THE NEXT GENERATION: SMACNA Chapters are Attracting New Talent into the Trades

What is the best way to attract new talent into the sheet metal and HVAC trades? That’s a question SMACNA members and their union partners have been wrestling with for years. With little improvement to the nationwide labor shortage, the search for recruiting solutions is ongoing. Many SMACNA chapters and their member firms are focusing on attracting the attention of our nation’s largest living adult generation—millennials. Many times, even targeting younger into the Gen Z world of 18 to 24-year-olds.
Leadership Thoughts

When I started penning this issue’s column on leadership, I took a bit of time to think about the “big picture.” Many of you business owners know what that includes—four generations of ownership, expectations of employees, staff morale, company trajectory, and leadership development—these are the topics that keep many of us up at night, but for me, they get me excited about the future prospects of my company.

As I started to reflect more on these thoughts, I kept coming back to my employees being the key differentiator for my company. I expect a lot from the people who work for me. R.F. Knox is, after all, a leading sheet metal contractor in Georgia and our work has literally changed the skyline of Atlanta.

I tell our customers, “If you dream it, we can build it.” That’s a pretty bold statement, but it is one I am comfortable making, due largely to the quality, expertise, and attitude of my employees. I know they are “all in” and live by our four traits including quality, integrity, reliability, and service. These traits are not just a sales message, but they are core tenants penned by my grandfather in the 1920’s and have become an important aspect of working at R.F. Knox today. As an organization, we especially focus on integrity and quality which we require in everything our employees do each and every day. It’s our employees that make me most proud of the work we produce at R.F. Knox.

How do you instill a leadership culture in your organization? Here are a few things I try to focus on to help make a difference at my company:

• Never ask someone to do something that you’re not willing to do yourself.
• Keep the history relevant and important. As a fourth-generation owner, I now carry the torch and have the responsibility to guide my company forward. And even though I have expanded services and modernized our production facilities, I still continue to recognize the early successes of my family. I think it is critical to provide perspective and make a palpable connection between their hard work and success and the hard work and success of my employees today.
• Being a leader requires a humble confidence. Leadership takes humility to temper authority and acknowledge the work of others. It also takes confidence to keep pressing forward and pursuing opportunities to grow. And out of that confidence, comes skill, wisdom, and fortitude. The balance between the two is a humble confidence and I strive to walk that line every day.
• As a leader of a company, I am constantly evaluating my organization from the perspectives of key stakeholders including my employees, my customers and my communities. Accurately understanding their impressions helps me remain proactive in addressing their needs. Some of the questions I make sure I know the answers to include: why does a customer select my company over the competition? Why do they want to work with us? What do we do differently from our competitors? What are we doing to foster a family atmosphere internally? Why do people enjoy working for our company—what keeps them coming to work every day?

By sharing my thoughts on leadership, I am hopeful many of you will also reflect on your own leadership experiences and the culture you are now fostering. Recently, one of my employees, Frank Battelli, said, “I have been cutting metal for 28 years. I like what I do, I like the people I work with, and I like the company I work for.” As I stated in the beginning, it always comes back to my employees and I am proud of their work and excited about our future.

Sincerely,

Jack Knox
SMACNA President

House Passes FAA Airport Infrastructure Bill; Davis-Bacon Repeal Crushed

After years of short-term, last-minute extensions to the nation’s airport operation and maintenance program, the U.S. House of Representatives passed the Federal Aviation Administration (FAA) Reauthorization Act (H.R. 4) extending FAA programs for another five years through 2023.

The five-year bill, which the House passed by a strong 393-13 vote, would freeze authorizations for the FAA’s Airport Improvement Program (AIP) at the current $3.35-billion level through fiscal year 2023. While a disappointment, this level of airport funding was far more than proposed by many who were battling the FAA package’s long road to passage in the House.

Davis-Bacon repeal amendment trounced by bipartisan support.

As part of the days-long debate on the important long-term airport program, SMACNA and its allies advocated toughening the prompt payment provisions for FAA procurement. The bipartisan coalition in the House agreed and added the stronger prompt payment language offered by Rep. Gwen Moore (D-4th-Wisc.) on a voice vote.

A big battle over
Davis-Bacon repeal was anticipated, and prevailing wage supporters on both sides of the aisle were ready to turn back an amendment for repeal by Rep. Steve King (R-4th-Iowa) including a special GOP coalition for Davis-Bacon led by Reps. Rodney Davis (R-13th-Ill.) and Mike Bost (R-12th-Ill.). After the debate and the votes were counted, the repeal forces suffered a crushing defeat by 71 votes, including a near-record 58 pro Davis-Bacon votes from the GOP.

A disappointing development surrounding the FAA package was the bill’s failure to increase funding for airport grants and remove the current cap on passenger facility charges (PFCs), an important infrastructure funding resource.

SMACNA is an active member of the Beyond the Runway Coalition for airport infrastructure and agreed with the coalition’s view that the legislation “misses a significant opportunity to provide airports with the resources to repair aging infrastructure, make needed investments in their facilities to accommodate rising passenger and cargo volume, and enhance air service competition for the benefit of passengers.”

One adopted amendment would create a $5.3-billion, five-year discretionary grant program to fund infrastructure projects at rural, non-hub airports.

Even though a SMACNA-supported amendment from Rep. Lou Barletta (R-11th-Pa.) to increase AIP grants was not included in the final package, federal airport construction funding should be strong this year. The appropriations for airport infrastructure grants this year will climb by $1 billion to $4.3 billion due to the 2018 omnibus spending package.

Additionally, in the Senate, the Commerce, Science and Transportation Committee passed a four-year FAA measure that has annual increases for AIP and included PFC revisions, which would reach a budgetary total of $3.75 billion in its last year. The Senate panel’s bill, which has yet to have a floor vote, leaves the PFC limit at $4.50. The bill is expected to pass by the August Congressional recess, giving it time for resolution during this session of Congress.

SMACNA members can show their support for the FAA package by contacting their legislators on SMACNA’s Take Action webpage. www.smacna.org/advocacy/take-action.

Seven out of 10 civilian workers in the United States have access to employer-sponsored retirement benefits, according to 2017 data from the U.S. Bureau of Labor Statistics. Nearly 80 percent of employees with access to those retirement plans are participating in them.

In essence, a retirement plan is no longer a perk for full-time employees—they expect it as part of a standard compensation package. For SMACNA-member sheet metal and HVAC contractors, the realities of creating and administering a retirement plan for their non-bargaining employees, which include administrative, management, and executive employees, don’t differ significantly from other industries. SMACNA contractors want good retirement strategies and plans for their non-bargaining employees.

The upshot is that these programs offer employees “engagement and a sense of being a part of something,” according to Carol Duncan, president of Oregon-based SMACNA contractor General Sheet Metal.

“IT’s imperative to offer good health care and retirement benefits to over head and administrative staff, many of whom are project managers and estimators,” says Scott Vidimos, president of Vidimos Inc., a sheet metal company based in East Chicago, Indiana. “These are key people in the organization. They are the face of the business and are tasked with bringing business in the door and running it profitably. Providing them a robust retirement plan emphasizes our support of the work that they do on a daily basis.”

To ensure that their retirement plans maximize the benefits to both the employers and their employees, sheet metal and HVAC contractors should take a number of considerations into account because the structure and parameters of a retirement plan can create points of differentiation for employees evaluating competing firms.

“The benefit helps in recruitment of quality employees and retention of quality employees,” says Jim Hall, president and owner of Waukee, Iowa-based HVAC company Systems Management and Balancing Inc. “It is also nice to know you are helping your employees reach a retirement goal.”

Defined benefit and defined contribution plans. For the most part, employer-sponsored retirement plans fall into two different buckets. Defined benefit plans, such as pension plans, promise a specific monthly benefit. Some plans lay out specific dollar amounts for participants. More often, participants receive benefits based on continued on page 12
CMF Inc. Takes on “Unmatched Challenge” of Stunning New Apple Headquarters

Challenging” is a major understatement for the award-winning architectural work performed by SMACNA architectural contractor CMF Inc. of Orange, California, on Apple Inc.’s innovative $5 billion new Apple Park headquarters in Cupertino, California.

The new Apple Park, with its futuristic spaceship feel, encompasses 176 acres, including a 2.8 million square-foot ring-shaped main building that stretches almost a mile in circumference along with two parking garages and a central utility building.

“The project—largely due to its enormous size and round footprint—presented challenges on a scale that were unmatched in our company’s history,” said Dave Duclett, president and CEO of CMF Inc.

The engineering and design effort began three and a half years before the job completion date and continued almost weekly to solve jobsite issues for one of the most anticipated and complex buildings in the world.

With its huge campus footprint, even adding a single flashing could equate to hundreds of additional man-hours for CMF Inc. The ripple effect to incorporate exterior changes like a flashing were significant due to the mile in circumference of such a huge building.

Installed tolerances were also never allowed to be more than one-eighth-inch on the building and needed to exhibit the same quality of workmanship as the iPhone, iPad, and other computer products that Apple sells.

“Our company installed the breezeway insulated panels, louvers, expansion joints, ridge and eave fascia, light troughs, clerestory end panels, radiused-blade moat grilles, insulated moat panels, and general sheet metal throughout the headquarters building,” Duclett said. “We also installed the aluminum rod cladding, ACM panels on bridges, roofing, galvanized purlins for solar panels, custom elevator fronts, column covers and aluminum PV Inverter tubes on the parking garages.”

“Every part had to exhibit the same quality of workmanship as the Apple products that the company sells,” he noted. To demonstrate his company’s commitment, Duclett bought Apple iPhones, iPads, and laptops for all managers, supervisors, and foremen on the job.

CMF got the job in part because “we had experience working with both DPR Construction and construction group Skanska” Duclett said. “We were also agreeable to providing and installing the main product, the insulated and sound-attenuated panels manufactured by Trimo in Slovenia.”

Complications reigned. One of the biggest initial problems was that of language and translation. “On phone calls, it would take a lot of effort to understand what each other was saying,” Duclett recalled. “That added a time factor and made it more difficult to get the work done.” The Slovenian company also used metric units, while the U.S. companies used the U.S. measurement system.

Transforming the design concept into reality, including installing the panel system, was also challenging. The original schedule had to be extended by more than a year. Many structural components were radiused; others were straight. And fabrication and installation requirements were constantly being modified or adjusted to meet reality.

“To demonstrate his commitment, Duclett bought Apple iPhones, iPads, and laptops for all managers, supervisors, and foremen on the job.”

Originally, Steve Jobs wanted everything built to 1/16-inch tolerance, but construction tolerances don’t allow that degree of perfection,” Duclett added.

Four separate contractors added to the complexity—for the interior, exterior skin, landscaping, and solar panels.

The project required 135,300 man-hours to complete.

The finished product was exactly what the customer wanted.

continued on page 15
MACNA contractor ACCO Engineered Systems, Glendale, Calif. got the call to complete a fast-track construction project for their client, the University of Southern California’s new Michelson Center for Convergent Bioscience based just 40 miles away in Los Angeles, California.

Using BIM modeling and multiple crane rigs, they installed thousands of pounds of ductwork using strict clean procedures. Both the BIM modeling and multiple crane use enabled ACCO Engineered Systems to deliver the fast-track project on time.

Designed to tackle some of the most critical health issues of our time, the USC Michelson Center was built to bring together medical researchers from various fields for interdisciplinary collaboration on serious health problems including cancer research, diabetes treatments, and search for non-addictive opioids.

The institution required a 190,000 square-foot research facility with state-of-the-art open, shared laboratories, a nanofabrication cleanroom, a low-vibration laboratory, a suite of microscopy imaging technology, two large microscopes, and area to accommodate 60 eight-foot chemical fume hoods.

ACCO Engineered Systems’ Costa Mesa team, part of one of the largest environmental firms in the western United States, took on this challenge. ACCO had experience working with complex chemical exhaust and scrubber systems, and had the unique duct materials necessary to complete the job including galvanized sheet metal, stainless steel, aluminum, fiberglass, and black iron.

“Our sheet metal general foreman used his experience with complex industrial installations, cleanroom construction, and bolted, welded stainless steel duct construction to install the highest quality products possible,” noted Nick Pattin Sr., ACCO’s senior project manager.

To reduce contamination during installation, ACCO cleaned and bagged all ductwork at the shop. The ACCO team installed all the ductwork in the cleanrooms using clean protocol procedures. With air quality and system contamination concerns in mind, they delivered coated, welded stainless steel duct for the corrosive exhaust system.

ACCO’s experience in virtual design and construction was also crucial, as the original 3-D model of the Michelson Center was incomplete and therefore not constructible. The BIM detailing crew then worked closely with the overall design team to build an accurate 3-D model of the project. They planned the roof structural system to accommodate the 120-inch by 96-inch supply manifold, 120-inch by 36-inch return air manifold, 96-inch by 96-inch welded stainless steel lab exhaust, and a volatile organic compounds (VOC) exhaust manifold, with all the building exhaust terminating in 35-foot-tall engineered stacks.

Adding a further challenge, midway through the project the ACCO team found they needed to completely redraw the 3-D model at the third and fourth floors to accommodate additional lab buildout—all while holding to the original completion date.

Specializing in large scale, fast-tracked projects like this one, ACCO coordinated the use of multiple large crane rigs for roof-top equipment installation. The 550-ton hydraulic, all-terrain crane worked nonstop hoisting materials and equipment as the large sections of roof duct were prefabricated and then delivered on time during the three-day roof rig phase. Strategies like this helped alleviate the pressure of installing the 12 air handlers, totaling 310,000 CFM, in pieces and building them up on the roof.

The installation sequence was key due to the multiple layers of MEP utilities. Coordination with electrical and plumbing was critical, including shared support racks. The peak sheet metal crew reached 45 individuals. Between shop fabrication and field installation, more than 110,000 man-hours were required to install over 541,000 pounds of sheet metal for this project.

The complexity, collaboration, and craftsmanship of the pioneering project won ACCO Engineered Systems the CAL-SMACNA’s 2018 Tom Guilfoy Craftsmanship Award in the mechanical category.
Smartphones, combined with the Internet of Things (IoT), not only allow people to remain plugged in with friends and family, they are also becoming a popular way to keep plugged in to what’s happening in the home.

From thermostats, appliances and automatic locks to window shades, light switches and surveillance systems, customers are remotely monitoring and controlling more of the house than ever before—all from the palm of their hands.

Zion Market Research predicts that the demand for smart technology in the home will reach $53.45 billion by 2022. This suggests that it’s smart for contractors to consider offering this kind of technology to their customers.

Peace of mind when away from home. At Artlip and Sons, a SMACNA residential contractor based in Aurora, Illinois, the use of smart technology has been a topic of discussion, as clients begin embracing new possibilities linked to the thermostat.

“In the past few months, we have started looking into smart homes and home automation as another service to offer the customer,” said Jason Pickering, who provides inside sales and service support. “The most popular one we have started to see is the smart thermostat. Certain customers really like to see what is going on when they are away from the home. They also like that they will receive email alerts when their equipment malfunctions.”

The company hasn’t yet received requests for technology beyond the smart thermostat, but they know it’s coming. They’ve been researching more options and are willing to expand into it if it makes sense for them as a company, and if there’s a market for it, he noted.

“Alexa, what is the temperature?” A recent article by the Forbes Technology Council predicted that “2018 holds even more promise for the smart home industry, as devices like Google Home, Alexa, and Amazon Echo become more commonplace and artificial intelligence becomes more sophisticated.”

Amazon and Apple also are both teaming with homebuilders to embed voice assistants directly into newly built homes.

Pickering sees more interest growing as other companies push smart technology into the mainstream. “Many of the giant companies (Google, Amazon, Apple) are trying to push smart technology, so it would make sense that it will continue to rise in popularity. Along with the smart technology, voice control seems to be popular, with Amazon’s (voice assistant) Alexa being used on the EcoBee 4, the Cor Smart thermostat, and many more.”

The customer base at Artlip and Sons is more mature, which may be why the company hasn’t had more inquiries into smart technology. But Pickering is sure it will rise in popularity, especially with younger customers who “more readily adopt new technologies.”

Pickering believes that people first embrace smart technology for safety reasons, followed by convenience, then comfort. “People like to know what is happening when they are away. Cameras, water sensors, smoke detectors are a few things that can put people’s minds at ease while they are away from home.”
SMACNA’s Technical Services Helps Answer Industrial Questions

In addition to developing and issuing highly regarded industry standards, SMACNA’s Technical Services Department continuously fields questions about technical aspects of sheet metal construction and the application of specific SMACNA standards. Some of the most frequently asked questions in the industrial sector are the use and application of the standard. SMACNA addresses some of the most frequently asked questions below using SMACNA’s Rectangular Industrial Duct Construction Standards as a reference.

Technical inquiry regarding snow and ice loads:
My question relates to ductwork in terms of gage and the reinforcing required. The duct is HVAC duct and will be 304 stainless steel all welded construction; negative 1-in. pressure ductwork. The duct is up to 120 inches and over 120 inches to 160 inches. The duct is outdoors and subject to weather conditions.

Technical Services Response:
Because the ductwork is outdoors and considering the region your project is in, we added a snow load of 40 lbs./ft² and an ice load of 7.62 lbs./ft². Together these loads add up to 47.6 lbs./ft² or an equivalent static pressure of 9.2 in. wg, which is added to the duct’s “critical load.” Adding all dead and live loads, the duct’s critical load is 11.3 in. wg, which the duct must be constructed for. Being over 10 in. wg, SMACNA’s Rectangular Industrial Duct Construction Standards will be used for the construction solutions.

Design conditions:
- -10 in wg.
- Class 1.
- Type 304 stainless steel.
- 120°F.
- Welded construction.
- External insulation 2-in., 6 lb. density.
- Cladding: 24-gage aluminum.
- Stiffeners: Fixed.
- Hanger spacing: 10 ft. max.
- Ice load: Zone 4, 1.6 in.
- Snow load: 40 lbs./square foot.

The following recommendations are per SMACNA’s Rectangular Industrial Duct Construction Standards:

16 gage.
- Duct to 120 in: Stiffeners (fixed): Top, sides, and bottom, R10 (See Rectangular Industrial Duct Construction Standard Table 7-D.), 3 ft. maximum spacing. If electing to use a single tie rod, can use R-9 stiffeners in lieu of R-10.
- Duct over 120 in to 160 in.: Stiffeners (fixed): Top, sides, and bottom, R12, 3 ft. maximum spacing. If electing to use a single tie rod, can use R-9 stiffeners in lieu of R-12.
- Be sure to include stiffeners at fittings as well as straight duct.
- Duct supports 10 ft. spacing max. Duct supports must be directly below stiffeners or use 12-gage reinforcement patches at all supports. (See Rectangular Industrial Duct Construction Standard Figure 4-9.)

Technical inquiry on the use of spiral duct in industrial applications:

Using the SMACNA Round Industrial Duct Construction Standards for Class 1 duct. Duct is -2 in. wg, stainless steel ductwork, and size 16 in. diameter and down. My question is, does anything prohibit the use of spiral ductwork for this application? Am I understanding the standard correctly that spiral can be used for this industrial application?

Technical Services Response:
Following up to your technical inquiry, stainless steel spiral duct is covered in SMACNA’S Round Industrial Duct Construction Standards, Chapter 11. Stainless steel spiral may be used in Class 1, Class 2, and Class 5 applications and is subject to the following design limits.
- A design pressure within the range from negative 30 in. wg to positive 50 in. wg. (7500 Pa to 12,500 Pa).
- Supported at intervals not exceeding 20 ft. (6100 mm).
- Design temperature not exceeding 250°F (121°C).
- Having a nominal diameter within the range of 4 to 96 in. (100 to 2440 mm).
- Minimum 22 gage.
- With diameter-to-thickness ratios of less than 1800 for all ducts.
- All ducts listed in the “bending” and “pressure tables” contained in other sections of Chapter 11 meet the minimum gage requirements described above.
- The tables are limited to indoor applications or outdoor applications where weather conditions are such that the effects of wind, ice, and snow may be neglected. (In designing systems for outdoor applications, where consideration must be given to the effects of wind, ice, and snow, the user is directed to Chapters 4, 5, 6, and 7 for guidance in manual calculation of their requirements.)

Members with technical questions can submit inquiries at: www.smacna.org/technical/make-a-technical-inquiry.
THE NEXT GENERATION: SMACNA Chapters are Attracting New Talent into the Trades

Connecting with millennials and to lesser degree, Gen Z’s, has become a major goal for a growing number of recruiting efforts. Some state-wide trades initiatives have been operating for years and are now incorporating social media strategies to reach these target audiences. Similarly, other recruiting programs—everything from multi-trade collaborative projects to grant-funded activities at individual union shops—are reaching out to young talent.

Apprenticeships are “Built to Succeed.” Catie Rogers, a 25-year-old apprentice at Sheet Metal Workers Local 20 in Indianapolis, Indiana, has become a celebrity of sorts, thanks to her involvement in Built to Succeed, a marketing initiative with the Indiana Careers in Construction Association, which increases awareness among high school and college students on educational and career opportunities in the building trades.

Rogers, who works at Poynter Sheet Metal in Greenwood, Indiana, is part of a group of young apprentices known as Built to Succeed cast members. All passionate about their career choices, they participate in Built to Succeed marketing and social media campaigns, talking about the training, pay, pension, and other benefits of apprenticeships.

Rogers is featured in several Built to Succeed YouTube videos and has been interviewed by news organizations including Snips magazine. She also spends time talking to prospective sheet metal apprentices.

“I didn’t consider construction until very soon after I graduated (high school),” Rogers said. “During welding night classes, I really started to consider it.”

She wholeheartedly loves her job and her union, she says, and shares this love with other millennials. “I just have a lot of passion because this trade didn’t only make me the woman I am today. It’s honestly changed my life,” Rogers explained. “I don’t only recruit for sheet metal. Of course, sheet metal is very easy for me to recruit for, because I know the program inside and out. But if I talk to someone about careers in construction, I tell them it’s not for everyone. But if they are still interested I will help them get information on any apprenticeship programs—pipefitters, electricians, ironworkers—whatever they are interested in.”

Rogers said a big selling point is earning while you learn. “I just graduated with a college degree, every one of my girlfriends my age has $10,000-plus in student loans before they even know they have a job. I feel for them,” she said. “They are behind before they start. I don’t have the same struggle...
High school shop classes are booming. SMACNA Sacramento Valley is also reaching out to teens—students at Sacramento’s Rosemont High School. Due to state budget cuts over the years, there hasn’t been any vocational training for local high school students. So SMACNA and their partners from the electrical and plumbing trades created the Rosemont High School Engineering, Construction, and Design Academy.

“We’re bringing back the shop class,” said Cheryl Sprague, executive vice president for the SMACNA Sacramento Valley chapter.

The joint venture used an empty school building near the high school as a shop. Volunteers from participating trades worked over the summer of 2017 to retrofit the building with training stations, including welding booths. Area supply companies also donated needed tools and supplies. After just one year, academy was a great success. With 160 students enrolled, the academy nearly doubled their 90-student goal for the launch.

“The school has been very appreciative,” Sprague said. “We are now raising money to expand to other school districts.”

Targeting youth with social media. Kyle Tibbs, communications and marketing manager with the SMACNA Mid-Atlantic chapter, is developing a recruiting program with contractors and local union representatives focused on careers in the sheet metal and HVAC construction industry. The initiative, TRADE—Technology, Recruitment, Advancement, Deliverability, and Evaluation, which is still in the early stages, will focus on recruiting through new channels.

“Anytime there’s new blood coming into the trades, it’s a win-win,” Sprague continued. “Our contractors need manpower to accept jobs. It’s also the right thing to do for the community.”

Tibbs is working with contractors and union reps to redevelop the process of being accepted into an apprentice program. “We have to spuce up our tactics,” Tibbs said. “Kids are accustomed to being coddled. Our program must match the enthusiasm of other careers if we are to succeed. This is an evolving process, but we hope to do signing days, provide speakers, offer tours, and even show up with giant checks at award ceremonies for high school seniors.”

Celebrating teens’ career choices with a special signing day has already proven to be a successful strategy in Virginia, where Henrico County Public Schools recently held its first “Career and Technical Letter-of-Intent Signing Day.” Twelve high school seniors were recognized as they signed letters of intent to work as machinists and apprentices with local and national companies.

With so many creative recruiting ideas, Catie Rogers may soon have plenty of company as a sheet metal apprentice celebrity.
“Always Find Ways to be More Efficient”
SMACNA Board Member: Thomas E. Martin of Cleveland

When Thomas E. Martin, president of T.H. Martin Inc., Cleveland, was attending Ohio University on a football scholarship, he wasn’t sure about following in the footsteps of his father and grandfather into the sheet metal industry. But when he returned to Cleveland after graduation in 1992, he helped his dad out running one project at Cleveland Hopkins Airport, and that was all it took. He was hooked for life.

Tom is now heading his family-run business as president of T.H. Martin Inc. He is also president of the SMACNA-Cleveland chapter. His brother, Mike Martin, serves as company vice president and partner. His father, Thomas H. Martin, who founded the company in 1985, has semi-retired and still comes into the office when he is in town.

T.H. Martin Inc. is a full-service mechanical contractor that employs about 100 sheet metal workers and 50 pipe and service fitters. About 60 percent of the company’s work is in HVAC, with the rest in design-build, service and maintenance, and custom fabrication.

We asked him some of the things he’s learned in business and the advice he would give to new leaders:

• What is the thing most people notice first about your shop? The cleanliness and lean principles of our fabrication shop. We have designated prefab stations and keep materials off our shop floor for better efficiency. We strive to keep everything smooth and efficient.

• What is most rewarding about being in the HVAC business? I like being able to offer customers options and solutions that provide comfort while also being highly efficient.

• What is most challenging about being in the HVAC business? Making sure that we are always up-to-speed and trained on new products and technology in our industry.

• What is the new technology you are most excited about? CAD and BIM software, 2D, 3D, and 4D modeling. It is exciting to be able to design, draw, and implement using the most updated software.

• What is your secret to running a successful business? To sit down and listen to my employees and customers and be willing to implement changes when they are needed. We can never stand pat. We must always find ways to be more efficient.

• What are you most proud of? Working with my brother Mike to expand and diversify our company. We have never walked away from a job and we never will.

• What is your advice for industry newbies? Do your job to the best of your ability. If you have questions, ask. Take care of our customers.

• What are your outside interests? Golfing and fishing.

• What is your favorite motto? Tough times don’t last. Tough people do.

• Which sports teams do you cheer for? Cleveland Cavs, Indians, and Browns.

• What was your first car? 1977 Ford Mustang.

• What is something you look forward to? Watching my son and daughter go through high school and do well scholastically and athletically.

A champion of energy efficiency, Martin brings a broad perspective including more than 25 years of experience in the HVAC and sheet metal industry to SMACNA National. Martin is serving his second term as the SMACNA Cleveland chapter president and in October 2017 was elected to a four-year term on SMACNA National’s Board of Directors.

Martin is highly engaged both personally and professionally with SMACNA, currently serving as chair of SMACNA’s HVAC Contractors Council Steering Committee, the Products and Programs Coordinating Committee, and the Contractor Operations Manual Task Force. He is a Chairman’s Club-level member of SMAC PAC and is a member of SMACNA’s National Strategic Planning Task Force.

To get involved and help shape the industry, members can join a SMACNA committee by visiting smacna.org and going to “Board/Committee Application Forms” on the “About Us” webpage.
Welcome New SMACNA Members
SMACNA welcomes these new members, including some from the newest chapter, SMACNA Hawaii:

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<td>T. Taketa Sheet Metal Inc.</td>
<td>Honolulu, Hawaii</td>
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Meets with...Rep. Brian Fitzpatrick of Pennsylvania

Rep. Brian Fitzpatrick (R-8th-Pa.) (right) presented Robert Johnston, owner of Aer Dux Inc. (left), and president of the Sheet Metal Contractors Association of Philadelphia and Vicinity, with an American flag that had flown above the U.S. Capitol building.

In addition to the flag presentation, Rep. Fitzpatrick discussed industry issues at the recent dinner with members of the SMCA Philadelphia chapter including Bill Reardon, chapter executive director, and Peter Jenkins, director of labor relations.
MG McGrath Honored for Speed Art Museum Work

The Metal Construction Association recently presented the Chairman's Award to SMACNA member MG McGrath, Maplewood, Minnesota, for their sleek wall panel work on the renovation to the Speed Art Museum in Louisville, Kentucky.

The $60 million renovation included the addition of two new buildings, expanded the museum to 62,500 square feet, which included new exhibit space, a café, and an events pavilion. Designed by wHY Architecture, the museum is considered a work of art itself.

MG McGrath fabricated and installed 40,000-square feet of custom-patterned wall panel systems for the new structures. They worked with the museum project team to fabricate and install a 485 square-foot aluminum composite wall panel system, a 19,540 square-foot custom corrugated aluminum panel system with a custom pattern, a 20,610 square-foot metal wrap insulated-core metal wall system, a 245 square-foot corrugated screen wall with aluminum wall panels, and aluminum fixed louvers.

The judges noted the visual language of the new project, which mirrored the original building, yet consisted of different materials, architecture, coloration, and texture.

Members can view a video of the art museum at https://vimeo.com/106778404.

SMACNA Bookstore Launches with Friendlier Design

To provide customers with the best user experience, SMACNA has redesigned the online bookstore with a new layout that makes it easier for users to find just the right book in seconds.

**Key features include:**

- Responsive design makes it easy to view on mobile devices.
- Improved keyword search lets users find the publications they need quickly.
- Redesigned layout creates easy-to-read descriptions and a “Look Inside” feature.
- Complementary products are featured prominently throughout the site.

Readers can access the bookstore online at www.smacna.org/store.

Empowering Company Employees

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a formula that includes a variety of factors, including years of service. These plans are more common for employees involved in collective bargaining, such as union craftspersons. SMACNA contractors ensure that their bargaining employees are well taken care of with these plans.

In defined contribution plans, which are more likely to be offered to non-bargaining employees, employees and their employers can contribute funds to an individual participant’s account. The funds in that account are then invested, and the participant eventually collects the balances in the account.

The most common type of defined contribution plan is the 401(k) plan. These 401(k) plans make up the vast majority of Americans’ employer-sponsored retirement plans. According to data from the Investment Company Institute, an association that represents regulated investment funds, a total of about 54 million U.S. workers participated in the 550,000 401(k) plans in 2015. In addition, there are several different kinds of employer-sponsored retirement plans such as 401(a) profit-sharing plans, 403(b) plans for non-profit organizations, and SIMPLE-IRA and SEP-IRA plans for smaller employers, among others.

“A 401(k) plan has become a standard offering for any competitive [compensation] package for professional people,” says Jim Morgan, president and CEO of Worcester Air Conditioning LLC, of Ashland, Massachusetts. “We need to offer it as a means to help people achieve retirement goals and to be competitive in the marketplace.”

Participants in these defined contribution plans have a dollar limit on the portion of their salaries that can be placed into the plan, and the deferred wages aren’t reported as taxable income. Participants in 401(k) plans can tailor the investments in their accounts to suit their own needs and timelines.

**The profit-sharing approach.** Additionally, employers can make contributions on behalf of all 401(k) plan participants and/or make matching contributions based on employees’ deferrals. The employer contributions are tax deductible, subject to certain rules.

Vidimos offers a profit-sharing plan that pays a share of an employee’s wages into an individual personal account. The company bases the calculation of the profit-sharing contribution on both an employee’s annual wage and individual performance bonuses.

The funds from Vidimos employees’ accounts are pooled together and split relatively evenly to be managed by two firms, one of which also manages its union employees’ pension plan. The plan allocates about 60 percent of assets to equities and 40 percent to fixed income investments. By law, all employees participate in the plan.

**Building engagement.** Payroll and insurance companies tend to be the service providers of choice for 401(k) plans with fewer than 100 employees. “Typically, these employers have payroll and insurance set...
up prior to the retirement plan, so going with one of these providers is a natural and convenient way to get started,” says Nathan Fisher, a senior vice president with Fisher Investments 401(k) Solutions.

Fisher notes that as firms grow in size, they generally take a more proactive approach to managing their 401(k) plans. He recommends a series of best practices designed to help employers understand best practices designed to approach to managing

Solutions.

Fisher Investments 401(k)

a senior vice president with

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Western Allied’s president,

pation rate, according to

has a 97 percent partici-

er, Great-West Life and An-

partners work with the

that employees contribute
to the plan, and the match-
ing contributions gradually become fully vested over a six-year period.

Three Western Allied partners work with the company’s benefits provid-
er, Great-West Life and An-
nuity Insurance Company, to manage the plan, which has a 97 percent parti-
cipation rate, according to Western Allied’s president, Angie Simon.

“We do lots of education to get to this level,” she says. “We meet with all new employees and share how important it is to start saving for their retirement from the first day they are working with us.”

Those kinds of efforts to build engagement with employees are key to building participation in retirement plans, especially among younger workers, according to Fisher. He says employers can help educate employees and empower them to take a more active role in planning for retirement through steps such as setting up regular face-to-face meetings for employees with their service provid-
ers. Also, employers can offer their plan partici-
pants online tools, such as retirement calculators, to keep up-to-date with their savings progress.

ESOPs: Giving Employees a Stake in the Company

An employee stock ownership plan (ESOP) primarily invests in the stock of the employer to fund the company’s retirement plan.

To initiate an ESOP, a company must first create a trust to receive its annual contributions of stock. Individual employee accounts are set up within the trust, and the company’s stock contributions are allocated to the indi-

ividual accounts based on a formula. For example, the allocations might be done in proportion to compensation or years of service.

Employees only become eligible to receive the assets in their accounts through a vesting process based on years of service. Under a so-called three-year cliff schedule, employees with three or more years are entitled to 100 percent of their contributions. A six-year graded vesting schedule enti-
ties employees to 20 percent of their contributions after two years of service and an additional 20 percent with every additional year of service. Once em-

ploeeys reach six years of service, their

shares are 100 percent vested.

When they leave their employer, employees receive the amount vested in their account.

Portland, Oregon-based Streimmer Sheet Metal Works Inc. has contributed to its ESOP trust every year since its creation in 1981. Today, employees own 37 percent of the company, while the remaining shares are privately held.

Steven L. Streimer, the company’s president, notes that he makes a concerted effort to demonstrate to employees that by helping the company improve its performance, they benefit via the growth in the value of the stock that they own via the ESOP. Every year, an independent firm puts a valuation on the stock, enabling Streimmer to demonstrate the company’s growth and benchmark it against the broader stock market.

“It’s a very lucrative benefit for our employees,” he says. “The people we’re hiring right now are very interested in it.”

SMACNA continues to be a leading advocate on Capitol Hill urging action by Congress this year to pass the Giving Retirement Options to Workers Act (the GROW Act, H.R. 4997), endors-
ing composite plans as a multiemployer pension option.

In the final year of the 115th Congress, pension reform’s prospects may have to adapt to changing dynamics and omnibus legislative opportunities to pass composite plan legislation. As SMACNA’s efforts to secure Republi-
can and Democratic spon-
sors for the GROW Act continue, more members are learning the merits of the composite plan option for pension security.

SMACNA asks that all members write their House representatives to sponsor the GROW Act (H.R. 4997). Members can link to sample letters with contact information for their Congressional mem-
bers on SMACNA’s Take Action webpage.

Select Joint Commit-
tee continues public and

private deliberations.

In the meantime, the Select Joint Committee on Solvency of Multiemployer Pension Plans continues to deliberate and hold private discussions and negotiations. The Joint Committee’s goal is to find solutions for failing plans and to address funding issues for the Pension Ben-
efit Guaranty Corporation (PBGC). The Committee has held two public hear-
ings with public witnesses and will hold at least one more open meeting, most likely focusing on employ-
er issues as well as on composite plans.

No experienced ob-
server of this significant issue believes a biparti-
san solution for failing pension plans will be easy to negotiate. However, if at least five Republicans and five Democrats on the Committee (out of 16 bipartisan members) agree on a loan guarantee or similar program for failing plans, composite plans would likely be included in a final package.

In addition, SMACNA remains attentive to any potential Select Com-
mittee action impacting PBGC premium levels and to the onerous plan funding restrictions being considered in a consensus proposal under review. The Committee has been tasked with producing a final report before Nov. 30 of this year.

If the Select Commit-
tee fails to produce the promised pension report, SMACNA will work to include the GROW Act language in other bills being considered during the lame duck session of the 115th Congress.

SMACNA’s Capitol Hill efforts have been steadily escalating to keep com-
posite plans on the radar screen of lawmakers and ensure they understand how these types of plans would work to benefit retirees and the industry.

If members have questions about pension reform, composite plans, or other issues, please contact SMACNA’s Capitol Hill office (202) 547-8202.
Project Managers Learn to Take Charge at Project Managers Institute

Attendees of SMACNA’s Project Managers Institute perfected their project management skills including leadership, financial management, and project planning during SMACNA’s sold-out course in Raleigh, N.C., in April.

In Brian Dwyer’s session on Money Matters, teams monitored a mock construction job and took action on improving cash situations. The session focused on billing promptly and accurately and driving all parts of a project to closure.

FMI consultant Andy Patron stressed the importance of time management with the attendees, including how to prioritize and delegate. As a result, attendees learned the value of self-management in relation to time management and understanding the significance of work-life balance.

The course was an eye-opener for many participants, who had numerous “ah-ha” moments and praised the hands-on exercises, real-life scenarios studied, and learned from the experiences of their peers.

“I assumed I was the only one struggling with certain job-related tasks, but in reality, everyone in the class is alike in different ways,” said Joseph Jasied, Elmsford Sheet Metal Works Inc.

“It allowed me to connect the dots to my everyday activities and why I do them,” said Craig Calantoc, Western Allied Corp.

SMACNA’s Financial Survey Report Shows Companies Where They Stand

Many members consider SMACNA’s Financial Survey Report an essential industry resource—to benchmark their company’s performance, analyze key metrics, and justify costs—to improve their profitability and cash flow.

It’s a simple fact that the more members that participate, the more powerful the data becomes. The data collection time for the Financial Survey is now, and members have until June 15 to fill out and submit their information.

If you participate, you will receive a complimentary copy of the survey report conducted by John Murdough, CPA, longtime instructor of SMACNA’s Financial Bootcamp, who is spearheading the project on behalf of his accounting firm Henry+Horne.

SMACNA members benefit from the Financial Survey Report in many ways. Some members who have used the report for years shared their insights on the clear paybacks it provides.

“The information is substantial and is a great source of reference to improve your company and better understand the current state of the industry,” said Todd Hill, president of Ventcon Inc. “I encourage everyone to participate, because the more information and companies involved, the better the report will be. It’s a great resource.”

Comparing company performance.

“The report is a very important tool that I depend on,” said Russ Kimball, owner of Evergreen State Heat and Air Conditioning, who compares his firm with those in the same market and geographical area. “I use it to measure how I am doing versus industry norms. The data on residential companies and company size are the most critical.”

Ernest J. Menold, president of Ernest D. Menold Inc., agreed. “Members need to know that it is helpful in comparing their financial performance to the performance of other contractors, not only in their region, but in their type of work,” he said. “We find it very valuable to see where we are in comparison to our peers. It shows us that we are performing well. It lets us know where we stand.”

The report also provides third-party validation to facts and figures. “We use it to justify change orders and overhead percentages,” said Matthew D. Cramer, president, Dee Cramer Inc. “If a customer questions our percentages, I show them the Financial Survey Report. It’s not just me sharing a number; it’s the industry numbers.”

Survey data is kept confidential.

Members who fill out the survey need not worry about sharing their financial information. The survey results are collected and compiled by John Murdough’s accounting firm Henry+Horne. No SMACNA member nor SMACNA staff will have access to company data.

SMACNA’s Financial Survey is available from the SMACNA homepage. Members may also send the survey link to their accountant, who can complete the form on their behalf. The deadline to submit surveys is June 15, 2018.

For more information, contact Bridgette Bienacker, SMACNA’s director of business management and membership, at bbienacker@smacna.org or (703) 803-2987.
Apple
continued from page 4

“Being involved in one of the most iconic and complex buildings in the USA was worth coping with all of the challenges,” Duclett said.

For its attention to detail and expertise, the project won the 2018 Tom Guilfoy Craftsmanship Award in the Architectural category from CAL-SMACNA.

Materials by the Mile
The Apple Park project in Cupertino, California, took 3½ years to build, 135,500 man-hours, and with a value of $28 million. The 2.8 million-square-foot main building stretched almost a mile in circumference. The building contained:

- Two lineal miles (100,000 square feet) of insulated and sound-attenuated Trimo metal panels.
- 60,000 square feet of insulated Kingspan moat panels.
- 6,700 lineal feet of custom radius louvered grilles.
- 9,600 lineal feet of welded aluminum ridge fascia with light trough.
- 9,200 lineal feet of aluminum eave fascia.
- 28,000 square feet of 6-inch-thick insulated clerestory panels.
- 50 sea containers of metal panels and accessories on about 16 pallets of materials each.

The parking garages and a central plant involved:

- 51 miles of purlins to support solar panels.
- 1.8 million pounds of 12-gage galvanized steel.
- 22,000 square feet of ACM panels.
- 5,600 lineal feet of custom light-gauge aluminum rod cladding.
- Custom stainless steel elevator fronts.
- 125 aluminum column covers.

SMACNA Premier Partner Daikin Applied designs and manufactures technologically advanced commercial HVAC systems for customers around the world. Its parent company, Daikin Industries, has more than $17 billion in revenue, 67,000 employees, 90 production sites, and customers in more than 150 countries.

Committed to finding energy efficient solutions for the industry, Daikin invests in innovation, technology, and sustainability initiatives, offering HVAC products that save energy and reduce environmental impact.

Speaking from Daikin Applied’s North American headquarters in Minneapolis, Ben Schlinsog, Regional General Manager, North Central, shared this commitment to leadership in solving his customers’ problems.

What products and services do you offer SMACNA members?
We specialize in custom solutions that leverage the latest in advanced technology, because that’s what our customers need the most—innovative solutions that are setting new standards of energy efficiency in the industry.

Daikin focuses on engineering innovative technologies, bringing our customers products that fit their needs so that they can create better outcomes for those inside their buildings. With the global commitment to a healthy, sustainable environment, we’re constantly seeking ways to make our products more energy efficient—for both the environment and to save our customers money on energy expenses.

What challenges can you help our members solve?
Our goal is to give contractors the tools to further their education—we want to help them solve customer problems most efficiently through our partnership.

We want to partner with SMACNA members not just in giving them the products they need, but also in helping them solve problems that challenge their customers. Typically we focus on solutions that increase efficiency, but our team can really tackle any mechanical challenge SMACNA members are facing. We also can offer financial models that evaluate different solutions to demonstrate payback.

What differentiates you from the competition?
We offer industry-leading products with the innovative technology. For example, our award-winning Variable Volume Ratio (VVR*) compressor technology in our Pathfinder® Air-cooled and Navigator® Water-cooled chillers is changing the landscape for what customers’ can expect from a compressor’s capabilities at all conditions, not just full-load. VVR technology senses the exact amount of lift needed at any given moment and adjusts the compression ratio automatically. As a result, the chiller’s compressor never overworks for the conditions. This is invented by Daikin for air-cooled and water-cooled chillers; not available in any competitive model.

Our Rebel® rooftop was also built with every possible innovation to save energy. Daikin basically reinvented the category with Rebel, giving rooftops efficiency that had never been achieved in a commercial rooftop system. We’re continuing to evolve our rooftop offering to give customers the exceptional rooftop performance they deserve.

What question should our contractors ask you and your competition and why?
Contractors may not know that Daikin is the world’s leading air conditioning company. We’re also fully dedicated to advancing HVAC technology and performance; none of our competitors have dedicated focus we have on HVAC equipment, solutions, filters, and refrigerants. We’re able to push beyond conventional HVAC with innovative approaches to their challenges.

We go to market through independent manufacturers’ representatives. They are experienced application experts in each of their markets, knowing what products perform best in their climates and will recommend the best full system solution for your customer. Our reps are unmatched in the industry.

What is the best advice you can give to our members?
Always keep in mind the importance of giving your customer a full system solution with advanced technology. We want SMACNA members to succeed and we do our best to provide the resources to do so.
SMACNA CALENDAR

JUNE 2018
June 10–12
Council of Chapter Representatives
Boston, Mass.

June 25–27
NJAB

SEPTEMBER 2018
Sept. 9–11
NJAB
Minneapolis, Minn.

OCTOBER 2018
Oct. 14–17
75th Annual Convention
San Diego Marriott Marquis and Marina, San Diego, Calif.

Oct. 8–10
Advanced Project Managers Institute
Raleigh, N.C.

FUTURE SMACNA CONVENTIONS
Oct. 20–23, 2019
76th Annual Convention
JW Marriott, Austin, Texas

Sept. 27–30, 2020
77th Annual Convention
The Broadmoor, Colorado Springs, Colo.

DECEMBER 2018
Dec. 2–4
Council of Chapter Representatives
Miami, Fla.

Dec. 4
Industry Fund Seminar
Miami, Fla.