise strategy of which many in our industry should take more advantage. I, for one, highly value the interaction I have with local contractors as well those I have met while traveling this year. Over a lifetime, I have learned that the more contractors I talk to, the smarter I am in running my business.

In SMACNews this month, we share with you several contractors you will want to keep an eye on to see what they're doing right. In a debut feature fittingly called "Contractors to Watch," SMACNA National has taken feedback and recommendations from chapter executives and shares with readers the contractors that have stood out for one reason or another. Some are laser-focused on what needs to be accomplished, while others are highly active in their communities. Still more build strong relationships while some simply stand out because of how hard they work.

Regardless of their collective success, all the contractors featured have developed a skill or strength that helps them make a difference each and every day.

As I read through the article, it occurred to me we should all develop our own strengths to the point where we stand out. Being complacent is not what our industry needs or wants right now. Words like "content," "routine" and "comfortable" should not be our descriptors. Rather, "innovative" and "growth-oriented" should be the words we use every day as we leverage competitive advantages and grow industry market share.

Collectively, if we all stand out, we strengthen our industry's reputation and solidify our reputation for delivering superior service, outstanding craftsmanship and an unequaled record of training and safety on the jobsite.

The good news is that during my travel as SMACNA President I have met a lot of impressive contractors — many more than mentioned in the article above. I see hard-working owners balancing all the demands that life throws at them and through it all, I see them thriving. I also see the SMACNA community helping at every turn, whether it is through formal learning opportunities or by facilitating conversations with peers willing to share their experiences.

Sincerely

Nathan L. Dills SMACNA President



CAPITOL HILL UPDATE

A SMACNA Priority: Contract Change Order Reform Introduced in Congress

Due to its popularity with contractors nationwide, federal change order reform has recently been reintroduced in Congress. It has bipartisan support and a promising future of passage.

The Small Business Payment for Performance Act of 2019 (H.R. 2344) reflects SMACNA members' suggestions for improving contractor payment conditions on federal construction.

The bill would make long overdue reforms advocated by SMACNA's many federal contractors to resolve change order payment disputes more quickly and fairly.

The Small Business Payment for Performance Act of 2019 forces agencies to be accountable for changed work they order by funding their own construction projects in a timely manner instead of diverting that financial burden to the small contractors.

This important legislation would allow contractors to submit a request for equitable adjustment (REA) or a project contract fee adjustment to an agency that had approved a performed change order to a project's original design or scope. Once the agency receives the REA, it must pay 50 percent of the billed change order work amount in a timely manner to offset extra costs.

While this legislation is not the entire solution to

the millions of dollars in change order inequities, it is a significant first step most worthy of passage.

SMACNA has told the co-sponsors and the full House of Representatives that SMACNA strongly agrees with the language and intent of H.R. 2344.

"Equitable changes to the contract, known as change orders, are ubiquitous on construction projects and slow approval can result in delayed payment," said the bill's co-sponsors Reps. Pete Stauber (R-8th-Minnesota) and Marc Veasey (D-33rd-Texas) when they introduced H.R. 2344. "Small businesses typically do not have enough capital and resources to sustain long periods of nonpayment and are dependent on a stable cash flow to stay afloat."

"Changes to scope of work on a contract can be initiated, unilaterally, by one party; often, the federal agency. Small businesses perform the changed work, incurring out-of-pocket costs for labor, supplies, etc. The work that small businesses perform, at the behest of the agency, are done at great financial risk to the small business. Unfortunately, small businesses are not being paid in a timely manner, or at all, for the changed work completed," they said.

After pushing legislation through the Small Business Committee by an overwhelming vote (18-3)

FEATURE STORY



last year, SMACNA and the bill co-sponsors were disappointed that it lost out to the short election year calendar. That bipartisan legislation, co-sponsored by Reps. Brian Fitzpatrick (R-8th-Pennsylvania) and Stephanie Murphy (D-7th-Florida), was reported to the floor as H.R. 2594 in June 2017 but did not receive an expected floor vote.

during the 115th Congress

Rep. Stauber also addressed the issue at the recent CEA National Issues Conference and asked members to help build his co-sponsor list by urging their lawmakers to pass the bill out of the Small Business Committee.

H.R. 2344, while just introduced, is expected to see positive consideration in the House Small Business Committee by this summer.

Concurrently on the Senate side, SMACNA, its member firms and allies are seeking a Senate sponsor willing to advance a Senate companion to the House bill. With a version of the change order reform bill moving on both sides of Congress, the odds of passage would significantly increase this year.

Members may read SMACNA's letter to the House: smac.news/6. Members are urged to contact their legislators on SMACNA's Take Action web page www. smacna.org/advocacv/ take-action.

2019 'Contractors to Watch' Stress Innovation, Leadership

MACNA is fortunate enough to count many of the most successful contractors in the industry among its membership. And all SMACNA contractors, no matter their size or success in their market, are known for their professionalism, skills, knowledge and the quality of their work.

This feature is dedicated to showcasing a select group of SMACNA contractors who are making a difference and having a positive impact in their local areas, whether it is through innovation, engagement or expansion.

Chapter executives recently shared their observations with SMACNA National and the following contractors were selected. From introducing young people to the industry to investing in new technology, they stand apart in a crowded field.

Mark Austgen, California Sheet Metal, El Cajon, California

Employee-owned California Sheet Metal in El Cajon, California, has carved a niche in

the competitive San Diego architectural sheet metal market. In a sector

dominated by HVAC companies and non-union architectural firms. they have found success stressing training and technology to demonstrate its prowess.

Linda Baxter-Jennings, SMACNA of San Diego's executive vice president, credits Mark Austgen, the president and CEO of the company for its success.

"Mark makes it a point to understand all aspects of the company and takes the time to educate himself so when it comes to working with managers and staff he has a good grasp on what they are dealing with on a daily basis," Jennings says.

"Mark is high-energy and focused on the success of his employees. He's always willing to listen and to offer support and training for his employees. Mark has made it clear that part of his success is to see every individual under his management also succeed," she adds.

That focus has paid off: CSM has worked on high profile projects, including pet supply Petco's headquarters and the Westfield UTC, a 1 million-square-foot outdoor shopping complex.

Austgen credits his "amazing team of people" and the fact that the company is 100 percent employee owned for its success.

"We have a diverse skill set of

highly technical craftsmen, seasoned managers and department leaders," Austgen says. "The company takes care of the employees, which is why we have many 20-, 30-, and even 40-year veterans of the organization."

To see the shop in action, look on SMACNA.org for a Contractor Spotlight video coming in June 2019.

Craig Berman, Geauga Mechanical Co., Chardon, Ohio



From the \$135 million, 34-story Lumen at Playhouse Square apart-

ment tower to the Flats at East Bank Apartments in downtown Cleveland, SMACNA member Geauga Mechanical Co. has been involved in some of the region's recent high-profile multifamily residential developments. And much of the credit goes to the company's 35-year-old president, Craig Berman.

SMACNA Cleveland Executive Director John Sindyla says Berman has boosted the profile of his company through innovative marketing techniques and embraced technology to make the 69-yearcontinued on page 10

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Installing a wall panel.

ITI Strike Force Training Focuses on Intricate Wall Panel Systems

s building envelope designs become more complex, so does installing their intricate wall paneling systems. Architects and design professionals are increasingly calling for the latest in-demand wall paneling systems and this is where the International Training Institute (iTi) comes in to lend quick support. Almost anytime and anywhere, the iTi can jump in with its Strike Force Training team to teach architectural sheet metal workers how to work with specific wall paneling systems.

Recently, when staff at Sheet Metal Workers Local 100 in Suitland, Maryland realized that an increasing number of construction projects were requiring specific building envelope and wall paneling systems, they contacted SMART's International Training Institute's Strike Force Training program.

This quick-response training initiative offered by the International Training Institute has become a go-to resource for specialized training in exterior wall and roof panel cladding systems such as metal composite material (MCM) panel systems, metal roofing, foam insulated metal wall panel systems, single skin systems, and others.

Soon after Local 100 submitted their Strike Force Training request, plans to build a new concourse at Reagan National Airport were announced. SMACNA firm Kalkreuth Roofing and Sheet Metal out of Wheeling, West Virginia won the job and Local 100 knew they would be working on these specialized systems sooner than later. Strike Force has already taken action and will deliver tailored training this Fall of 2019. The training will focus on how to install Centria metal panels and architectural louvers, which have been called for in the airport project specifications. The new concourse is expected to be completed in 2021.

This nimble Strike Force training program has had a hand in many success stories like this. Almost mid-way through its third year, the program is delivering specialty training sessions at Joint Apprentice Training Centers (JATC) around the United States and Canada. Training sessions typically take three days and 12 instructors travel to JATCs to provide this type of hands-on specialty training. These product-specific courses typically concentrate on the "what, how and why" of complex wall panel system installation used on projects out for bid.

"Building enclosure designs are constantly changing due to technological innovation, code requirements and the modernization of installation means and methods," said Dan McCallum, the iTi's architectural specialist. "As architectural building designs become more intricate and more complex, so does the installation."

According to McCallum, sometimes there is a new construction project coming to town, so SMACNA partners with a local union office to expand their workers' knowledge base and enhance their skill sets to ensure better performance with specialty products. For example, Strike Force conducted training for Local 24 in Columbus, Ohio last year to get their members trained on a specialty wall panel installation at a new Facebook data center.

Strike Force plans the training sessions with contractors, local union business managers, and manufacturers to learn about the project and determine the course training material that is needed.

"It's not just a one-and-done

INTERNATIONAL TRAINING INSTITUTE www.sheetmetal-iti.org

service," noted Jim Page, the iTi administrator. "We help the local unions develop a plan that brings the project into focus."

The goals of such project-focused training include higher production quality, no overages on labor hours and job costs, and more accurate estimates.

Other training requests that don't have a specific project focus also include a greater emphasis on outreach to the architectural and design community.

"It's about marketing and branding ourselves," McCallum remarked. Since the Strike Force courses are held at local JATCs, architects and design professionals from the area are invited to attend for free. These stakeholders also get to meet their potential SMART and SMACNA partners and tour the training facility.

One goal is to prevent architectural sheet metal jobs from going to carpenters and other trades. "We use the opportunity to introduce ourselves to the building design community," McCallum added. "We encourage them and say, "please use us for everything you can (in your projects). It really does make a difference."

The Western Washington Sheet Metal Workers Local Union 66 is taking this outreach and marketing approach during a Strike Force training on June 4 to 6 in Seattle, Washington. The core of the program features metal wall panel installation training for Local 66 members. It includes a hands-on installation class with manufacturer certification for training in architectural horizontal foam panels, insulated composite back up panels and an aluminum plate rain screen system. Local architects and wall consultants may continued on page 14







IFS Helps Upgrade Missouri Schools to Reduce Energy Costs

ntegrated Facility Services (IFS) of St. Louis, Missouri is a key player in the St. Louis County Pattonville School District's \$10.2 million dollar energy conservation project to upgrade the schools' aging facilities and save on energy costs.

The company's extensive \$3.1 million design/build work will replace older HVAC equipment with new systems designed to increase energy efficiency and reduce operating costs. The upgrade includes four schools: Pattonville High School, Pattonville Heights Middle School, Parkwood Elementary, and Rose Acres Elementary.

IFS is currently working with construction management and energy performance company Navitas on the Pattonville High School. Navitas audited the schools' energy use to develop energy conservation improvements – from HVAC upgrades to building performance optimization. The improvements are expected to reduce energy consumption by one-third.

"Components of the old system ranged from 15 to 40 years old," said Jay Edwards, IFS project manager. "We replaced boilers, water heaters, variable air volume (VAV) boxes, condensing units, evaporator coils, rooftop units, makeup air units and exhaust fans. We upgraded everything you can think of."

One of the most dramatic aspects of the installation involved airlifting rooftop units up to the school roof. At 417,917 square feet, Pattonville High School is



the largest high school in the state of Missouri, but the campus didn't have enough space to lift the equipment by conventional crane. IFS partnered with Midwest Helicopter Airways to get the job done.

Then, on a clear day during the school's winter break, the IFS, Navitas, and helicopter team airlifted 70 tons of HVAC equipment to the high school roof by air crane.

"To control costs, we minimized the number of empty trips the helicopter would take. It took about a week to plan the two and a half hour lift." The helicopter removed 32 existing, hard-to-reach HVAC units and lifted 38 new condensing units and cooling coils, makeup air units and rooftop units. Sixteen IFS employees assisted on-site. It took 70 trips.

Inside the building, replacing the boilers also was essential for cutting the school's operating costs. For example, the old system used a heat exchanger on the main boiler system to heat the domestic water. "Even in warm weather, the school had to run the boilers for water for showers and handwashing," Edwards explained. "When they tried to cool the building in the summer, the hot boilers drove up costs."

IFS separated the domestic water from the HVAC system by rearranging piping in the boiler room. "Now the boilers are dedicated to the heating system and the school has water heaters that meet their needs more economically," he said.

IFS finished most of the work at Pattonville High School during the school months. To avoid disrupting classes and events for the high school's 1,700 students, IFS performed most of the upgrade in the afternoons and evenings. "We started at 3 p.m. and worked until 10 p.m. or 11 p.m. at night," he said. "Sometimes we worked weekends."

And they kept their work areas immaculate. "The building occupants didn't know where we had been, because we cleaned up every night before went home," Edwards noted. "We even replaced ceiling tiles back before we left."

The HVAC project is scheduled to be complete in August before the start of the school year.







Prefabrication Speeds Dormitory Residence Projects

ver the past several years, James Morgan, president and CEO of Worcester Air Conditioning, Ashland, Massachusetts, estimates that his sheet metal workers have prefabricated and installed ductwork in more than 3,000 dormitory rooms in colleges and universities across the Bay State.

Their ductwork graces the residence halls of Harvard University, the Massachusetts Institute of Technology, Framingham State University, Berklee School of Music, and the campuses of the University of Massachusetts from Boston to Amherst.

Their work on the dormitories with Commonwealth Honors College (CHC) at the University of Massachusetts Amherst is a classic example of their experience in prefabricating and installing these kinds of ductwork assemblies in tight spaces.

Fabricating and installing ductwork for residence halls is quite different than for office buildings, Morgan said, as offices typically have more space above ceilings to contain ductwork and other MEP services.

"At the Honors College, seven buildings were constructed simultaneously, all in tight proximity to one another," Morgan said. "There was limited space between the floors and it required very small ductwork to move the air."

Worcester Air installed ductwork in more than 1,300 rooms in the college's six student residence halls and administration building, including single and double rooms, suites, and apartments. Space was tight. The height for dorm rooms between the poured concrete floors spanned 10 feet with a limited area of about 12 inches for ductwork above the ceilings. All in all, Worcester Air installed 260,000 pounds of galvanized steel ductwork in the seven buildings.

Commonwealth Honors College is a "campus within a campus," Morgan said. The Honors College is a community of academically talented students that features small classes and close interaction with faculty and provides opportunities for analysis, research, leadership and engagement in a nationally recognized university, UMass Amherst.

Worcester Air prefabricated most of the 8-to-10-foot-long sections of ductwork in the shop. This length would allow risers to fit between the slabs. A full 10-foot section weighed 60 to 70 pounds and could be installed on a ladder or lift by two workers.

"We would put together these sections wherever loading zones allowed for the larger pieces," he said. The rectangular duct tended to be wide and flat and 16 inches wide by 4 inches high to accommodate the small spaces above the ceilings.

"Most of the prefab in the dorms involved assembling straight and turning sections, with shop-cut taps cut into those fittings where appropriate," he explained.

"The riser ducts are a lot smaller in this kind of project," Morgan added. For example, the round duct risers can include laundry exhaust, bathroom exhaust, and kitchen exhaust and range from 4 to 12 inches in diameter. "There are many risers, but they tend to be small," he said.

The advantages of assembling the ductwork in the shop included being able to work at table height and having fewer pieces to install at elevation.

"On the jobsite, the work is frequently done from a ladder above a worker's head. Prefab allows more work to be done indoors at table-level all in a controlled setting, with no wind, rain or other environmental conditions that could create a safety risk," he added.

Once the duct assemblies were completed, they were placed on carts and transported to the work site. Particularly when transporting work that was intended to be exposed to building users, extra care needed to be taken to prevent damage during shipping. "The finished work was generally painted, so we had to protect it," Morgan said. "We wrapped it in bubble wrap and transported multiple sections on a four-wheel cart that was lifted into the building by a hoist."

Worcester Air also installed air handling units in tight mechanical spaces, which supplied the central areas such as common areas, lobbies, kitchens, laundry facilities and stairwells.

"We're fortunate," Morgan reflected. "Universities in New England are building. It's fair to say that the university community in New England is currently very active."

> WORCESTER AIR www.worcester-air.com





The plenum is large enough to drive a truck through.

SMACNA Contractor's Supersized Duct Delivers for California Hospital

e Sutter Women's and Children's Hospital project in Sacramento, California, was headed for disaster in the preconstruction phase in 2009. The owner could see that the project was going to be hit with significant cost overruns and terminated the original construction team. SMACNA contractor Air Systems Service and Construction (ASSC) of Sacramento was part of the winning team when the project was rebid under an Integrated Project Delivery model.

ASSC, in a design-assist role, devised a huge 16-foot by 16-foot plenum served by the largest fan-wall system west of the Mississippi, along with engineer of record Capital Engineering. The contractor made good use of the services of SMACNA's Technical Services Department to design ductwork that would deliver the constant-volume airflow required by the hospital, meet California's stringent seismic requirements for hospitals and be economical to build.

Sutter Women's and Children's Hospital is a 395,241-square-foot building that includes a basement, eight floors of patient rooms and services including PICU, NICU, ICU; labor and delivery; and ante/postpartum, examination and isolation rooms.

The ninth-floor penthouse is

a fully built up HVAC mechanical system consisting of 200 fan wall cubes with individual VFDs controlled by a central panel moving over 500,000 CFM. The plenum is pressurized to 6-inches of static pressure.

"The fan wall modulates as a whole to maintain designed static pressure in the system," says Jim Meurer, executive vice president at ASSC. "As this is an acute care facility, the terminal units are CAV versus VAV. One of the benefits of the fan wall is its inherent redundancy. If a fan cube fails or needs repair, the rest of the fan cubes will ramp up to maintain system static."

Heating and cooling are generated at, and supplied from, a separate central plant. The penthouse cooling section is composed of 24 129-inch by 51-inch chilled-water cooling coils that totaled 2,640 GPM. The campus central plant also supplies space heat and domestic hot water from two steam exchanger systems.

"The ninth floor of the building is dedicated primarily for a built-up mechanical penthouse air handler," says Meurer. "It is a conventional system, but is on a massive scale. This single penthouse system effectively serves the entire building."

So why create a plenum large enough to drive a truck through? It's because of the laws of physics, says Mark Terzigni, SMACNA's director, engineering and technical resources.

"The laws of physics require a certain amount of air at a certain temperature to heat or cool a space," Terzigni explains. "Years ago, when first cost was the deciding factor, ductwork was smaller and air had to be delivered at higher pressures, which resulted in higher energy use. Now that life cycle costs trump first costs, ductwork is larger which allows fan horsepower to be lower."

When he teaches a class, Terzigni points out that CFM equals velocity multiplied by the cross sectional area. As the cross sectional area gets bigger, energy costs get smaller because the fan horsepower goes down to deliver the same CFM.

The contractor and SMACNA's Technical Services Department relied on both the HVAC Duct Construction Standards and the Rectangular Industrial Duct Construction Standards manuals to design the 16-foot by 16-foot plenum. The industrial manual is a design guide that allows the contractor to work out solutions for various conditions and specifications, based primarily on engineering theory that has been validated by actual construction projects.

Typically, ductwork comes off a coil line in sections, is joined together, and then it's reinforced. The Sutter Hospital project reversed this sequence in order to meet static pressure and seismic bracing requirements. The contractor built the reinforcement first, an exoskeleton that was supported every 8-feet on center with 4-inch welded tube steel frames.

"Given the seismic criteria we were facing," Meurer explains, "we came up with the concept of 'bridging' between the seismic support frames with additional 4-inch tube steel horizontal members, as well as adding 2-inch by 4-inch tube steel ribs."

"This created the complete exoskeleton frame, which then allowed us to simply skin the interior with TDC plenum panels. The TDC plenum panels were joined with conventional duct flange gasketing, and sealed with high-pressure duct sealant. Once the system was completed, it was externally insulated," he says.

> ASSC www.airsystems1.com

COVER STORY

CONTRACTORS GRAVITATING TO PREFABRICATION FOR SHEET METAL AND HVAC PROJECTS

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Essentially, prefabrication refers to contractors assembling the components of a structure at a designated manufacturing site, then transporting the completed version to the actual site of a job for installation. Prefabrication's construction cousin, modularization, involves prefabrication that combines work from multiple trades.

Phil Corbin, manager of preconstruction services with J. F. Ahern Co., likens the prefabrication work the Wisconsin-based company is currently doing to building with an "erector set."

"Basically, the job is built offsite, and then kind of put together as a cookie cutter on-site," Corbin says.

Sheet metal and HVAC contractors have found that that prefabrication offers a number of benefits when applied in both commercial and residential projects.

Safety is Job One

Contractors widely cite improved workplace safety as one of the chief benefits of prefabrication. "The exposure for a company in the field is greatly reduced," says Joseph Lansdell, president of Poynter Sheet Metal in Greenwood, Indiana.

Instead of being subjected to variable climate conditions in the field, prefabrication means "the work is all done in a controlled, indoor environment," according to James Morgan, president and CEO of Massachusettsbased Worcester Air Conditioning LLC. Activities such as welding are safer when done indoors at a production center than outside at a jobsite, for instance. It's easier for contractors to handle materials indoors, and the same goes for operating and caring for machinery and equipment.

Importantly, most prefabrication work is done at table height in the shop, as opposed to sending workers up on ladders to do ceiling installations.

"We reduce the amount of trauma-type injuries if we put work down at the floor or waist level," notes Guy Gast, president of the Iowa division of The Waldinger Corporation.

Lower Labor Costs

In addition to the safety benefits, contractors have found prefabrication is boosting efficiencies across multiple dimensions.

First, as Lansdell points out, contractors tend to incur lower labor costs for work done in shops as opposed to out in the field. "Simple math states for every hour I shift from field to shop, I should save money even if the productivity factors are equal," he says. Gast says Waldinger recently completed a case study of a 90,000-square-foot commercial office building in which the company relied on prefabrication for duct work. He pegged the hourly labor savings from prefabrication at approximately 6-7 percent relative to field work on the project. "All of the work that we were able to move to the shop was done at a rate of three or four dollars an hour lower than the field crew rate," Gast said.

Gast also notes that it is becoming more difficult to find qualified field labor for projects. "Anything we can do to reduce our dependence on a diminished resource, the availability of field labor, is a benefit to the company in the big picture," he says.

Wayne Greenwood, president of Boston-based contractor JEC Service Company Inc., says his company has set a goal of shifting as much as 20 percent of its field hours back into a prefabricated shop setting. A major reason behind the push, he says, is that working in the field can lead to unavoidable delays and snags that arise during the work day. In contrast, shifting that work to shops reduces downtime significantly.

Increased Employee Satisfaction

Of course, achieving lower labor costs only goes so far if workers balk at doing fabrication work in shops. Fortunately, contractors report that workers have embraced the move.

"We were concerned when we first started it that there would be pushback from some of the union guys about leaving the field and going into the shops," Corbin says. "And we found, actually, the polar opposite: that they liked how much easier it made their job."

JEC encountered some hesitance from the labor force when it came to moving more work to prefabrication, according to Greenwood. "I think there's just some natural resistance to change from anyone," he says.

However, contractors say a more hospitable workspace and enhanced safety make prefabrication appealing to workers.



"OUR BIGGEST OPPORTUNITY RIGHT NOW IS EDUCATING GENERAL CONTRACTORS TO CREATE JOBSITE CONDITIONS THAT CAN MAKE OUR PREFABRICATION STRATEGIES SUCCESSFUL." – Jim Morgan

"These guys are now working at heights of three feet to five feet height, versus 15 feet up in the air. They're working in a controlled environment where it's 60 degrees inside versus when the wind is howling through a building," Corbin notes. "They're not having to hunt and peck through a gang box to find the things they need — the equipment is already pulled together for assembling."

"The field foremen who realize their jobs became easier and more satisfying have really bought in and use the system we have developed," Lansdell says. 150,000-square-foot facility near its main shops that is dedicated to prefabrication.

Going forward, Morgan says sheet metal and HVAC contractors have one important item on their to-do list as prefabrication continues to grow.

"Our biggest opportunity right now is educating general contractors to create jobsite conditions that can make our prefabrication strategies successful," Morgan notes. "The better the general contractor is in understanding what our prefabrication needs are — and not just ours, but all trades — the more successful the overall strategy will be."

Space Wanted

In terms of shifting more projects to prefabrication, planning ahead and coordination are seen as key. "Make sure you get buy-in for all of the team members on the jobsite first," Corbin advises.

For example, once a job kicks off, Morgan says Worcester's project





JEC SERVICE COMPANY INC www.jec-company.com

J. F. AHERN CO. www.jfahern.com THE WALDINGER CORPORATION www.waldinger.com

WORCESTER AIR CONDITIONING www.worcester-air.com



managers negotiate with general contractors about considerations such as using tower cranes and leaving spaces in exterior walls to install large prefabricated pieces.

Meanwhile, Lansdell notes that software systems can facilitate communication between workers in the field and back in the shop to ensure prefabricated pieces are built to match jobsite conditions.

Prefabrication doesn't necessarily entail initial investment in new equipment or design systems. However, contractors cite needing adequate space as one of the biggest challenges to getting started. Greenwood says JEC has already outgrown the 15,000-squarefoot space it uses for prefabrication, for example. Ahern has a



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old company more efficient.

Geauga Mechanical's service department is completely paperless with all technicians carrying Apple iPads to track the progress of projects. The latest in coordination software, such as Autodesk's Navisworks and Revit are used, and layout work is done in 3D thanks to a Trimble robotic total station.

Berman is tackling the industry's worker shortage by opening his shop in Chardon, Ohio, to eighth-grade students to introduce them to building trades careers. Within the next few years, Berman says he hopes that his work will start paying dividends.

"I hope that we have been able to get young people interested in the building trades and have begun developing a new generation of sheet metal workers," he says.

Brian Ninomoto, Hawaii Sheetmetal and Mechanical, Hilo, Hawaii



The aloha spirit of deep care and respect is demonstrated by Hawaii Sheetmetal and

Mechanical and especially its president, Brian Ninomoto. The Hilo, Hawaii-based company has established a reputation for topnotch service and craftsmanship, according to Blake Parsons, the executive director of SMACNA's Hawaii chapter. The company also took first place in SMACNA's recent annual safety competition for its man-hours category.

In addition to starting and running his own sheet metal company in a rural section of the state, Ninomoto is active in the business community, currently serving as president of the Hawaii Island Contractors Association.

As an owner who started as an apprentice, Ninomoto has remained a hands-on executive, Parsons says.

"He isn't afraid to get his hands dirty and would never ask an employee to do something he wouldn't do himself," he adds. "He treats his employees and customers like family."

Geoff Parks, CMC Sheet Metal, Capitol Heights, Maryland



High quality and prompt service are hallmarks of CMC Sheet Metal in Capitol Heights,

Maryland. The more than 40-yearold company has worked on projects throughout the metropolitan Washington, D.C., area, from government buildings to retail facilities and universities.

Geoff Parks, the vice president of construction at CMC Sheet Metal, is not only active with his firm, but he volunteers to serve on a number of SMACNA's committees, including those dealing with the chapter's pension, vacation and health funds. Bernie Brill, the executive director of SMACNA's Mid-Atlantic Chapter, says Parks has earned the respect of his peers, despite only being in his early 40s.

"Geoff sees the opportunity to try to get involved and make a difference in the industry," Brill says. "He understands the value of building a coalition and building a consensus among members to move the industry forward."

Gary Venable, Colorado Sheet Metal, Colorado Springs, Colorado



Springs-based Colorado Sheet Metal has been involved in numerous high-profile projects. Its owner and president, Gary Venable, is a

From health care

to military and

university proj-

ects, Colorado

"Contractor to Watch" because of his commitment to the industry and the state's SMACNA chapter, according to Nathan Cooper, executive director of SMACNA Colorado.

"Gary's a really smart, methodical contractor," Cooper says. "He's really thoughtful about the way he goes about his business."

A second-generation sheet metal worker, Venable has a long history in the industry. He started as an apprentice, working his way into management. He now owns Colorado Sheet Metal and serves as president of the state's SMACNA chapter.

"He's just seized every opportunity that's been given to him along the way," Cooper says. "I think Gary's perspective as an apprentice helped him in dealing with labor issues and in considering how our labor partners might feel about something. And that's absolutely powerful."

Venable says he wants his employees to feel empowered at all levels.

"CSM's success has always been based on building relationships," he says. "Most of our key field personnel have been with us since they were apprentices and developed into foremen or moved into the office. We stress to that they are the front line of our sales staff. If we have an opportunity with a new client, it's our field staff that can turn that single project into a relationship and give us the opportunity for future work with that client."

Christopher J. Weickert, Weickert Industries Inc., Long Island City, New York



In an industry where change can be slow, Christopher J. Weickert has led

his fifth-generation family business forward, embracing technology to grow its HVAC design and sheet metal fabrication operations.

He realized that digital communication would be an asset to its operations, so he installed a server-based network for the business. The company now fully uses a virtual network, allowing instant access to plans, time tracking materials, scheduling and all communications.

"Chris recognizes that the sheet metal industry has changed and rather than continue to do business the same way, he has found other avenues to expand his company," says John Contrubis, associate director of New York City SMACNA. Weickert has steered the company into areas that others may have avoided, such as service work, he says. "That has given his company a competitive advantage when bidding certain jobs."

The company has also developed a reputation as a go-to HVAC contractor for the famous and historic buildings that populate New York City. Weickert enjoys working in such structures.

"Since these properties can't be modified they present different obstacles that require outside-the box-thinking," he says. "Over the years, I have worked in Rockefeller Center, the Museum of Modern Art, the Metropolitan Museum of Art, the Empire State Building and One Wall Street. It is really fun to figure out how to put air conditioning into these existing buildings when they weren't initially designed to have it."

Weickert is also eager to market the services his company offers. At a 2018 regional trade show, Weickert used a small remote-control car with a roof-mounted camera to attract attendees to his booth — and demonstrate how such equipment can be used in ductwork to spot problems.

Garrett Yates, A-J Sheet Metal, Sandy, Utah



When asked to pick one word to describe Garrett Yates, the project manager at A-J

Sheet Metal, Shelley Lester of SMACNA Utah said that just one word doesn't summarize him.

"Hard-working and dedicated," Lester says. "Our chapter is fortunate to have such a grounded and realistic individual to bring his perspective and positivity to the table."

Yates stands out because of his high level of commitment, patience and service. "Nowadays, a contractor needs to be more than a firm installing sheet metal. They need to be diverse, to have the best workforce and to be focused on the purpose of the work and not just the task at hand. Garrett encapsulates all of these ideals."

Yates also has the unique ability to connect with multiple generations of workers. He volunteers at the local Joint Apprenticeship Training Center (JATC), mentors students, and serves on the SMACNA Utah Board of Directors.

Yates says he can relate to younger and older workers because he's had a lifetime of experience in the sheet metal industry.

"Working for A-J Sheet Metal is the only job I've ever had," he says. "I started working in the shop at age 16 during summer break and every summer until I graduated from high school. I earned the respect of our employees by working side-by-side with them in the field and in the shop. It makes a huge difference in managing employees who respect you and who know that I have been in their shoes and that I know what I am talking about."

"Learning all of the things I learned in the shop and the field were invaluable to me," Yates adds. "Most of the knowledge and experience you get is on-the-job training, but the apprenticeship program is great for learning to be a skilled and trained professional in this industry."

Andy Yonkus,

State Mechanical Services, Aurora, Illinois



In a little over seven years as vice president of State Mechanical Services in Aurora, Illinois, Andy Yonkus has helped grow the company from \$15 million in revenue to over \$55 million. The company

has added high-rise residential developments and offices to its resume, and it has designed and built mechanical systems for a number of hospitality sector developments and auto dealerships throughout the state.

This project versatility is no accident, Yonkus says. "We are very diverse in our markets. This allows us agility when a particular market gets cold and another warms up."

Tony Adolfs, executive director of SMACNA Greater Chicago, says Yonkus is an active member of their Young Executive Committee, as well as a new, and vocal, member of the association's board of directors.

"He's not afraid to speak out on any topic," Adolfs says. "He's a breath of fresh air. That's the kind of person he is — and the kind of person we want."

Yonkus also points out that he's always eager to listen too. "Managing a business means that you have to listen more that you talk," Yonkus says. "When you talk, it needs to be well thought and applicable to the topic. Also, always ask why when something doesn't go the way you thought it would and don't jump to conclusions."

Editor's Note: Our plan is to run this as an annual feature. Both contractors and chapter executives should keep that in mind as the year progresses.

Welcome 2019 Associate Members

PLATINUM



Celebrating SMACNA Members' Anniversaries



While SMACNA National celebrates its 75th anniversary this year, there are many members and chapters who are also commemorating their own noteworthy milestones. SMACNA and its contractors' histories are intertwined. In these pages, we will share just a few of their milestones and their philosophies, humble beginnings and visions for the future.





Artlip and Sons Quality Work by Craftsmen Who Care www.artlipandsons.com

Families in Aurora, Illinois, and the surrounding Fox Valley have watched the green trucks of Artlip and Sons Inc. servicing HVAC systems in homes and businesses since 1969. This year they celebrate their 50th year in business.

Hank Artlip, president, credits the company's longevity to its people. "The most important part of any business is the people" he said. "It is the most challenging part, but also the most rewarding. I have had the pleasure to work with great people. Fifty years is not possible without that."

Artlip, along with his brothers, is the second generation to run the company, which was founded by his father Wayne L. Artlip. They represent the third generation in the industry, which began with their grandfather who

worked for a large HVAC firm.

"My parents started the company out of their home and garage," Artlip said, who also serves on the SMACNA National Board. There were three employees. "My mom was the office manager and dispatcher and my dad did sales by night and service and installs by day." They also had a field technician/installer.

Now, Artlip and Sons Inc. has grown to 25 employees and specializes in commercial HVAC, service and maintenance, design-build, custom fabrication, and residential heating and air conditioning.

His father's philosophy still guides them. "My dad always treated people well and was a calm leader," Artlip reflected. "That laid the groundwork for success and our company's motto, 'Quality work by craftsmen

who care.""

In 1972, they moved into a small building in Aurora. In 1981, they purchased a second building across the street and added a sheet metal division. In 1991, they expanded into, a 16,000-squarefoot facility twice the size of the other structures combined.

Meanwhile on a national level in 1972, SMACNA established the SMACNA Safety Committee and SMACNA and SMWIA also established the National Training Fund.

One change Artlip has made is their flexibility in fabrication. "We have gotten away from doing our own fabrication on most construction projects. Our full fabrication shop is mostly used now for smaller or specialty projects or for when we have the manpower to do our own fabrication. We can continue to ramp it up and down as required."

Dee Cramer Inc. **Dedicated People Delivering Quality** www.deecramer.com

The third generation to run Dee Cramer Inc., Matt Cramer, president, and his brother Rich Cramer, vice president of service, are carrying on the work of their father and grandfather - along with a rich legacy of dedication to SMACNA and the industry. This year they celebrate their 82nd anniversary.

"My grandfather Dee Cramer founded the company on the core values of quality and dedicated employees who are committed to the customer," Matt Cramer said. "Our tagline is "Dedicated people delivering quality," because we carry on those values today."

Founded in his garage in 1937 by Dee (Devere) Cramer to sell and install residential furnaces, the business has grown and diversified into one of the country's largest family-owned heating, ventilation, and air conditioning firms.



Now with 225 employees, the firm is based in Holly, Michigan, where they operate three shops in the state and have a branch office in Lansing.

Matt is continuing a legacy of service devoted to SMACNA. He served on SMACNA's Board of Directors (2010 to 2014). Earlier, company founder Dee Cramer and his son Richard (Dick) Cramer Sr. both served as SMACNA National presidents — Dee from 1954 to 1955 and Dick from 2006 to 2007.

All three generations have been recognized with SMACNA's Contractor of the Year award: Dee in 1983, Dick in 1997, and Matt in 2011.

Dee Cramer's son Richard (Dick) J. Cramer Sr. took over from him, joining the company in 1964, and is the current chairperson. Later, Dick's two sons Rich and Matt joined him — Rich in 1986 and Matt in 1993 — and they run the company to this day.

"The company grew from residential to commercial and Industrial mainly because of the reputation that Dee had for quality and the relationships he built handling the heating needs of local General Motors executives at their personal residences," Cramer reflected.

Not only has the company's history been intertwined with SMACNA, but with the Big Three automakers — General Motors, Ford Motor Company, and Fiat Chrysler Automobiles US.

"Our market is driven very much on the success of the automakers," Cramer explained. "We also

"OUR MARKET IS DRIVEN VERY MUCH ON THE SUCCESS OF THE AUTOMAKERS," CRAMER EXPLAINED. "WE ALSO DO A LOT OF WORK FOR FIRST, SECOND AND THIRD-TIER SUPPLIERS FOR THE BIG THREE." –Matt Cramer

do a lot of work for first, second and third-tier suppliers for the Big Three. However, we have benefitted by not having all of our eggs in one basket." The firm also specializes in hospitals and higher education clients, including Michigan State University and the University of Michigan.

They have stayed nimble through economic ups and downs. "Over the years, with the loss of so many GM plants and employees, we have been successfully moving our focus to other geographic markets like Lansing, Ann Arbor and Detroit," Cramer noted. "That has benefitted us greatly." Over the years, the biggest changes have been in technology such as building information modeling (BIM), advancements in 3D and iPads and tablets in the field. "It's good to do plan and spec work, that keeps our saw sharp, but working on IPD and Design Assist / GMP / Open Book projects are fun and we believe deliver the best value to the owner," he added.

A future goal is growing their service department. Their vision, Cramer said, is to also "build on what my grandfather founded our company on and what has gotten us here today: Dedicated people delivering quality."

Geisler Brothers Stick With What You Know

Geisler Brothers Company has been part of the fabric of Dubuque, lowa life for 127 years, serving area manufacturers for generations.

As the fifth generation to lead the family business, Todd Geisler, president, along with his brother Scot, vice president, run the company by their forefathers' guiding principles.

"Stick with what you know," Geisler recalled. "Invest in what you do rather than something outside your knowledge. Always run one man short. Don't get too big too fast. Be prepared for a downturn more than an upturn."

In 1892, his great-great grandfather, Joe Geisler opened up a hardware store and sheet metal shop in Dubuque, Iowa, including two employees who manufactured and repaired pots and pans.

Today, four buildings and several acquisitions later, they have grown into a 57,000 square-foot facility



serving the tri-state area's heating, cooling, ventilation, architectural sheet metal, custom sheet metal and roofing needs for commercial and residential customers. They employ 160 employees in Dubuque, Iowa City and Coralville.

In 1991, they acquired Dubuque Steel Products, which fabricates stainless steel products, a modern-day nod to their roots, which they call their "pots and pans" division. In 2012, they purchased a heating, air conditioning and sheet metal firm, Universal Climate Control, which Scot manages.

In 2012, on the national level, SMACNA received ASHRAE's Gold Circle Award, granted chapter charters to SMACNA of Japan and SMACCA of New York City and together with the SMWIA endorsed a sheet metal industry substance testing policy.

Their biggest issue today is manpower. Over the years, they've been working on "finding the right balance between manpower and work opportunity," Geisler said. "Manpower is the biggest issue today."

Geisler is getting ready for the next 100 years. "The next generation, the sixth generation, is still in college and we'll see them in a few years." His advice to them: "Look for opportunity. If an opportunity presents itself, be ready. Stay hands-on and involved in the dayto-day business."

LEADERSHIP



Saving the Hardest For Last

In a construction-related business of any size, decisions come early and often, particularly when you are the owner. As the scope of your leadership role expands, the decisions usually only get harder because all the easier decisions are made by other people! Initially, many decisions feel daunting because you have no frame of reference. But with time, some decisions get easier because you have the experience of past mistakes and successes to guide you.

But life has a way of handing us the very hardest decisions at the very end of our careers. Few of us will have any relevant experience to draw from. While the counsel of others will be valuable, these end-of-career decisions are intensely personal and require a leader's lifelong accumulation of wisdom, resolve, and courage to make. These decisions are of ultimate strategic importance, but don't feel urgent until it's almost too late. I'm talking about decisions regarding what we think of as retirement.

"Retirement" is an inadequate social construct based on outdated actuarial tables and work demands. When the Social Security Act was passed in 1935 guaranteeing retirement pensions to all Americans over the age of 65, the average life expectancy was less than 62 years!

Today most people can expect around 20 plus years of productive living past that age. Many of our clients are actively engaged in their business long past 65. They enjoy the work itself, the thrill of accomplishment, as well as the financial rewards it provides. The only drawback is that past 65, the odds only increase that some external circumstance (illness, family complications etcetera) will force a decision we aren't prepared to make. That's why these hardest decisions still need to be made, before some unforeseen crisis makes it for us. When do I step away? This may be the hardest and most crucial decision we ever make. Leave too soon and the company will be weakened and unprepared for a future without you. Hold on to long and you can become an anchor working against the sails of the next generation, regardless of intent. There are many other difficult decisions that follow, but establishing a realistic timeline is where all these begin.

Who will take my place? By the time you've been in leadership for a few decades, the job you're doing is uniquely built around your skills and aptitudes, likes and dislikes, and personal preferences. There is no one individual in your organization who has that same profile. That means in most cases, replacing your scope of responsibility will necessitate a group of people. Understanding that early will save some costly misfires.

Where will I reinvest my life going forward? One of the roadblocks to making these first two decisions is the lack of thought around how you plan to purposefully live in your next chapter. Recreation is great, but when you can golf/fish/travel, whenever you want, it very often loses its appeal. Conducting a simple audit of time and energy will usually reveal a leader's significant lack of diversity in their time/energy portfolio. Right now, it's likely that most/all of your meaningful relationships, sense of purpose, source of satisfaction and your very identity are wrapped up in your business.

Untangling these essentials of happiness from your current role is a primary prerequisite for discovering your preferable future!

Ron Magnus, managing director of FMI's Center for Strategic Leadership with Ed Rowell, CSL consultant. Ed Rowell works in succession planning at FMI. You may contact him at erowell@fminet.com if you have any questions.



MCM wall panel.



continued from page 4

attend the training for free. It includes a presentation on maximizing envelope performance with IMP-integrated components.

McCallum also instructs the sessions. He has direct experience with architectural sheet metal and worked at the Warko Group in Reading, Pennsylvania, as vice-president of estimating and managing architectural sheet metal and HVAC projects.

The hands-on training content features best practices and techniques used for field layout and measuring of wall panel systems.

During the Seattle training, for the first time, Strike Force is including a construction technologist from a large power tool company to deliver a presentation directly to invited architects, engineers and signatory contractors on the technology used in construction including how augmented and virtual reality — along with 3D printing, robotics and drones — are changing how contractors design and build.



www.smacna.org/annualconvention





Pictured (left to right) Douglas Gudenburr of Ductmate Industries Inc., Michael Gunning of Gunning Inc., Adam Renick of Renick Brothers Construction Co., Congressman Reschenthaler, Mark Malencia of Emcor Services Scalise Industries and Raymond Yeager of Ductmate Industries Inc.

LEGISLATIVE

SMACNA Western Pennsylvania Talks Infrastructure with Rep. Reschenthaler

The SMACNA of Western Pennsylvania chapter and the SMAC PAC Committee co-chaired a recent meeting with Rep. Guy Reschenthaler (R-14th-Pennsylvania).

Held at the Duquesne Club in Pittsburgh, representatives from the Western Pennsylvania chapter spoke with the new member of Congress one-onone and discussed the need to address infrastructure revitalization, the opioid crisis, community development, workforce training and energy retrofits.

LEGISLATIVE

SMCA of Philadelphia Meets With Rep. Norcross

The Sheet Metal Contractors Association of Philadelphia and Vicinity met with Rep. Don Norcross (D-1st-New Jersey) in April for dinner and to discuss several industry issues in Cherry Hill, New Jersey.

SMACNA members Matthew Sano of Fisher Balancing Company and Gary Luthe of Luthe Sheet Metal Inc., who also serves on SMACNA National's Board of Directors, spoke with Rep. Norcross about upcoming legislation, pension reform, regional development and federal infrastructure efforts in Congress.

Rep. Norcross has been a labor leader and president of the Southern New Jersey AFL-CIO and supports many interests that intersect with sheet metal and HVAC industry concerns including job training, pension reform, strengthening the nation's infrastructure and combatting the opioid epidemic. He is the only electrician in Congress and is familiar with the concerns of union

workers and contractors.

In Congress he serves in leadership roles in the Democratic Caucus and is co-chair of the Rebuilding America Task Force, vicechair of the Bipartisan Task Force to Combat the Heroin Epidemic and serves on the Joint Select Committee on Solvency of Multiemployer Pension Plans.



Pictured (left to right): Gary Luthe of Luthe Sheet Metal Inc., Congressman Norcross (D-1st-New Jersey) and Matthew Sano of Fisher Balancing Company.

LEGISLATIVE

Energy Efficiency Advocates Support Sen. Shaheen

SMACNA co-hosted a small dinner on Capitol Hill in April along with several business and energy efficiency organizations in support of Sen. Jeanne Shaheen (D-New Hampshire) and her energy efficiency initiatives.

Sen. Shaheen discussed several issues including the pending energy legislation in Congress, infrastructure, skilled training and apprenticeship program improvements as well as the upcoming Congressional agenda for 2019 and 2020.

The dinner was co-hosted by SMACNA and the Alliance for Industrial Efficiency (AIE). SMACNA is a leading member and steering committee director of the Alliance. The Alliance is a national organization advocating a high efficiency economy that encourages combined heat and power (CHP) and waste heat to power (WHP) applications in industrial, commercial and institutional facilities as well as incentives for great facility efficiency.



Pictured (left to right) Stan Kolbe Jr., SMACNA's director of legislative affairs, Katie Cullen of the Alliance for Industrial Efficiency, Sen. Jeanne Shaheen (D-New Hampshire) and David Gardiner of Gardiner Associates and director with the Alliance for Industrial Efficiency.

SMACNA has a longstanding relationship with Sen. Shaheen, who is a vocal advocate of industry issues and energy efficiency legislation. Sen. Shaheen has been a Senate leader on energy efficiency policy and is the co-author of the bipartisan energy efficiency legislation, The Energy Savings Through Public-Private Partnerships Act (S. 239) and The Energy Savings and Industrial Competitiveness Act (S. 385).

MEMBERS

Welcome New SMACNA Members

Complete Mechanical Solutions *Rockton, Illinois*

Matthew C. Sheridan Services Egg Harbor Township, New Jersey

Metropolitan Mechanical Contractors Eden Prairie, Minnesota

Stateline Mechanical Inc. Machesney Park, Illinois



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SMACNA CALENDAR

JUNE 2019

June 1 Women in Construction Leadership Council Summit Lake Tahoe, Nevada

June 2-4 Council of Chapter Representatives *Lake Tahoe, Nevada*

June 10-11 NJAB *Cleveland, Ohio*

SEPTEMBER 2019

September 9-10 NJAB Salt Lake City, Utah

OCTOBER 2019

October 20-23 76th Annual Convention *JW Marriott, Austin, Texas*

DECEMBER 2019

December 8-10 Council of Chapter Representatives *La Quinta, California*

FEBRUARY 2020

February 25-26 Partners in Progress Conference *Las Vegas, Nevada*

MARCH 2020

March 1-5 Business Management University *Tempe, Arizona*

March 23-24 Collective Bargaining Orientation *Dallas, Texas*

JUNE 2020

May 31-June 2 Council of Chapter Representatives *Charleston, South Carolina*

FUTURE SMACNA CONVENTIONS

September 27-30, 2020 77th Annual Convention The Broadmoor, Colorado Springs, Colorado

October 24-27, 2021 78th SMACNA Annual Convention *Maui, Hawaii*

October 23-26, 2022 79th SMACNA Annual Convention *Marco Island, Florida*

October 15-18, 2023 80th SMACNA Annual Convention JW Marriott Phoenix Desert Ridge Resort and Spa Phoenix, Arizona **SMAC**^{NEWS} is published monthly by the Sheet Metal and Air Conditioning Contractors' National Association for its national, international, and associate members.

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