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SMACNA contractors like CSM are coming up with valuable solutions to maximize negative air spaces in hospitals.



THE ART OF THE ACCELERATED CONSTRUCTION PROJECT

When projects get accelerated, or have to be done on short notice, state and local governments often call on SMACNA members to make it happen.

In his three decades in the mechanical construction industry, Albert Youna says he never saw more cooperation than what he witnessed while working on a recent project turning Chicago's landmark McCormick Place convention center into a makeshift hospital for coronavirus patients. *continued on page 8 >>*

Surviving, Even Thriving, in Extraordinary Times

If there is one thing I have learned during this pandemic, it's the fortitude our members possess and their adaptability to the ever-changing business climate that defines COVID-19's impact on the economy.

From week to week, we have seen dramatic changes in active job sites, jobs ready to start, and our scheduled pipelines of work. In mid-March, we at Western Allied Mechanical shut down with approximately 30 jobs within six to eight weeks of completion. When the Bay Area construction industry was allowed to restart six weeks later, completing those halted jobs was our first priority. Additionally, our engineering team had completed a new group of projects that were now 'permitted' and ready to start. And around 10% of our workforce had health complications that left them unable to return to work.

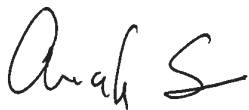
After weeks of nothing, we had almost double the work to perform to catch up and get new jobs started, all while missing key field personnel. Accelerated deadlines and compressed schedules are something every contractor runs into from time to time, but nothing like we have faced during the past few months. Every general contractor had compressed their schedules to appease the owners. The intense backlog and catch-up has been a real battle to manage, but it is what every contractor faces as this challenging time continues.

In this edition of SMACNews, we feature an article on a New Horizons Foundation project on how the pandemic has affected productivity for MEP trade contractors and how required implementation of new COVID-19 procedures have further challenged our ability to timely complete projects, especially those with compressed schedules.

Even with every challenge imaginable, our contractors are still doing exceptional work. We're highlighting a few of these projects in this SMACNews, all of which were successful due to great management, effective communication, superior teamwork, and selfless behavior in the shop and on the jobsite.

The new and shifting realities continue to challenge all of us. As I virtually travel the country, I am impressed by how well we all adapt, survive and, in many cases, thrive in the face of adversity. It makes me proud to be SMACNA's president.

Sincerely,



Angie Simon
SMACNA President



CAPITOL HILL UPDATE

PPP Flexibility Act Becomes Law; SBA/Treasury Clarify New Rules Under the Act/Loan Program Extended

The Paycheck Protection Program (PPP) Flexibility Act, Public Law Number 116-142, with changes to PPP strongly supported by SMACNA, was signed into law by the president on June 5, 2020. The legislation provides more time for PPP borrowers to use their loan funds, qualify for loan forgiveness and gain additional relief from the program's original requirements.

The Small Business Administration (SBA) and Treasury have issued an Interim Final Rule to clarify several areas of the law along with two new PPP Loan Forgiveness Applications. The revised loan forgiveness application reflects the new PPP Flexibility Act provisions. In addition, the Senate and House both approved continuing the PPP loans, which can be turned into grants, until August 8.

House Passes \$1.5 Trillion Infrastructure Bill: Efficiency, Schools and 179D Tax Incentives

The Democratic-controlled House approved a

\$1.5 trillion plan late Wednesday to rebuild the nation's crumbling infrastructure, pouring hundreds of billions of dollars into projects to fix roads and bridges, upgrade transit systems, expand interstate railways and dredge harbors, ports, schools, building retrofits and building tax incentives long advocated by SMACNA.

The bill also authorizes more than \$100 billion to expand internet access for rural and low-income communities and \$25 billion to modernize the U.S. Postal Service's infrastructure and operations.

Lawmakers approved the Moving Forward Act by a 233-188 vote, mostly along party lines. It now goes to the Republican-controlled Senate, where a much narrower bill approved by a key committee has languished for nearly a year. Majority Leader Mitch McConnell (R-KY) has not attempted to schedule a floor debate and none appears forthcoming before end of July. Many GOP Senators

have asked for a half-measure response to address local, state and national infrastructure needs in their areas.

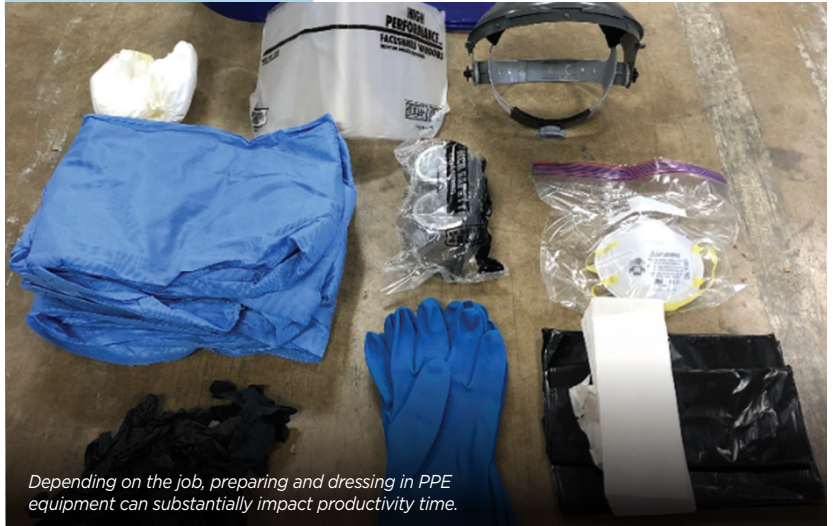
SMACNA Priority Federal Contract Change Order Reform Added to the House National Defense Authorization Act (NDAA) Package

The House Armed Services Committee added several measures related to procurement of its annual defense reauthorization bill, H.R. 6395 (116). The military and defense funding and procurement package will go to the House floor for a vote later in July. H.R. 2344, Contractor Change Order legislation would require an immediate 50% partial payment upon change order completion and certification with an expedited process for fairer and faster payment for the remaining amounts due. During long debate in the House Armed Services Committee, the language was offered as an amendment by Reps Golden (D-ME) and SMACNA allies Reps Don Bacon (R-NE) and Paul Cook (R-CA).

While the Senate version does not contain the House contract change order reform (H.R. 2344), it is expected a bipartisan base will emerge in the House-Senate Conference resolving the issue and differences on a wider range of issues before the



FEATURE STORY



Depending on the job, preparing and dressing in PPE equipment can substantially impact productivity time.

Study Highlights Rising Costs, Diminished Productivity for HVAC/Mechanical Contractors

Life on job sites has changed dramatically for sheet metal and HVAC contractors in the era of COVID-19. Apparently, so have the costs associated with doing that work.

A preliminary analysis of HVAC and mechanical contractors found that contractors are losing approximately 9.4% of hours on the job as a result of coronavirus mitigation efforts. Add in variable amounts of lost productivity for each project, and the impact on a contractor's bottom line can be significant. For specialty contractors, a loss of 10% in labor productivity often results in a 100% loss in project profitability.

Companies throughout the sheet metal and air conditioning sector are now starting to work through these productivity effects on the new normal. "On most of the projects where people are paying attention to the risk and threat to employee safety and health, the mitigation expenses are real," says Guy Gast, president of the Iowa division of The Waldinger Corporation, a full-service mechanical and service contractor operating in the Midwest.

Quantifying Losses

Until now, no resources existed to aid contractors in accurately quantifying

the impacts of lost productivity for the purpose of seeking equitable compensation; adequately pricing upcoming work that will take place under pandemic driven-work rules and conditions; And the ability to properly formulate financial projections that take into account stress on cash flow due to both decreases in productivity and the associated increases in overhead costs.

The estimates of the pandemic's impact on the industry come from a joint effort of SMACNA's New Horizons Foundation and ELECTRI International, the National Electrical Contractors Association's foundation. The foundations have commissioned Colorado-based construction management consultant Maxim Consulting Group to assess the final data on both mitigation and productivity benchmarking from actual jobsites and contractors' fabrication processes.

"We're capturing information from people in leadership, operations management personnel on project cost codes, field supervisors on mitigation activities, and project managers on productivity benchmarking data," says Tom Soles, SMACNA executive director of member services.

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bill returns for final votes in Congress. SMACNA and its allies continue to work with Senate offices to understand the value to construction firms of a more rational and fair change order procedure on federal contracts.

SMACNA Priority "Great American Outdoors Act" Passes Senate

The Senate, by a 73-25 vote, passed S. 3422, The Great American Outdoors Act, which would provide \$6.5 million to address a maintenance backlog at National Parks. This includes roads and trails, vertical structures, such as housing, and restroom facilities. The bill would also provide \$900 million in oil and gas revenues for the Land and Water Conservation Fund (LWCF). The bill was championed by Sens. Cory Gardner (R-CO), Steve Daines (R-MT), Joe Manchin (D-WV) and a majority of the Senate. SMACNA had urged Senate passage for more than two years and is now lobbying House members to support or cosponsor its companion bill or pass the Senate version. House Democratic leadership said they expect floor action on the legislation before the August recess.

Resiliency of Composite Plans Report Shared with Congressional Offices

As reported in a recent SMACNA Member Update,

SMACNA, in conjunction with a construction industry employer coalition, commissioned a new study designed to evaluate how composite plans would perform during an economic crisis. The study's author, actuary Josh Shapiro of Groom Law Group, notes the sustainability of a retirement system cannot be measured during easy times.

The detailed case study evaluates how a composite plan would have performed during the downturn of 2008 and the more immediate coronavirus pandemic. The report makes clear that composite Plan design offers workers the kind of security and stability that too many traditional multiemployer defined benefit plans promise but cannot deliver, and shows employees and employers stand to benefit once Congress authorizes the use of composite plans.

The study makes clear that retirement plans can only achieve success as long as employers continue to participate in them. The number of active employees covered by the defined benefit system has steadily declined. Plans have also seen large reductions in the number of contributing employers because the ability of employers to absorb the cost of unfunded pension liabilities is limited and employers are being driven out of the system.



The GES Sheet Metal project team with DPR construction observes a close-up review by the architects. A section of the mock-up has been cut away to allow the design team to see the materials used inside the metal panel.



A view of the secondary support system and integration of waterproofing and rigid insulation.



GES SHEET METAL
www.gessheetmetal.com

one another on the job site can create some issues that require creative problem solving. We have had to be flexible in our thought process while staying within the confines of the CDC requirements for general COVID safety.”

GES is finding their new installation strategies (including around-the-clock shifts) and modularizing fabrications in the shop have been so successful that the company may continue these practices as “just a better way to do it.”

While creativity and adaptability are always desirable characteristics in a contractor, most of the COVID-19 questions GES gets from prospective clients relates to material procurement and schedule impacts. GES has demonstrated its ability to successfully address these and other challenges presented by COVID-19. The Harvey Mudd project features a lot of metal, all of which was delivered on time.

The panel system, totaling 20,000 sq. ft., is a one-of-a-kind fabrication. The unique approach will ultimately save time because the custom panel system does not require third-party verification like name brand panel systems.

“The design concept is a series of custom-formed, brake shape panels set inside a modularized frame made from a custom-sized aluminum extrusion,” said Reeves. “The panels are formed into three different profile shapes and the installation of them into the frame is random to create the custom panel look. The concept seems to create a look of a metal curtain or window treatment between the otherwise glass dominated façade.”

Panels are formed from coil and a 21 ft. bifolding break into their

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Contractor, Architect Achieve Construction Continuity Amid COVID Challenges

When the leadership team at GES Sheet Metal got the news last year that they had been selected as the architectural siding contractor for a \$30 million job, they knew the project would be a great addition to the company’s portfolio. Now, roughly at the half-way point to completion, it’s clear the project has delivered some unexpected added value — COVID-19 credentials.

GES is not a subcontractor, but a full project partner. The Fontana, Calif.-based SMACNA firm is providing design assist and custom metal work for the new McGregor Computer Science Center at Harvey Mudd College in Claremont, Calif. Their crews have

been working there amid COVID-19 challenges, health concerns, and state-imposed restrictions for more than two difficult months. However, this experience turned into an unexpected growth opportunity for the company. It has also become a test site, where GES has proven they can quickly adapt and find new ways to get the job done in this evolving pandemic.

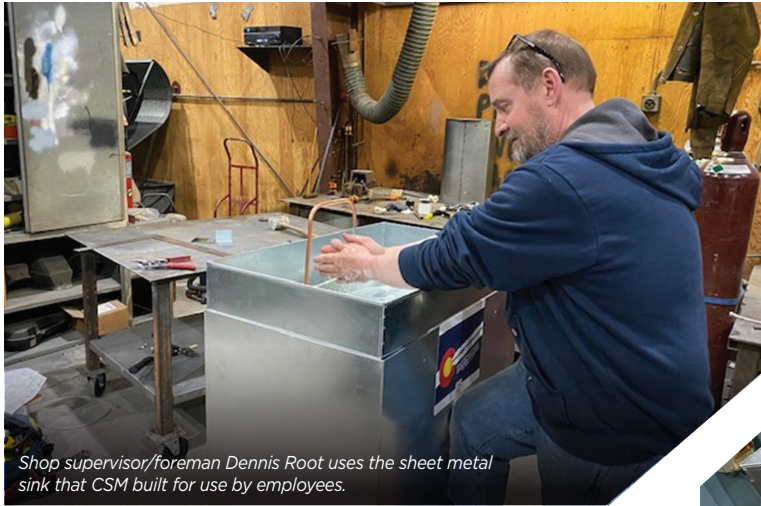
“This project will be a great example of a tough design, a tough schedule, and a pandemic — a collection of circumstances that would normally result in a failure to launch,” said GES Vice President Johnny Reeves. “If we can stay focused on teamwork and partnerships, we really believe there is no problem too large to help solve.”

Reeves said the job site was

closed briefly due to a shelter-in-place ordinance, but then opened when construction was deemed essential work. Even with that delay, a toilet paper crisis, and ongoing PPE and social distancing challenges, GES remains on schedule and within budget. Reeves credits this success to the GES employee team and their strong, lasting relationships with customers, architects, and general contractors.

“The partnership mentality that was established early on in the project has different goals now, but the confidence we have in each other to stay creative and solution-focused is proven,” he continued. “It’s these kinds of relationships that seem to keep this project moving forward amid an ever-changing terrain.”

GES is highlighting their design assist formula and successful COVID-19 adaptations at Harvey Mudd as a way to differentiate their company from the competition. “The concept of minimizing our exposure has caused us to think about our fabrications and installations a little differently,” said Reeves. “Having two or more persons being six feet away from



Shop supervisor/foreman Dennis Root uses the sheet metal sink that CSM built for use by employees.

EVEN BASIC JOB SITE SANITATION SUPPLIES, SUCH AS SINKS AND SOAPS THAT HVAC AND OTHER CONSTRUCTION WORKERS TAKE FOR GRANTED CAN BE TOUGH TO FIND.

Contractor Fabricates Solution to Common Problem Confronted During COVID-19 Crisis

It's not just toilet paper and personal protective equipment that's in short supply during the coronavirus pandemic.

Even basic job site sanitation supplies, such as sinks, soap and potable water, that HVAC and other construction workers take for granted can be tough to find.

That was the situation facing Colorado Sheet Metal employees while working on several projects earlier this year. And while securing masks and gloves might still be an occasional challenge for the Colorado Springs-based company, CSM employees — and other area contractors — are able to keep their hands clean, thanks to a custom-fabricated hand-washing station the company designed and built (from sheet metal, of course).

CSM President Gary Venable said when he realized that coronavirus-induced panic buying was making necessities hard to come

by, he considered purchasing an alcohol-based hand sanitizer made by a local distillery as an alternative, since it didn't require water. But Venable said he was reluctant to put the flammable liquid on job sites. And water wasn't hard to find.

Working with shop supervisor Dennis Root and service manager Jim Thomas, they came up with the idea of making a touch-free hand-washing station that would safely meet the contractor's sanitation requirements. Employees would be able to wash their hands as normal without worrying about spreading germs through high-contact surfaces such as faucet handles.

The sink CSM designed uses primer bulbs like those used with boat fuel to bring up clean water from a 5-gallon tank, where it flows through a spigot made from copper refrigerant piping into the sink. The used water then drains



The water supply and disposal system is simple to manage.

from the sink into another equal sized, but empty tank. The whole mechanism, encased in 16-gauge and 22-gauge galvanized steel, is controlled by a foot pedal so employees never have to touch the sink.

For CSM's employees, designing and then fabricating and assembling the sinks was a way to keep employees engaged during a tough time while also solving a problem that had been frustrating the company.

It turned out that Colorado Sheet Metal wasn't the only local company having problems relating to the stringent sanitation requirements on job sites in the COVID-19 era. The sink's clever design generated interest among other construction companies in the area, since many of them were also having trouble securing portable sinks.

"We ended up offering them to our (local) general contractors who were struggling (with getting supplies) as well," he said. "We sold them for \$500 apiece."



COLORADO SHEET METAL
www.csm-hvac.com

So far, 22 sinks have been sold to other construction businesses in the area, although Venable, who is also the current SMACNA Colorado president, pointed out that selling them to other contractors wasn't the original plan.

The profit on each sink, about \$125, is matched with a contribution from CSM, which is split and given to the company's 45 employees as a bonus on their paychecks, Venable added.

Nathan Cooper, the executive director of SMACNA Colorado, said the sink is a great example of the ingenuity of the association's members.

"It was one of those rapid-response projects that really helped out the industry when we needed it to continue working," Cooper said.



Welsch Heating & Cooling Co. employees don personal protective equipment before entering a customer's home.

Residential Service: A New Norm in a COVID-19 World

The COVID-19 pandemic and social distancing have challenged the residential market. From personal protective equipment to customer anxiety, contractors are navigating an unprecedented landscape.

Mendel Plumbing & Heating, Inc. in Saint Charles, Illinois, began rolling out safety measures before the state shutdown. They explained their protocols on their website and via e-mail marketing to clients. "Knowing that our clients still have a need for our services, our goal has been to position ourselves as somebody who can deliver quality service safely," said President Tom Mascari. "We went on the offense, communicating on a regular basis what we were doing to stay in touch and on top of what the CDC and the state were telling us needed to happen."

Mendel also began offering a troubleshooting service for people who have been exposed to COVID-19. "If a client calls in and they have some kind of exposure, we'll put them through to one of our technical gurus, and they'll FaceTime with people." We'll see what we can do to help them work through their issue. We don't just say 'No, we can't come.' We say, 'Okay, let's go to phase two.'"

Mascari emphasizes that client needs are "still out there, and we as contractors need to position ourselves to fit within their circle of trust they have for whoever they want to come into their home or business."

Welsch Heating & Cooling, in St. Louis has found that, after an initial slowdown in the pandemic's early days, some customers are becoming pragmatic. "With people being at home, if the air condi-



A Mendel employee wearing PPE.

Mendel Plumbing & Heating's 'No Contact' logo lets customers know the contractor has COVID-19 safety protocols in place.

tioner is not working, it becomes a major event because now they're not escaping to their office," says company Vice President Paul Heimann. "We're finding customers are very open to making those service calls, and also sales calls, because they do want to get some of these things taken care of while they're at home."

The St. Louis area partnered with their SMART labor force to offer a \$100 rebate on service calls for front line workers, which has been well received.

Heimann says Welsch remains focused on the customer. "People do need heat and they do need cooling. There wasn't a magic bullet for customers, so we had to create solutions as we went. The only thing you can do as a business is be as prepared as you can be for any situation that's thrown your way."

At Skyline Heating A/C & Sheet Metal Inc., in Denver, it's mostly been business as usual regarding this spring cooling season. President Denise Ruscetta estimates that 80% of their residential calls come from repeat customers, which she thinks has been key. "Our customers have service needs and are getting back to feeling comfortable having



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ATLAS HEATING & AIR CONDITIONING
www.atlasheating.com

someone in their home," Ruscetta said. "With our proper protective protocol, I believe they are at ease with a familiar company attending to their needs."

Atlas Heating & Air Conditioning in Oakland, California, has felt the effects of the state's shelter-in-place order. Many retrofit jobs have been delayed. Their protocols have evolved to include masks, gloves, booties, hand sanitizer, truck-washing stations and disinfectant wipes. Safety and COVID meetings are held in their back parking lot to ensure social distancing, and they take the temperatures of all field workers upon arrival at the shop each day.

Company President Robert Tuck notes that the changes have been difficult, but they have a positive attitude about the future. "We remind our crew that Atlas made it through the pandemic of 1918, and we will make it through this one with the same spirit and teamwork."



Ernest D. Menold, Inc. sees increased demand for handrails and guardrails as businesses adapt to new health guidelines.



Aluminum reactor cages for PECO required over 2,100 hours of fabrication in the shop.



Menold fabricates handrails out of steel, then hot-dip galvanizes them before sending to customers.



ERNEST D. MENOLD, INC.
www.menold.com

Providing New Services in a Changing Industrial Market

The COVID-19 pandemic took the father-son team of Ernest J. Menold and Ernie P. Menold, third and fourth generation leaders at Ernest D. Menold, Inc., by surprise. “We went from being in a very robust economy in February to seeing huge changes in just a few weeks,” said Ernest J., company president and grandson of its founder. “We were told we would be the successful bidder on several major projects, and we still don’t have those orders. We have a lot of contracts in hand that we’re wrapping up, but we don’t know how many customers will move forward with the projects they were planning two months ago.”

Founded in 1947, Ernest D. Menold, Inc. began as a small sheet metal shop to serve local industrial manufacturing companies. Three generations later, it has grown into a major player in the greater Philadelphia sheet metal market, providing a wide

range of services from HVAC to architectural to industrial work. Their customers include giants like Merck, and the award-winning Wells Fargo Center, Philadelphia’s NBA and NHL stadium.

Menold, Inc. anticipates continuing adjustments in the future. “The estimating department hasn’t seen a downturn in the amount of work available to bid,” explains Ernie P., business development manager and great-grandson of the company founder. “But given historical trends and the response to the 2008 recession, we expect a change in the third and fourth quarters.”

In this uncertain market, the Menolds are positioning themselves to help clients comply with new health guidelines. Menold, Inc. is ready with the handrail and guardrail businesses needed to direct foot traffic. They also designed and fabricated clear COVID-19 containment booths for healthcare providers. Healthcare professionals standing inside the

customizable booths can administer multiple coronavirus tests while remaining completely protected from infection. Menold also forms and fabricates plexiglass barriers. “A customer might think of us as only HVAC specialists,” said Ernie P. “We’re educating our customer base about the full breadth of our capabilities so they know we can help them with new challenges.”

Meanwhile, Menold is reevaluating shop processes. “We do design-assist work upfront during the design process, so most project management time is focused on starting and organizing the project. With fewer new projects right now, Ernie P. is digitizing our internal order system,” said Ernest J. “We want to get away from paper vouchers and delivery tickets.”

Because craftspeople work close together, they wore respirators and Tyvek onsite to follow early recommendations. “Health regulations limit crew size, but we never laid anyone off,” said Ernest J. “At the beginning of

the outbreak, about 15% of our workforce decided to stay home to protect family members, and most of them have returned to work as Pennsylvania opens up.” Now that their county health status is ‘yellow,’ the shop is almost back to normal with mandatory masks, painted lines to designate work areas, and no outside visitors admitted into the building.

No matter how the economy responds, the Menolds are in a strong position to move forward. “Our largest industrial clients are Merck, the local utility company [PECO], and GlaxoSmithKline,” said Ernest J.

The industries which these three companies support are classified as essential industries, so work on those facilities never stopped. “The utility company pours a slab, and we build a pre-engineered metal switch-gear building to the specifications they give us. We put in insulation and an HVAC system based on their parameters. We’ve done 12 or 14 of these projects over the last 10 years, and we’re doing three projects with a total of four buildings for them right now.”

The Menolds don’t take all the credit for their success, though.

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THE ART OF THE ACCELERATED CONSTRUCTION PROJECT

continued from page 1

From owners and general contractors to engineers and subcontractors, everyone worked to get this critical job for the city and region completed quickly and on budget.

“It was just a breath of fresh air,” said Youna, who works as the president of YMI Group Inc., a full-service mechanical contractor in Elk Grove Village, Illinois. “I never experienced that level of working together and getting the job done.”

The downtown Chicago convention center is just one example of the type of COVID-19-related accelerated projects SMACNA members have been recently hired to undertake. Clients on these types of jobs — typically states or even the federal government — do not have time for the back and forth of multiple proposals and bidding that projects typically require. Resources and dependability are often more important than the lowest price. Instead of months to agree on the scope of work, there are only days — or just hours.

At the height of the coronavirus pandemic in the U.S., hospital systems across the country feared that the surging numbers of patients would outstrip available resources. Officials sought to quickly turn large structures such as hotels, arenas and even recent-

ly closed hospitals into temporary medical facilities for as long as the crisis lasted. Oftentimes, there were only weeks to complete the work.

That’s where SMACNA members such as Colorado Sheet Metal (CSM), CMC Sheet Metal and YMI come in. From bringing a decommissioned hospital back online to turning a conference center into a critical care complex, the work of these and other contractors has been hailed as the definition of “essential” during the crisis. And much of their work has been completed in less time than it would typically take to submit a bid.

McCormick Place: From Meeting Rooms to Medical Rooms

YMI was among the contractors hired in late March to turn McCormick Place, closed at the time due to COVID-19, into an alternate care facility that could house up to 3,000 patients. Plans called for 750 of the facility’s 3,000 beds to be in isolation tents with high-capacity oxygen, medical vacuum systems and medical air piping, as well as an HVAC system designed for negative air pressure to contain any airborne contaminants.

The projects were overseen by the U.S. Army Corps of Engineers, Metropolitan Pier and Exposition



Colorado Sheet Metal helped St. Mary-Corwin Medical Center hospital create negative pressure rooms by adding HVAC exhaust systems to the exterior of buildings.

Authority (facility owners) and the Federal Emergency Management Agency (FEMA). The work required an around-the-clock schedule to meet a demanding deadline that called for the multi-phase project to be completed in a month’s time. Project design and engineering services were handled by Stantec and Environmental Systems Design Inc. (ESD), with

Walsh Construction as the general contractor.

A little more than 72 hours after submitting its bid, Walsh awarded YMI the contract to install the care facility’s medical gas supply. Gases such as oxygen are critically important to patient comfort and surgical operations, since proper delivery can be a life-or-death situation for people



Ductwork installed by CSM runs along the exterior of St. Mary-Corwin Medical Center in Pueblo, Colorado. Two floors of the hospital were converted to negative pressure rooms for COVID-19 patients.

into the isolation tents that were erected inside McCormick’s Hall B. YMI supported its field employees with an onsite office setup staffed with a project manager, design engineer, building information modeling (BIM) drafting, general superintendent and general foreman.

Youna said the typical disagreements among the trades that can slow down a project weren’t present on this job. “(Everyone) just worked wonderfully well together,” Youna said. “I didn’t hear anybody yelling or shouting. I didn’t hear anybody arguing. It was just a refreshing approach to solving the problem.”

Expanding Capacity in Maryland

When Maryland Gov. Larry Hogan ordered the state to come up with 500 additional beds to treat COVID-19 patients, CMC Sheet Metal was among those who answered that call. The Capitol Heights, Maryland, contractor was hired by mechanical firm Heffron Co. in late April as part of a still-ongoing \$12.5 million project

“IT WAS JUST A BREATH OF FRESH AIR. I NEVER EXPERIENCED THAT LEVEL OF WORKING TOGETHER AND GETTING THE JOB DONE.”

—ALBERT YOUNA, PRESIDENT, YMI GROUP, ELK GROVE VILLAGE, ILLINOIS

to add 20,000 square feet — and 20 beds — to the infectious containment unit at Meritus Medical Center in Hagerstown. CMC’s role was to detail, coordinate, fabricate and install the ductwork for the expansion.

“It’s pretty jam-packed, because each room is isolated,” explained Geoff Parks, CMC’s vice president of construction. “They’ve got dedicated supply, dedicated exhaust. Everything is ducted and it’s quite a bit of material up in the space.”

Parks said the emergency nature of the project meant that “as soon as we got the nod, we were working on it,” adding that CMC employees have been working overtime. “They were looking for us to produce something to clash (test) within a week.”

Despite the intensity of a critical project being built during a global pandemic, the job has been going well, Parks said. “There’s a lot of HVAC, piping, storm drains, sprinklers, med gas, conduit — just all condensed, and with social distancing and other safety precautions, it’s added a new layer,” he said. “But I think everyone has been handling it very well.”

Bringing Hospital Space Back into Service

Across the country, CSM was involved in a similar project, bringing two underused floors at a Pueblo, Colorado, hospital back to patient-ready condition to help the region prepare for a possible spike in coronavirus cases.

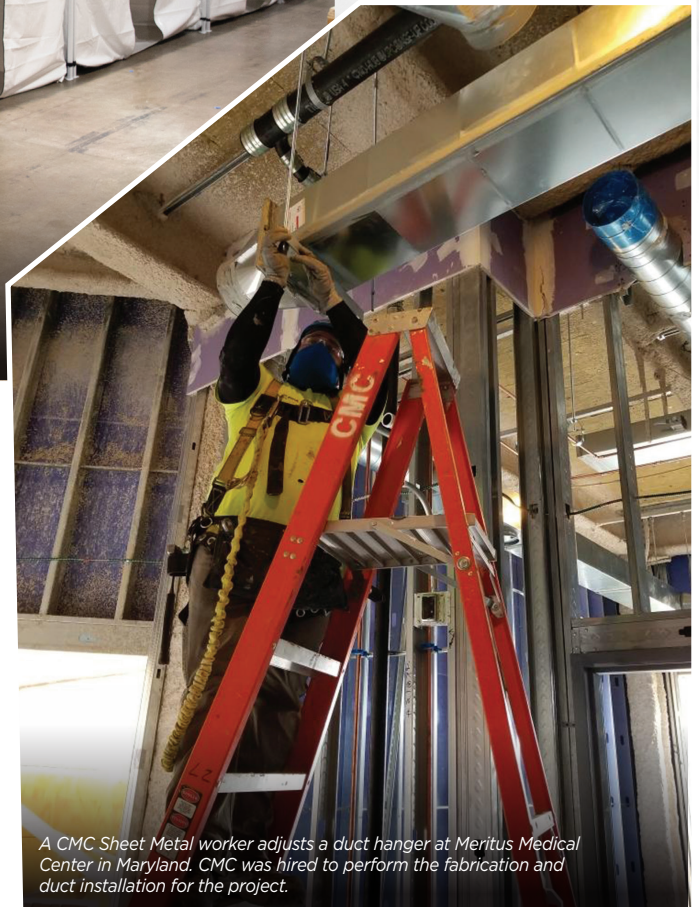
Invited April 11 to bid on the

undergoing treatment.

Working 12-hour shifts and decked in protective gear, YMI employees erected a bulk oxygen storage tank farm outside of the center, with piping and ventilation installed on a temporary scaffolding superstructure. Medical gas piping drops met with 16-foot hoses that connected to a medical headwall, sending filtered air



Some of the isolation tents installed at McCormick Place as part of the project of turning the conference center into an alternative care facility.



A CMC Sheet Metal worker adjusts a duct hanger at Meritus Medical Center in Maryland. CMC was hired to perform the fabrication and duct installation for the project.



Sheet metal lies on the plasma table at CMC Sheet Metal's shop in Capitol Heights, Maryland. The metal is to be turned into ductwork for an infectious disease unit at Meritus Medical Center in Hagerstown.

project to overhaul the HVAC on the fourth and fifth floors at St. Mary-Corwin Medical Center, CSM officials had just six days to assess, design and bid, said company President Gary Venable.

The project was not a small job. Each floor was 46,000 square feet. “(The hospital) was not set up for this type of patient care,” Venable said of the isolation and negative air spaces necessary when caring for COVID-19 patients. “It was quite the undertaking.”

The design CSM came up with called for installing 18 Greenheck Fan Corp. exhaust fans on the building’s roof, then connecting

them along the outside of the building through ductwork that would run down the five-story hospital’s exterior. Eight make-up-air units from Daikin would also be used with ductwork supported by scaffolding.

Operating under Denver general contractor Mortenson Co. and mechanical engineer Cator Ruma & Associates Co., whose on-site staff helped with design, duct sizing and routing, crews worked 12 hours a day, seven days a week to meet the deadline.

CSM worked with two other Colorado Springs-based

SMACNA members: Mech One, which assisted with fabricating the 1,000 feet of rectangular ductwork and the 3,000 feet of spiral duct that the job required, and Midwest Test and Balance.

Aware of the project’s timetable, Greenheck shipped the exhaust fans within two weeks and Daikin delivered the custom make-up units within three weeks. Venable said the manufacturer’s rush efforts were really appreciated.

“We actually finished the day before Mother’s Day so everybody could have Mother’s Day off,” he said.



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Study

continued from page 3

The resulting report will illustrate how COVID-19 guidelines and directives from general contractors, owners, and federal and state governments can stretch project schedules and cut into productivity and profitability.

Mitigation Efforts

Study data points to coronavirus-related mitigation requirements being substantial, eating up the equivalent of 45 minutes of each tradesperson's time on the job, every day. These mitigation measures include safety and training such as orientation activities as well as fitting for personal protective equipment (PPE). Time is also lost to social distancing and access rules — things like re-directing the flow of foot traffic at the work site and forced wait times to enter new areas. Additionally, protocols for the cleaning and disinfection of equipment and work areas add new layers of administration, such as more paperwork, meetings, and inspections and one can see major impacts across all aspects of a construction job.

Gast articulates mitigation measures in place at Waldinger sites that are not uncommon to others in the HVAC and mechanical trades. He notes that Waldinger does "fit for duty" verifications for all workers, checking their health and ensuring that they have not been in contact with others infected with the coronavirus. The company has installed additional wash stations and hand sanitizers at job sites. Social distancing is forcing workers to find alternative ways to accomplish some physical tasks on the job.

"In some cases, mitigation involves separating crews to reduce the population in a workspace," says Gast, who also serves as chair of the New Horizons Foundation.

In addition to separating crews, preliminary findings in the report indicate contractors are taking required safety precautions that

can further dilute productivity, including splitting the shop/field teams into shifts to minimize the number of people in the shop or on a site at any one moment; eliminating the option of worker movement between shop and field to avoid cross-contamination risks; active management of pick up and deliveries; and, limited oversight of management and superintendents.

Not surprisingly, estimating the effects of these factors is proving to be more difficult than with direct mitigation efforts. However, the report states they are yielding productivity losses from anywhere

pany is paying for all of the new supplies on job sites, and labor costs are going up due to dents in efficiency. The same goes for rental costs for heavy machinery such as lifts.

Rethinking the Future

For many contractors, the shifts in the industry's landscape mean revisiting agreements with customers to account for unanticipated expenses at existing projects due to the COVID-19 requirements. Likewise, contractors and clients have to rethink the parameters of future jobs in light of the new

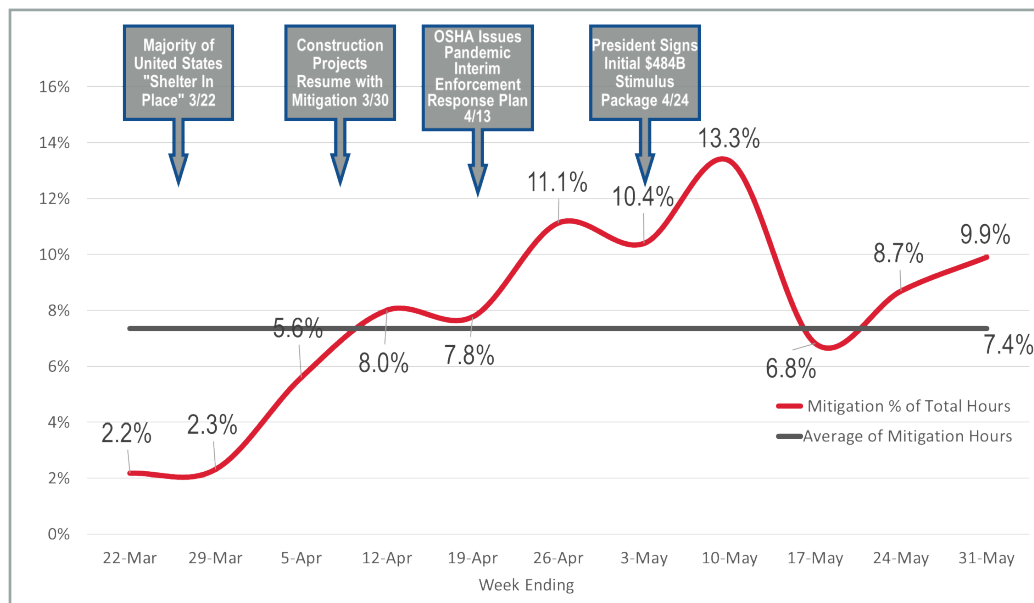
can track and document new expenses. They include creating cost accounting categories for mitigation efforts and monitoring expenditures on things like new equipment, travel costs, technology upgrades and inspections. Furthermore, companies should implement periodic cost reviews and document the scene at work sites via written narratives or video, according to early data.

Above all else, Gast encourages sheet metal and HVAC contractors to be realistic about what they are facing in the COVID-19 era.

"If I have a fear for the industry; it's that we're naturally born with rose-colored glasses on our face, and we want to see the best possible outcomes. Sometimes it's hard to accept that we're experiencing increased costs because we want to look good," Gast says. "We want to believe that our production is unaffected. It would be easy to

"IN SOME CASES, MITIGATION INVOLVES SEPARATING CREWS TO REDUCE THE POPULATION IN A WORKSPACE."

— GUY GAST, PRESIDENT OF THE IOWA DIVISION OF THE WALDINGER CORPORATION



Mitigation Hours as a Percent of Total Hours by Week (Combined NHF and ELECTRI data to May 31, 2020)

between 10% and 40%, depending on the job site.

Mitigation measures and diminished productivity are translating into higher costs for contractors. As an example, Gast points out that Waldinger's PPE expenses are rising about 20 cent per worker hour, with the company investing in new equipment like face shields and nitrile gloves for sanitation purposes. Meanwhile, the com-

pany is paying for all of the new supplies on job sites, and labor costs are going up due to dents in efficiency. The same goes for rental costs for heavy machinery such as lifts.

Part of the purpose behind the new study is to help facilitate these conversations. "This puts our members in position to discuss with customers how they can be made whole," says Soles. "If we have the data and statistics, then members can show the consequences of these necessary measures."

The report offers recommendations on ways contractors

sort of fall asleep at the switch — only to discover later in the project that you've been experiencing a deleterious effect from mitigation or from production loss."

Data collection for this report has concluded. The report will be distributed to SMACNA members in July 2020. For questions, please contact Tom Soles at tsoles@smacna.org.



Leading Responsibly During Uncertainty

Seasons of extreme change always create extreme opportunities. Those who successfully act on those opportunities are usually remembered by history. Those who don't are usually forgotten.

During the COVID-19 pandemic — a time of unprecedented challenge — leaders everywhere are feeling the responsibility of their roles, perhaps like never before. Every decision feels like a “bet-the-farm” wager. During recessions, at least we have some frame of reference. “This is like that” thinking can, to some degree, help guide us toward a preferable future.

But a pandemic? None of us were alive during the 1918 Spanish flu pandemic, and most historical accounts describe the impact, not best practices for economic recovery. Even companies recognized for their comprehensive contingency plans often failed to take a global pandemic into account.

So, we are left to figure this out as we go. In a very real sense, many companies will survive or fail based on how well their leaders bear the weight of responsibility to make the right decisions. Here are three types of decisions a leader must make if he or she wants to be found faithful in this season of massive change.

Choose Honesty

Every survivor of corporate downsizing has a story of senior leaders saying in a confident tone, “We are not considering layoffs at this time” only to realize when they were cut loose, plans were already well under way. True leaders respect people enough to believe they can

handle the truth, even when it is an unpleasant one.

To paraphrase your mom, “If you can't say what is true, don't say anything at all.” People long to feel the liberation of truth from their leaders. There is perhaps no greater building block of trust. And we will all need every ounce of trust we can get in the days ahead.

Choose Action

Everyone is familiar with the “fight-or-flight” (or freeze) response as a primitive and powerful survival reaction. Even those who would fight when personally threatened are prone to freeze when a safe path out is less than clear. As John Wayne said, “Courage is being scared to death but saddling up anyway.”

The message is that for a leader,

fear is not so much an emotion to be felt as it is a challenge to overcome. We are all scared right now. To pretend to be otherwise is to appear naïve or foolish (and be in denial). But others are counting on us to lead them someplace better than where we are. This is a time for strategic action based on our best thinking. Waiting too long, especially waiting for a “return-to-normal,” could result in devastating consequences.

“WE ARE IMPERFECT PEOPLE WORKING WITH LIMITED INFORMATION IN AN EVER-CHANGING ENVIRONMENT.”

Choose Collaboration

Leading collaboratively is hard. But all of us are smarter than any one of us alone. It is particularly valuable when we admit the inadequacy of

our own experience. You can be sure you are not the only person in your organization thinking about what's next. Now might be just the time to regularly bring the best minds together — regardless of position or longevity — to think together about a way forward that looks very different than the way back.

We are imperfect people working with limited information in an ever-changing environment. We are all making choices now that will have impact for some time to come. In a season where, as the poet Robert Frost wrote, “... I can see no way out but through,” our wisdom and conviction will be tested as never before. Regardless of the outcome, may we carry out our leadership responsibilities with courage and resolve for all those who follow us.

Ron Magnus, managing director of FMI's Center for Strategic Leadership, with Ed Rowell, CSL consultant.





Mergers & Acquisitions in a COVID-19 Influenced Construction Industry

As an active consultant looking to help contractors transition their businesses, I have extensive exposure to mergers, acquisitions, and succession planning activities. These activities tend to correlate to certain cycles in the economy and whether you call it a recession, a slow-down, or just uncertainty, this is a very different market from where we stood on January 1, 2020.

Economic cycles are not new to business owners. Whether the changes are at the macro or micro level, the business world will continue to ebb and flow no matter what the circumstances. This one however, is different. Experts see this period as a medically driven slowdown vs. an economic hit, so pundits believe the recovery will be faster because sitting on the sidelines are trillions of dollars in federal spending programs, and the FDA is fast-tracking vaccine solutions.

The market for selling a business has shifted as well. Many construction companies have felt the pain of work stoppages and delays over the last few months and, depending upon the health of your funnel, region and sector, there may still be more pain to feel in the near term. But hope remains ever-present, and the industry has a powerful opportunity to grow.

SMACNA members are in a unique position. Strategic and financial buyers are showing significant interest in the HVAC and related mechanical industries; they are looking for roll-up options and recognize the opportunity present-

ed in this temporary downturn.

In addition to the typical strategic and financial buyers, we see an uptick in individual private buyers. Buyers are looking for distressed assets and the opportunity to purchase businesses at a discount to what would have been the value of a company six months ago. Back then, pre-COVID unemployment was low, finding good people was hard, and executive-level skilled buyers were almost impossible to find.

Private buyers tend to be people in the industry. Today, hundreds of companies have furloughed employees some of which have given executives generous severance packages, and some of these executives are not ready to leave the industry.

These same executives are now looking to buy a company instead of work for someone else. They still have equity in their homes, banks want to loan, and as long as the business has positive cash flow, then there are conventional financing options that allows them to compete with other professional buyers.

The challenge most owners have in selling a construction business whether it be to strategic or private buyers, the deal often comes down to their people with the quality of their senior management being key.

This is a service-based business, so buyers want to know who is left at the end of the deal. Owner/operator (private) buyers take this



“THE CHALLENGE MOST OWNERS HAVE IN SELLING A CONSTRUCTION BUSINESS WHETHER IT BE TO STRATEGIC OR PRIVATE BUYERS, THE DEAL OFTEN COMES DOWN TO THEIR PEOPLE WITH THE QUALITY OF THEIR SENIOR MANAGEMENT BEING KEY.”

significant stumbling block out of the transaction. They know the market already and typically use conventional bank financing with SBA backing. SBA typically funds 70-90% of the sale price at close and stipulates that the business owner must leave after one year.

Unlike private buyers, strategic buyers need to find a CEO (your replacement) post-close for you to train. This process often sees a transition time of usually more than a year. Professional buyers often complicate the deal structure by asking the seller to invest a portion of the sale into the new entity, or seller-carry some type of financing over two to three years.

Looking to the Future

The market is definitely unstable due to uncertainty about the future. As sellers, this uncertain market is difficult, and some construction companies are feeling more squeeze than others. Some are doing better, others are doing

about the same as the previous year, and some are barely hanging on, but no one can say they feel fully confident about the future. That's what gets us up to work, that's why we are last to go home, and in between, is what motivates us the most and causes us to make the sacrifices we do.

This pandemic-caused economic episode too shall pass, and the next normal will require adaptation and creativity. The new generation is coming up the ranks and will be ready and able to take it on. The good news is that the M&A market for SMACNA members is alive and well.

Should you be considering your exit options, the question comes down to: 'When do I leave?' Should I wait until I'm ready, until the business is ready, or when the market is ready?' That part you can control — the decision is yours.

John Ovrom is the founder and CEO of Exit Consulting Group.



Mobilizing for the Future: Office Technology

As the construction industry continues to overcome the unprecedented challenges of 2020 with agility and resilience, contractors and craft workers are in some cases, exceeding traditional productivity expectations to deliver strong infrastructure for our cities and communities, but in others losing productivity due to PPE and safety precautions newly implemented on the job site.

SMACNA members are demonstrating ingenuity and entrepreneurial spirit by accelerating key competencies, like offsite fabrication, and through critical pivots, like the creation of touchless sinks and providing metal breathing strips for masks.

With emptier offices and remote working, now more than ever there is a vital need to examine successes and challenges with office technologies including those that allow safer and more flexible workspaces as well as ensure business continuity.

Businesses' ability to quickly adapt to remote work environments has been an unexpected benefit of sheltering in place. As workers return to a more stable phase of opened job sites, and increased construction activity, business owners and workers are reexamining previously recognized standards for workplace environments. In the office, flexible schedules and work-from-home policies boost recruiting efforts, improve retention and reduce overhead costs. While versatility in work location can reduce or eliminate commuting times and increase productivity, there can be

significant challenges to maintaining work-life balance, managing increased fatigue and maintaining the ability to stay focused.

Communicate with Workers Often

Communication is one of the most important pathways to team success and generating a productive company culture. Best practices to make remote meetings more purposeful include turning on webcams, interacting through open-ended questions and promoting dialogue between all participants. While it takes more energy to connect and engage through a webcam than in person, consider features to help invigorate the creative process. A diverse spectrum of software tools are available to bolster team camaraderie, and it's worthwhile to evaluate which free and premium components create the most comprehensive collaboration packages to drive project results.

Systems like Zoom and Microsoft Teams champion extended video capabilities like screen sharing, recording, digital whiteboarding, instant messaging, Q&A sessions and audience polls. Zoom is heavily leveraged for video meetings and webinars, providing advanced meeting analytics; and its free version allows for 100 participants per call. Microsoft Teams, a component of the Office 365 enterprise-grade cloud, boasts extremely robust security, foundational software compatibility, advanced search capabilities and strong document collaboration. Digital collaboration platforms like Monday.com and Mural also

advocate creative workflows and team ideation.

Remote working conditions have underscored the importance for a secure and resilient data strategy at all levels of an organization. It is critical to make data accessible to those authorized to use it regardless of their location, but also to protect the information from undesired visibility and access. Like all aspects of successful technology implementation, a strong foundational data strategy starts with educating and empowering employees to be the first line of defense.

Practice Sound Data Strategies to Protect Your Business

Strong data strategies begin by positioning employees to practice vigilance. This includes robust password training, multi-factor security, limiting work to within virtual private networks or VPNs, eliminating or strongly delineating between work on personal and corporate devices, and educating teams on the dangers of phishing through fraudulent emails. Workers should always be wary of digital messages that call for immediate payment, request login information, or have embedded links, especially in vulnerable times of uncertainty. When in doubt, it is always worth making a direct call to colleagues, suppliers and clients versus exposing the company to increased data risk.

When preparing for the future of work, it is now more critical than ever to invest in a robust private office network with powerful security features. For workers who travel between jobsites, consider

hotspot capabilities on company devices to reduce usage and risks of public Wi-Fi access points. While hotspots can be set up through most major carriers and count against existing data limits, the cost is minimal relative to the potential downside of a significant information breach. Cloud applications for project management, like Office 365, Procore, Autodesk's BIM 360, and Milwaukee Tool's ONE-KEY asset management platform, also offer securely managed remote access to data regardless of worker location. Managed remote access provides role and credential customization throughout all phases of a project.

Continue Practicing Technology and Leadership Best Practices

Best practices and standard operating procedures for the future of construction continue to evolve at a rapid pace due to external considerations including technological advancement. No matter the turns taken by the economy and outside factors, people and culture will always be the core to successful business endeavors. As industry leaders, consider ways to build a robust corporate infrastructure, healthy enthusiasm for new solutions, and clear lines of communication within your organization. Commit to self-development, shared team goals, and corporate advancement by leveraging internal expertise and the larger knowledge base of the entire SMACNA network. As always, remain curious, enthusiastic, and practical when embracing new ideas to mobilize for the future of the industry.

Tauhira Ali is senior manager of construction technology at Milwaukee Tool.



ARCHITECTURAL
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final shape. The color is champagne metallic, designed to maximize the play of light to create lights and darks within the color (see images, page 4). The project also includes 3,000 square feet of aluminum plate accents around the panels, stairs, and ground floor of the building.

The Harvey Mudd project is scheduled to be completed in December, giving the GES team ‘on-time status’ to add to their COVID credentials. They will also continue investing in the future by putting added time, energy, and effort into relationships. “These connections will take us to jobs two and three years from now,” Reeves said. “We’re taking the time to educate architects and show them how we can customize a project for them.”



INDUSTRIAL
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“Our involvement in SMACNA is one of the main reasons we’re as successful as we are,” said Ernest J. “We’ve sent most of our key employees to SMACNA’s financial management programs. The opportunity to talk with peers in the trade has been invaluable. They always come back with ideas for our company.”

Ernie P. agrees. “SMACNA provides the resources that allow our employees to take the next step. If you want to bring a foreman to a project manager or a project manager into upper management, SMACNA has the resources to help your employees grow.”

MEMBERS

Welcome New SMACNA Members

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EOS Mechanical, Inc.	Elkgrove Village, IL
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HT Lyons - Wappingers Falls Sheet Metal Division	Wappingers Falls, NY
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Sept 11-14, 2022

79th Annual Convention
Colorado Springs, CO

Oct 15-18, 2023

80th Annual Convention
Phoenix, AZ

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