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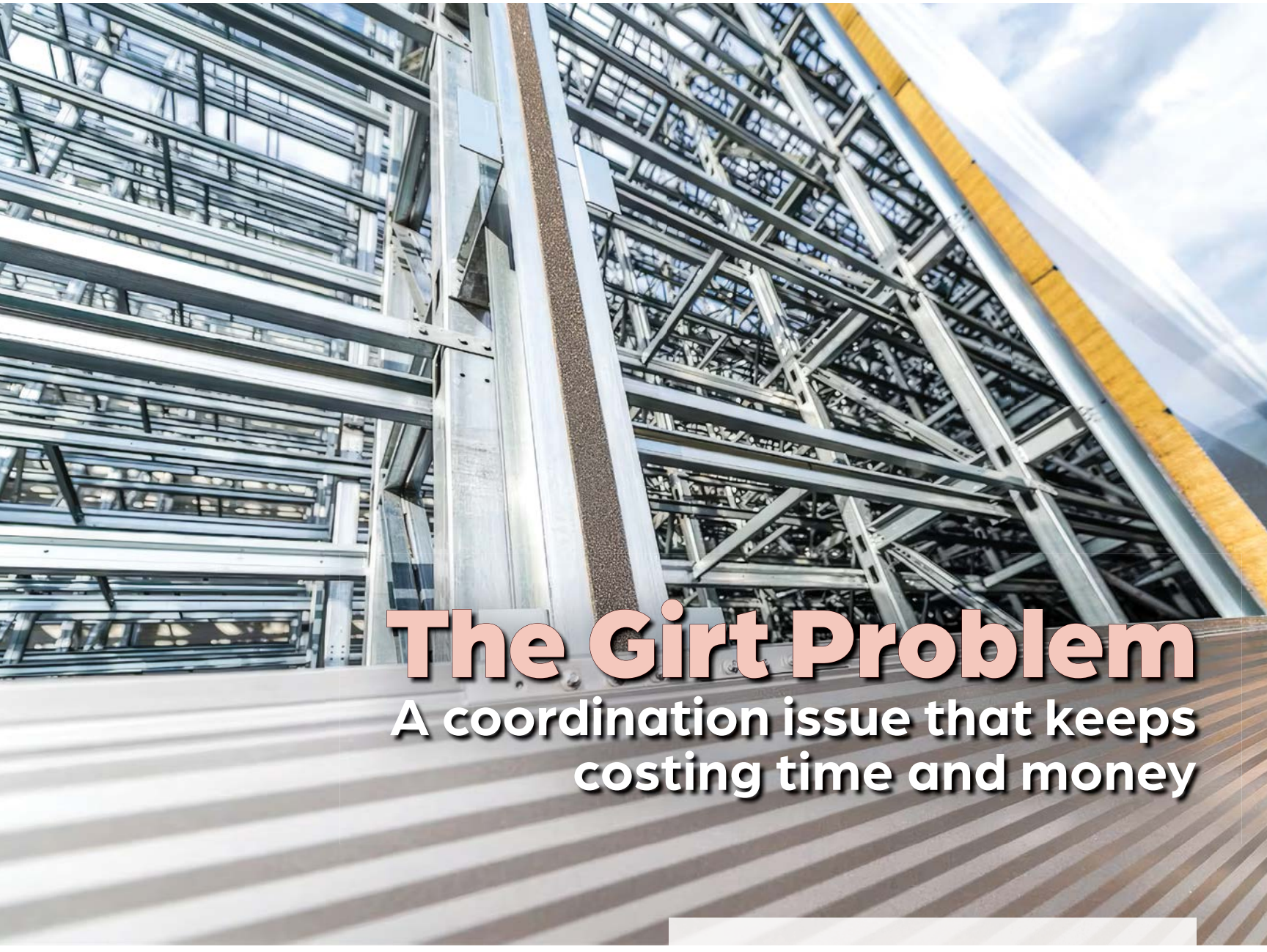

The Girt Problem

A coordination issue that keeps costing time and money

- Clamped and connected in Mendota
- Air leakage in metal building envelopes
- AC478 levels the competitive landscape

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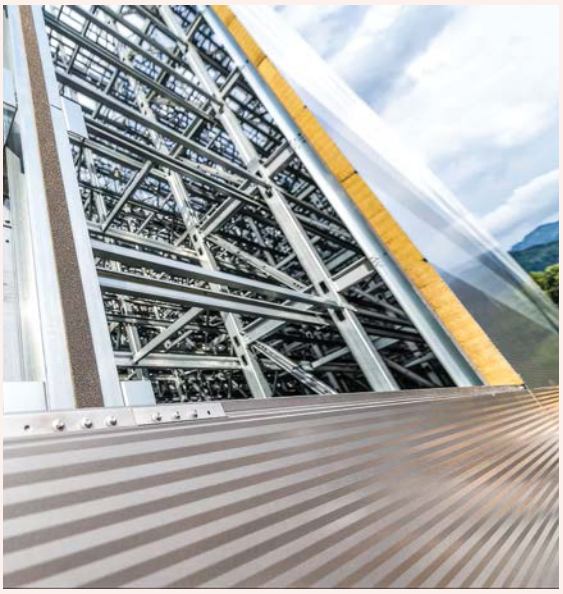

On the Cover

With nearly a decade of experience in the IMP industry, Brucha Corp.'s director of engineering and technical services Eric Wolfe explains that contractors rarely lose money because they *don't* know how to install IMPs. They lose money solving coordination problems after construction has already started.

PHOTOS COURTESY BRUCHA

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Melanie Kowal
EXECUTIVE PUBLISHER
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Real innovation doesn't need to be flashy

The month of August always feels like the calm before the rush. Projects are moving, vacations are winding down, and before you know it, the calendar is packed again. For our industry, it also means we're getting ready to reconnect at METALCON to see what everyone has been building, testing, and improving over the past year.

One of the things I appreciate most about metal construction is that it's an industry that never stands still. The changes aren't always dramatic and they rarely make headlines. Instead, they're the result of thousands of practical decisions made every day. A better installation method. A smarter building detail. A product that saves time on the jobsite or improves long-term performance. Those small improvements add up and keep pushing the industry forward.

As I read through the articles in this issue, that idea kept coming back to me. Every story is about solving a problem. It's finding better ways to integrate solar. It's improving building performance as energy codes become more demanding. It's using pre-engineered metal buildings to create spaces that genuinely improve people's lives. It's raising the standard for installation quality so owners have greater confidence in the finished product.

None of those ideas are flashy. They're simply examples of professionals who want to do better than they did yesterday. That's something I've always admired about this industry.

The labor market is still challenging and finding experienced workers remains one of the biggest concerns across construction. Yet companies continue to invest in training, technology, and better processes because they know the demand for quality isn't going away. Owners expect more from every building they commission, and metal continues to prove it can deliver on performance, durability, and value.

As we head into one of the busiest times of the year, I hope you'll find something in this issue that gives you a new idea or a fresh perspective. Whether it's a technical takeaway, a project that inspires you, or a conversation you'll continue with a colleague at METALCON, that's exactly why we put this magazine together.

Thanks for reading *Metal Construction News*. I hope to see many of you this fall.

Melanie Kowal

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Customer loyalty starts with a date

By George Hedley

George Hedley, *CPBC, is a certified construction business coach and speaker. He helps contractors build better businesses, grow, profit, get organized, and improve estimating and field production. He is the best-selling author of "Turn your construction business into a profit-making machine!" available on Amazon. Visit HardhatBizcoach.com to schedule a free introductory coaching session, get his Hardhat Hedlines Biz-Tips e-newsletter, templates, videos, or webinars and workshops information.*

Remember when you were first dating? To get to know the other person, you would spend a lot of time talking and doing things together. Afterward, you would call, send a gift, and keep in touch on a regular basis.

Just like dating, building strong customer relationships takes commitment, time, and constant contact. The best relationships are built over time in what I call "relationship building sessions"—dedicated time with customers for sharing a meal, attending a ball game, or doing something else enjoyable together.

In essence, you are *dating* your customers to build loyalty.

Customers want to do business with friends and people they know well, like, and trust. Contractors build trust by first doing a good job, and second by taking the time to get to know their customers personally.

Once you realize you are in the business of building relationships, your company will grow and become more profitable because of the loyal customers you've earned.

6 steps for developing loyal customers

1. Make customers your priority

Spend at least 33% of your time with customers in face-to-face sessions, which could include meals, sporting events, or industry meetings. I try to schedule at least two customer sessions per week plus one round of golf or sporting event with current or potential customers every month.

2. Help your customers

Before I meet with customers, I come prepared to share a business tip or strategy that can help their bottom line. People want to help those who help them, so look for ways to help your customers. At least four times a year, send something that could help them, like jobsite photos or code updates. Include a handwritten note like "I thought this could help your business" to reinforce that relationship.

3. Customer ranking

Make a list of all your customers from the last three years, and organize them by these categories: loyal, repeat, old, target, and referring parties. Next, rank them according to how easy they are to do business with and their potential to become loyal customers. After ranking them, list them in order of highest to lowest rank, then make sure you spend quality relationship time with the highest-ranked customers and the new targets you want to hit.

4. Spend time with top customers

Trusting relationships are built over time with lots of one-to-one contact, conversations, experiences, and fun. With your customers ranked, you know which ones are your top priority for quality relationship time. Track every meeting with customers and commit to seeing them at least every two to three months.

Your goal is to convert new targets into repeats, and repeats into loyal customers who will mainly use your company for their needs.

5. Be in the right place at the right time

In my own business, I noticed that subcontractors who spend a lot of time in our office get the most work. Is that luck? I don't think so! By prioritizing customer relationships, you'll land jobs simply by being in the right place at the right time.

6. Show you care

The No. 1 reason customers leave us is an attitude of indifference—they think we don't care about them. Customers want to know we care about their business and their challenges, and them as people. Keep notes on each of your customers to track things like family, schools, hobbies, goals, vacations, activities, and major life events. Before you meet with them, refer to your notes and ask them about their personal life. A caring attitude will set you apart and solidify your relationships.

Building a loyal customer base is no different from building any lasting relationship. It takes time, consistency, trust, and genuine interest in the other person. If you stop dating your customers, someone else will gladly take them out to dinner. Keep dating them, and they will keep choosing you long after the competition has stopped calling.

Leveling the competitive landscape

David Leinbach, president of The Kaiser-Martin Group and current MBCEA president

Sasha Demyan, MBCEA executive director

Credibility, consistency, and cost savings through AC478 accreditation

By Anthony Capkun

Competing at a higher level. Consistent results. Reduced callbacks. These are just some of the benefits cited by contractors who have undergone and achieved AC478 *Metal Building Assembler* accreditation.

I first learned about AC478 while attending the Spring Conference of the Metal Building Contractors and Erectors Association. According to MBCEA, it is the most comprehensive quality assurance accreditation of its kind for metal building assembly.

To learn more about the program and how it truly benefits contractors, MCN spoke with David Leinbach, president of The Kaiser-Martin Group and current MBCEA president, and Sasha Demyan, MBCEA executive director.

MCN: What problem was AC478 created to solve?

SASHA: Manufacturers have long had stringent quality standards, but there wasn't an equivalent industry-recognized benchmark for the contractors installing metal building systems. Specifications would routinely just call for an erector who has been in business a minimum of three years.

It was actually the contractors themselves who decided to create this quality program. They were tired of losing out on a job to the lowest bidder who was not qualified. They wanted to create standards that raised assembler quality and leveled the playing field.

DAVID: In the real world, AC478 brings credibility. Owners and GCs want assurance that the team erecting the building knows what they're doing ... that they know how to erect a building and *can prove it.*

SASHA: So AC478 closed that gap by establishing a uniform third-party verified standard for quality, safety, documentation, and training. It helps ensure that the performance designed into a metal building is actually delivered on the jobsite.

DAVID: There is an AISC certification for structural or hot-rolled steel erectors, but there was nothing for metal building systems erectors before AC478. So accreditation gives us—the contractors and erectors—a way to demonstrate that our processes are disciplined, repeatable, accountable, and safe.

We are not just saying "We're good!" The accreditation *shows* that we're good.

MCN: Beyond just technical ability in the field, what does AC478 validate about a company?

DAVID: It validates the entire business: from leadership's commitment to quality and training programs, quality-management systems, safety culture, field practices and, most importantly, the documentation practices that bring all of those systems together. Technical skill is essential, but AC478 ensures that skill is supported by a structure of systems that bring consistent quality to our processes and our jobs.

MCN: So an owner/GC can look beyond the workers on a jobsite to see a strong, sophisticated company doing the work. With accreditation, they know what they're getting.

DAVID: Yes, and in today's construction, paperwork has grown immensely. Everybody is documenting. You have to protect yourself. And that's not just GCs or CMs, but owners, too. Many of the big companies have systems in place and they want to know *that you* have systems in place; that you are documenting man-hours on the project, safety and quality processes, and near misses. It all has to be documented. AC478 helps bring all of these systems together.

MCN: Let's talk a little more about these changes to company systems when a contractor undergoes accreditation.

SASHA: Training becomes much more intentional. Accreditation affects how you operate and document. You're not relying on individual experience alone but working through a defined process. From pre-job planning to final inspection, there's a clear roadmap that everyone follows.

On projects, you see better documentation, clearer communication, and fewer surprises. Work is planned, checked, and verified at every stage. Workers are trained and qualified for the tasks they are expected to execute. Crews are more aligned because everyone understands the expectations and the procedures. Issues get caught early instead of becoming expensive fixes later.

So you see those changes in day-to-day operations and in the field. And documentation is no longer an afterthought—it becomes standard practice.

MCN: David, based on your own experience as a contractor, or from conversations with others, what part of the accreditation process felt the most demanding?

DAVID: That's hard to answer, because I actually found it to be the opposite. I suppose it may seem demanding in our own minds ... a fear of the time it will take to do this.

Smaller contractors have to wear many hats: they're the legal, estimating, and safety departments! They may have a safety manual, but it's not integrated with a quality management system. As for me, I did have a quality management system, but it was all in my head ... it wasn't written down.

So it was demanding from the perspective of *just getting started*. Once we started, MBCEA and other contractors supported us. In the end, it was a very liberating experience and ended up saving us time and costs.

SASHA: That really is the issue. We find that companies quickly feel overwhelmed. They look at the criteria for accreditation and think "Oh, this is going to take so many hours, so much time, and we're going to have to hire someone to put this all together."

DAVID: And it does take time, but MBCEA has templates for a lot of the things we use. Once a year we get reviewed as part of our accreditation, which only takes about a day, maybe a day and a half. In fact, we recently went through our reassessment and learned some valuable information that will help us streamline the process.

Accreditation brings consistency to the office and the field. It may sound strange, but it is an overall time saver. Sure, a contractor will say "I don't have time for another thing on my plate," but you will save time by avoiding callbacks, or having to explain then re-explain things because they were never well documented.

SASHA: As David said, most contractors already have everything that they need. They just need to put it all together in a structured, auditable system. David had his quality management system in his head; many people have their systems in separate spreadsheets.

MBCEA helps contractors find all those little pieces that are scattered everywhere and put them together. Contractors soon realize it doesn't take as long as they thought, and they do not need to hire someone for the process. While anyone can pursue AC478 accreditation, MBCEA members benefit greatly from the association's pooled knowledge and experience with the process.

MCN: David, can you think of a specific example where you really noticed a business or operational benefit because of AC478 accreditation?

"[Contractors] were tired of losing out on a job to the lowest bidder who was not qualified."

DAVID: We now have a very good quality-management manual, and it's always improving. Also, we were able to coordinate everything with our project management software, so now everything is in one place.

MCN: What separates companies that succeed in accreditation from those that stall?

SASHA: Commitment from company leadership. We find that companies that embrace AC478 as a business improvement initiative—as part of their culture, not just as a certificate or a badge—tend to succeed. It really is important that it becomes part of your company culture.

DAVID: Contractors are concerned about time, cost, and complexity. These are valid concerns, but the benefits totally outweigh them. You are going to gain in all those areas.

AC478 accreditation is going to save you the cost of callbacks, of doing things incorrectly, or worse. And the complexity goes down year after year as you tweak your system. MBCEA has plenty of help for contractors and, like anything, the more you put into it, the more you're going to get out of it.

> "We are not just saying "We're good!" The accreditation *shows* that we're good."

MCN: If a contractor is still sitting on the fence about AC478, what is the one thing you would say to them to get their buy-in?

DAVID: I can't think of a single owner out there who doesn't want to get better. If you want to make your company better, then get accredited.

SASHA: If you want to compete at a higher level and deliver consistent results, AC478 will get you there. Learn more about pursuing this important mark of quality by visiting mbcea.org.

APX Construction Group served as the general contractor while Midwest Steel Erectors handled the steel erection. Metallic Hypersteel Buildings provided the pre-engineered metal system.

Built for service, designed for healing

Metal kennel facility helps support veterans and rescue dogs

By Helen Bednar

SOURCE: APX CONSTRUCTION GROUP

In the quiet town of Winnebago, Minn., something extraordinary is happening. At Bravo Zulu House, the nation's first all-military sober living home for veterans with PTSD, a new chapter of healing has begun through an innovative program called Tails of Hope.

This program pairs every resident with a shelter-rescued service dog, creating life-changing partnerships that go far beyond companionship. The program not only rescues animals in need but also empowers veterans to heal, reconnect, and move forward with a renewed sense of purpose.

Behind the scenes, the success of Tails of Hope required more than compassion and vision—it needed infrastructure built to last. That's why Bravo Zulu House partnered with APX Construction Group and Midwest Steel Erectors to bring a new, dedicated facility to life using Metallic Hypersteel Buildings. Together, they built a kennel system that met every demand: sanitation, durability, energy efficiency, and cost control.

This is not just a story about a building. It is about creating spaces where veterans and service dogs begin new lives together.

Why Bravo Zulu House matters

For veterans living with PTSD, recovery is more than sobriety. It is about rebuilding trust, finding community, and finding safe spaces where healing can take root. Bravo Zulu House was founded with this mission in mind.

Unlike traditional treatment programs, Bravo Zulu House takes a holistic approach:

- **Structured sober living.** Provides stability and accountability.
- **Peer support.** Veterans support veterans through shared experiences.
- **New beginnings.** Programs such as Tails of Hope add purpose and companionship to recovery.

The phrase "Bravo Zulu" itself is a naval signal meaning "well done." At this home, it is not just a phrase; it is a mission statement.

Healing through companionship

The Tails of Hope program is built on a simple yet powerful idea: to help heal veterans alongside animals who also need a second chance. Each resident is paired with a rescue dog, and together they embark on a journey of training, bonding, and growth.

Dogs are carefully chosen from local shelters, with a focus on temperament and compatibility. Each veteran-dog pair then works with a professional trainer to create a tailored support partnership. Veterans gain not only loyal companions but also daily support in managing PTSD, sobriety, and the challenges of reintegration.

The results are profound. Veterans report lower stress levels, increased emotional resilience, and renewed motivation to

The kennel building had to be easy to sanitize and be able to withstand extreme weather while providing long-term durability.

maintain their sobriety. Dogs, once homeless, find stable homes and a new purpose. It is a win-win that embodies the spirit of service and healing.

A collaborative build

Launching a program like Tails of Hope meant one thing: a kennel facility built to the highest standards. For veterans to bond with their service dogs, the environment needed to be safe, sanitary, and comfortable year-round.

That's where the partnership of APX Construction Group, Midwest Steel Erectors, and Metallic Hypersteel Buildings made the difference.

The kennels had to withstand Minnesota's extreme weather, from freezing winters to humid summers, and needed to be constructed of corrosion-resistant materials for easy sanitation and long-term durability. Finally, the design had to be budget-conscious for a nonprofit, but also scalable as the program grows.

APX Construction Group served as the general contractor while Midwest Steel Erectors handled the steel erection. Metallic Hypersteel Buildings provided the pre-engineered metal system that checked all the boxes:

- Corrosion-resistant materials for a healthy, easy-to-clean environment.
- Metal panels and insulation that maintain comfort in both hot summers and frigid winters.
- Modular design that enables easy expansion as more veterans and dogs join the program.
- Fast construction timelines that helped keep the project on track and within budget.

> "The program is built on a simple yet powerful idea: to help heal veterans alongside animals who also need a second chance."

The all-galvanized steel building measures 18 x 66 feet, with a wall height of 10 feet. A center partition wall separates the exterior kennel walls from the interior.

The structure consists of 26-gauge PBR panels on the walls and roof, coated with PVDF (polyvinylidene fluoride) for durability, weather resistance, and low maintenance. The structure was insulated with 6-in. R-19 rollover insulation.

A cornerstone of healing

For nonprofits like Bravo Zulu House, choosing metal construction is not just about affordability; it is about longevity and flexibility. The result is a kennel facility that is not just functional but a cornerstone of healing.

This project shows how metal buildings serve both people and animals, creating environments that are healthy, safe, and adaptable. When a building makes this kind of impact, it becomes more than just walls and a roof. It becomes a catalyst for change. MCN

*With over 12 years of experience in the construction and design industry, **Helen Bednar** is the creative director at APX Construction Group, where she leads the design team to ensuring each project is both aesthetically stunning and highly functional.*

Clamped and connected

A no-penetration rooftop solar installation advances Kingspan's renewable energy goals in Mendota

A large, unobstructed standing seam metal roof helped make Kingspan's Mendota facility a strong candidate for rooftop solar.

By Anthony Capkun

SOURCE: DYNAMIC ENERGY

While solar PV systems have been installed on rooftops for decades, there are nonetheless numerous factors that go into achieving a successful installation. That said, the partnership between Kingspan Insulation North America, Dynamic Energy, and REC Solar makes it look easy.

A few months ago, the partners celebrated the completion of a new rooftop solar installation at Kingspan's Mendota, Ill., manufacturing facility. The 881-kW solar PV system was installed across roughly 50,000 sf of an existing standing seam metal roof, with racking attached directly to the seam ribs using clamps—no roof penetrations required.

"Installing solar on standing seam metal roofs is one of the most tested practices in the industry. As a result, the process is generally fairly *seamless*—pun intended—and Dynamic's experience is invaluable in ensuring the success of the project," said Jessica Nee, vice president of business development.

Dynamic served as the engineering, procurement and construction (EPC) firm for the Mendota project. The solar PV system itself is owned and operated by REC Solar through a 25-year power purchase agreement.

"From upfront design and engineering, to permitting and working with the utility during the project interconnection, to the construction of the facility and through financing, Dynamic aims to make the installation of solar a smooth process for the facility owner," Nee added.

The case for solar in Mendota

According to Christopher Davis, Kingspan Insulation's director of strategic projects and CI, the installation at the Mendota facility was driven by a combination of factors, including advancing the company's Planet Passionate sustainability goals, improving long-term energy cost management, and increasing operational resilience through greater energy independence. Additional factors included incentives through the State of Illinois and the 2025 federal tax credit.

"Rooftop solar was the right fit for the Mendota facility because it allowed us to leverage existing, unused roof space to generate clean energy onsite, reduce reliance on grid power, and immediately advance our sustainability and cost-management goals without impacting operations or requiring additional land use," Davis said.

Besides having a suitable roof, the owner also needed reliable partners to ensure success in an active manufacturing environment—partners who could deliver high-quality design, maintain strict safety standards, and coordinate installation with minimal disruption to ongoing operations.

Onsite in Mendota

"Kingspan Insulation had recently completed a project with Dynamic Energy at their facility in Winchester, Va., and as they move forward with their Planet Passionate goals of increasing renewable energy use and reducing Scope 1 and 2 emissions, the facility in Mendota was the perfect candidate to follow Winchester," said Dynamic's director of project delivery Neal Brewster.

Mendota has a large, unobstructed roof area in an electric utility zone with favorable renewable energy incentives and regulations, he added.

Dynamic has completed over 100 rooftop projects across the U.S. during its nearly 20-year history, Brewster continued. The Mendota project was a typical rooftop installation as it relates to standing seam roof installs, although it also benefited from being a large single elevation roof that is rectangular-shaped with minimal obstructions.

According to Brewster, these elements truly optimized the site for a solar installation.

For this project, Dynamic used a seam clamp—a pressure-clamped system that bolts to the seam and is torqued to a specific inch-pound value to match the wind uplift requirements of the location.

"This is a tried and true, tested solution to minimize the risk of water leakage during both installation and for the life of the system," Brewster said.

A structural engineer was engaged early in the project development phase to review the standing seam roof and the facility, with the primary goal of determining whether the roof could handle the load of the PV system. The engineer used test data from the clamps themselves to determine a system design that would meet the site-specific requirements, Brewster said.

"Doing a feasibility assessment with a structural engineer is always an important first step to verify the site is a suitable candidate for solar," Brewster advised. "It is also important to know the roof installation date. As a solar project typically has a life of 20-25 years, the roof should ideally be less than 10 years old for a solar installation."

The rooftop array was designed around local conditions, including wind uplift, thermal movement, and seasonal snow loads, as well as fire-access requirements.

It is also important to verify whether the local grid is able to interconnect the solar project. This is known as the hosting capacity of the site, Brewster explained, adding that Dynamic can easily assess the capacity for a facility owner.

"Once a baseline capacity had been verified, a detailed, site-specific design was produced to account for local conditions, like wind uplift, thermal movement, and seasonal snow loads," he said.

This confirmation and site-specific design would ensure the integrity and safety of the overall structure, and that the PV system would be successful over the long term.

"With that starting point, the main design criteria were ensuring adherence to codes and requirements of the local authority having jurisdiction," Brewster said.

The NFPA dictates the maximum dimensions of arrays and walkway requirements to ensure that fire departments can access all areas of the roof, he added. In addition, setbacks are required from any equipment on the roof, and from the perimeter of the facility.

Because the PV system was attached with seam clamps, the risk of water ingress was significantly minimized. Still, this is an existing roof, so did the solar PV system impact any roof warranty?

"Typically, when sites have an active roof warranty, a waiver is filed with the roof warrantor to allow for the installation of the solar PV system," Brewster explained. "Pre- and post-installation roof inspections are conducted by a certified, independent roofer and, once construction is complete, the roof warranty is re-authenticated."

Working over an active facility

Given that the majority of the work for the project took place on the roof, Dynamic's installers were not in the way of the company's daily operations within the building or on the ground. The biggest obstacles were during materials receiving, Brewster said, which involved pallets of solar modules that would be hoisted onto the roof with a crane or telehandler.

"Once that step is complete, we are largely out of the building owner's way, and there is minimal impact to daily operations other than coordination and communication of scheduling and progress," he said. "PV systems do typically require one electrical outage at the building to complete the electrical connection safely, but this usually takes place during off hours, typically on weekends or after business hours."

The standing seam roof provided a major advantage, as the inter-row spacing between modules is much smaller on a flush-mounted standing seam roof as opposed to a flat, tilt-mounted, membrane roof. Brewster said this can allow for a higher power density (kW/sf), leading to higher solar production. However, all of this is contingent on the roof inspection and structural assessment, so it is important to complete those steps as early in the process as possible.

Brewster also highlighted the extensive safety requirements that were followed because installers were working at height. Plus, solar panel installation also comes with electrical safety considerations.

"Dynamic has a full-time health, safety and quality inspector who continually ensures compliance, and safe and quality working practices, along with robust safety training standards specific to the type of work being performed at a site," he said.

The independent power producer

"REC Solar worked closely with Dynamic to help ensure the system is set up for long-term success and is well-positioned to deliver reliable performance over its life," said CEO Robb Jetty.

REC Solar is an independent power producer (IPP) that finances, owns, and operates distributed power systems. Under a power purchase agreement, REC Solar owns and operates the Mendota solar PV system for a 25-year term.

"In this role, we bring the perspective of a long-term owner and operator, with a focus on performance, reliability, and operational efficiency over time," Jetty said, adding that this ownership model reinforces the importance of consistent energy production and dependable system performance, which helps ensure the project delivers sustained value over the full 25-year term.

Solar PV made seamless

The Mendota installation is Kingspan's third in North America, following similar installations at its facilities in DeLand, Fla., and Winchester, Va. The company's sustainability program includes the goal of installing solar PV systems on all wholly owned sites and achieving 60% direct renewable energy use by 2030.

The system in Mendota is expected to generate roughly 1 million kWh of electricity annually, offsetting approximately 700 metric tons of CO2 emissions.

"Across our three North American rooftop solar installations, we've learned the importance of working with experienced, reliable partners—Dynamic Energy and REC have been great to work with—and the value of thoughtful planning to integrate solar seamlessly into active manufacturing operations," said Davis.

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Building with metal composite materials

Understanding the fabrication, performance, and appeal of MCM

By Ben Kweton

PHOTOS COURTESY SHEET METAL SUPPLY

The building owner at 1951 Landmeier in Elk Grove, Ill., took advantage of the village's facelift incentives to improve the appearance of the building with a lightweight aluminum rainscreen.

First developed in the 1960s and originally marketed as a strong, lightweight, aesthetic, and flat alternative for billboards and signage, MCM (metal composite material) gained architectural popularity for its use in facades by the 1980s.

After the original patent expired, the market has seen tremendous increases in global adoption, producers, innovation, and the availability of materials and coatings, making ACM (aluminum composite material) a popular choice for both new and retrofit construction.

In the spirit of both the architectural adage "the most sustainable building is the one we don't build" and the sustainable principles of "reuse, reduce, recycle," MCM has many attributes that put it at the top of the list for adaptive reuse and retrofit projects. Whether to assist in neighborhood rejuvenation, aesthetic appeal, corporate identity, or even building efficiency, MCM is a smart choice.

Deliberate specification, precise fabrication

MCM refers broadly to metal skins on both faces of a typically fire-retardant core and encompasses a full range of materials from aluminum and zinc to copper, titanium, and stainless steel. ACM is the most popular, affordable, and easily fabricated type of MCM. More "exotic" materials can be used, but often pose challenges for both the fabricator and the routing and cutting equipment.

Fabrication begins with CAD drawings of the facade and individual panels, which are then translated into cutting parameters. Panels are most commonly milled on large CNC table routers with multiple heads, which route a V-groove along bend lines while a second routing head cuts the perimeter to size, and may also drill fastening and weep holes.

Routed flat panels are then typically folded by hand, and an aluminum extrusion

is mounted to the perimeter. From this point, stiffeners are added as needed, and the panel is ready for installation.

Advantages of ACM

The aesthetic advantages of ACM include, first and foremost, the array of finishes available: white to black and everything in between, woodgrains, patterns, and anodized aluminum. There are many options to add curb appeal to an existing building and modernize its facade.

Modern technology has taken the traditional flat ACM wall and elevated its aesthetic by enabling curvature and borrowing origami-style folding techniques, applying them to composite materials to give otherwise mundane facades a bespoke, unique look. Custom perforations and designs can be cut into the material to further enhance identity and integrate LED backlighting, creating a stunning facade.

Fire, weather, and temperature resistance are key material advantages of ACM. All metal components in the assembly are aluminum, providing rust and corrosion resistance in humid climates, while common paint formulas—PVDF and FEVE (polyvinylidene fluoride and fluoroethylene vinyl ether)—are warrantied against chalking, peeling, and fading for decades, even in direct sunlight.

> "MCM has many attributes that put it at the top of the list for adaptive reuse and retrofit projects."

Substructural components can be designed and utilized to plumb decrepit or bowing walls. Minor adjustments can be made using a variety of widely available shims, while walls that need further adjustment can use more advanced multi-part components to bring an existing wall back to a flat plane. Several companies offer pultruded fiberglass girt options, in lieu of traditional galvanized steel, which prevent thermal bridging and enhance energy efficiency.

The use of an ACM rainscreen on an existing building also offers the opportunity to increase or add insulation to the exterior. If sustainability and reduced energy consumption are part of the project goals, this is a very economical way to achieve them.

Sustainability and efficiency

In addition to enhancing performance and sustainability, ACM is environmentally friendly. Most of the aluminum used in the face and backside of the panels comes from recycled materials, and scrap from a project can be sent to a specialized

ACM helped rejuvenate the curb appeal of this Walgreens in Wheeling, W.Va.

recycling plant for processing. At the end of its usable facade life, ACM panels can be easily removed from the wall, substructural components can be reused, and new ACM panels can be applied.

By nature, ACM is a very lightweight facade material. This reduces the structural requirements of the existing building and the seismic force on it. Lightweight panels reduce transportation costs and make them easy to move on a jobsite, enabling installation with minimal labor for maximum coverage.

Care and maintenance

While they are extremely low maintenance, ACM facades are not maintenance-free. The manufacturer's cleaning recommendations should always be followed but, in general, cleaning the facade once a year with water, mild soap, and non-abrasive cloths, brushes, or sponges satisfies this requirement.

Harsh solvents, alkaline cleaners, and abrasive cleaning tools should be avoided at all costs, as they can scratch, damage, or discolor the paint. If graffiti is a concern, approved graffiti removers are available and work very well, but should be tested in an unobtrusive area to ensure they do not damage the coating.

When cleaning, inspect any gaskets or sealants used in the panel assembly to ensure their integrity, and take note of any scratches or damage to the panels.

Additional ACM perks

Many municipalities offer grants for streetscape improvements and beautification. While some seek to reinvigorate their tired downtown restaurant and retail areas, others offer incentives in industrial tax increment financing (TIF) districts.

These grants typically help defer costs to the building owner through an application process and reimbursement after completion, and can help cover thousands of dollars in exterior improvements. Compared to simply painting an exterior, an ACM facade offers modern appeal with a plethora of finish options and potential performance enhancements.

ACM continues to be a frontrunner in modern facade design, whether for new construction or retrofit, and for good reasons. Developments are constantly driving the market and quality forward, with cores shifting away from the original thermoplastic polyethylene (PE) to a mineral-filled thermoplastic fire-retardant (FR) core.

ACM manufacturers continue to create better, safer materials, and the finishes continue to evolve as well. From the sheer number of standard and stocked colors to color-shifting finishes—even mimicking granite and marble—incorporating ACM into a facade has never been more appealing. MCN

Ben Kweton *is the president of Sheet Metal Supply Ltd. Founded in 1991, the company fabricates zinc and provides custom-formed perimeter edge systems, wall facades, flat-lock tiles, substructural components, ES-1-rated products, glazed-in panels, standing seam systems, and ACM/MCM/plate panels.*

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A PEMB engineer optimizes the secondary framing to satisfy structural loads while minimizing steel tonnage and cost.

"The Girt Problem"

Why one coordination issue continues to cost IMP contractors time and money

By Eric Wolfe

PHOTOS COURTESY BRUCHA

After nearly a decade working in the insulated metal panel industry and reviewing a wide range of projects across North America, one issue continues to surface more than any other.

Whether the project is a cold storage facility, food processing plant, manufacturing facility, distribution center, or commercial building, the same coordination issue appears again and again and, in almost every occurrence, it's discovered after the steel is already standing.

I call this recurring issue "The Girt Problem."

The building was designed correctly. The IMP was designed correctly. But nobody ever stopped to ask whether they were designed to work *together*.

Project size doesn't seem to matter, but coordination does. Contractors rarely lose money because they *don't* know how to install IMPs. They lose money because they're forced to solve coordination problems after construction has already started.

Once the steel is fabricated, crews are scheduled, lifts are rented, materials are ordered, and installation is underway. Even a relatively small coordination issue can ripple through the rest of the project, adding labor, delaying schedules, and creating conversations no contractor wants to have after the job has already been awarded.

The mismatch nobody planned for

Variable girt spacing isn't bad engineering but good engineering. A PEMB engineer optimizes the secondary framing to

The Girt Problem is one of the easiest to prevent yet one of the most expensive to discover once the steel is standing.

satisfy structural loads while minimizing steel tonnage and cost.

That's why girt spacing varies up the wall rather than holding a uniform dimension: you'll see one bay at three and a half feet, the next at five, the next at seven and a half, with each span tuned to the loads at that elevation. In a PEMB, that deliberate variation is exactly what creates the exposure.

At the same time, the IMP manufacturer is engineering a panel for structural performance, thermal performance, weather tightness, and appearance. The panel's thickness, its skin gauge, its width, and even the specific manufacturer all determine how far it can span between supports under the project's design loads.

Every IMP manufacturer publishes allowable spans. The problem is those numbers are often never compared against the PEMB girt layout until construction is already underway.

Both systems are well engineered. They just aren't always engineered together.

The building is optimized for the structure. The panel is optimized for the enclosure. Those two optimizations don't always align.

Imagine you're awarded the IMP package on a 200,000-sf distribution center. The PEMB package has been approved, steel fabrication is underway, and the insulated metal panels have been released. During a final drawing review, someone notices one section of wall exceeds the allowable span for the selected panel.

At that point there are no perfect options. You can add supplemental fastening and increase labor. You can through-fasten the wall and change the appearance of the finished building. Or you can upgrade to a heavier panel after the project has already been quoted. Every one of these solutions is more expensive than the coordination meeting that would have prevented it.

Once the steel is standing, every option gets more expensive

Supplemental fastening is often the first option considered. Structurally, it works. From a contractor's perspective, however, it changes the installation sequence. What should have been a one-sided installation now requires interior access, additional lifts, another crew, and more labor—a crew working the inside of the building at the same time as the crew on the outside.

That can dramatically increase crane or scissor-lift time, along with labor and equipment costs. Nobody budgets for a second installation strategy after the project has already been awarded.

Through-fastening may solve the structural issue, but it changes the appearance of the building by introducing exposed fastener heads into what was intended to be a clean architectural facade—something building owners rarely accept on a finished skin they're paying a premium for.

A thicker panel or heavier steel facings may solve the span issue, but they also increase material cost after the project has already been quoted. None of these solutions are wrong. They're simply expensive solutions to a coordination problem that should have been identified before the steel was fabricated.

Catching The Girt Problem early

Preventing The Girt Problem usually doesn't require redesigning the building. It requires coordination. In most cases, it starts with looking up the panel's published allowable spans and getting the designer, the building engineer, and the IMP manufacturer talking to each other before steel is fabricated.

Sometimes everything checks out. Sometimes a girt shifts a few inches. Sometimes the panel selection changes. Often, the correction isn't any additional steel, just a member moved slightly to land where the panel needs support. That doesn't produce a more expensive building. It produces one that's optimized for both the structure and the enclosure at the same time.

The important point is not which solution is chosen, but rather when the solution is chosen.

When those decisions happen during design, they're relatively inexpensive.

Coordination matters because of what it protects: the speed that makes IMPs worth specifying in the first place.

"Nobody budgets for a second installation strategy after the project has already been awarded."

When they happen after the steel is standing, they're almost always expensive.

Why this is worth protecting

The reason this coordination step matters so much is what it protects: the speed that makes IMPs worth specifying in the first place. An insulated metal panel takes three separate building components—the air, water, and vapor barrier, the insulation, and the finished cladding—and consolidates them into one engineered product. That consolidation happens in the factory, not in the field, which is what lets several trades' worth of work collapse into a single installed product.

Onsite, most of the labor goes into the trims and transitions at openings, corners, and terminations. But once that detailing is set, the field of the wall goes up very quickly. Fast enclosure means a tighter building sooner, reduced field labor, and a general contractor and owner who get the schedule they were promised.

Takeaways and the bottom line

The Girt Problem directly attacks IMPs' main benefit. Every late remedy either slows the installation, adds a second crew, or raises the material cost. Coordinate the supports upfront and you keep the advantage for which the system was specified.

Some quick tips for preventing The Girt Problem:

1. Start the conversation before steel fabrication.
2. Compare PEMB girt spacing with the selected IMP manufacturer's published allowable spans, and check both against what the project specification requires of the panel.
3. Get the IMP manufacturer involved early.
4. Price the installation you're actually going to build, not the one you hope to build.

After years in the industry, I've become convinced that The Girt Problem isn't really about girts but about coordination.

The building was designed correctly. The panel was designed correctly. Your job is to make sure they are designed to work together. If this article changes one habit, I hope it's this:

Before the steel is fabricated, ask one simple question: "Does the girt layout actually work for the panel that's about to be installed?"

The cheapest problem to fix is the one that hasn't happened yet. The Girt Problem is one of the easiest to prevent yet one of the most expensive to discover once the steel is standing. MCN

Eric Wolfe *is the director of engineering and technical services at Brucha Corp., where he oversees engineering, structural analysis, and technical development for insulated metal panel systems. With nearly a decade of experience in the IMP industry, he serves on the Insulated Metal Panel Association (IMPA) Technical Committee, contributing to the advancement of industry standards and technical best practices.*

Photo shows a proprietary air barrier system being installed in a metal building. The air barrier material (shown in green) is placed within the thermal envelope or on the exterior side behind the sheeting. The system provides a fully sealed airtight envelope, meets the IECC and ASHRAE requirements, and is more effective than a standard exposed vapor retarder.

Sealing the envelope

Controlling air leakage in metal building envelopes

By Bill Beals
SOURCE: SUPPLIED

Modern metal buildings typically have a lifespan of 50 years or more, which means the envelope has to perform for the long haul, not just on day one. Two common challenges that metal buildings face are air leaking through the envelope and insulation systems that do not stay sealed or intact over time.

To prevent these issues, builders are turning to continuous air barrier systems that control air movement, maintain performance, and support long-term durability.

At the same time, energy performance requirements for metal buildings continue to increase with each new code cycle. Currently, the International Energy Conservation Code (IECC) and ASHRAE 90.1, *Energy standard for sites and buildings except low-rise residential buildings*, both require an air barrier in the thermal envelope, and that it be clearly identified and detailed in the construction drawings.

Where metal buildings commonly leak air

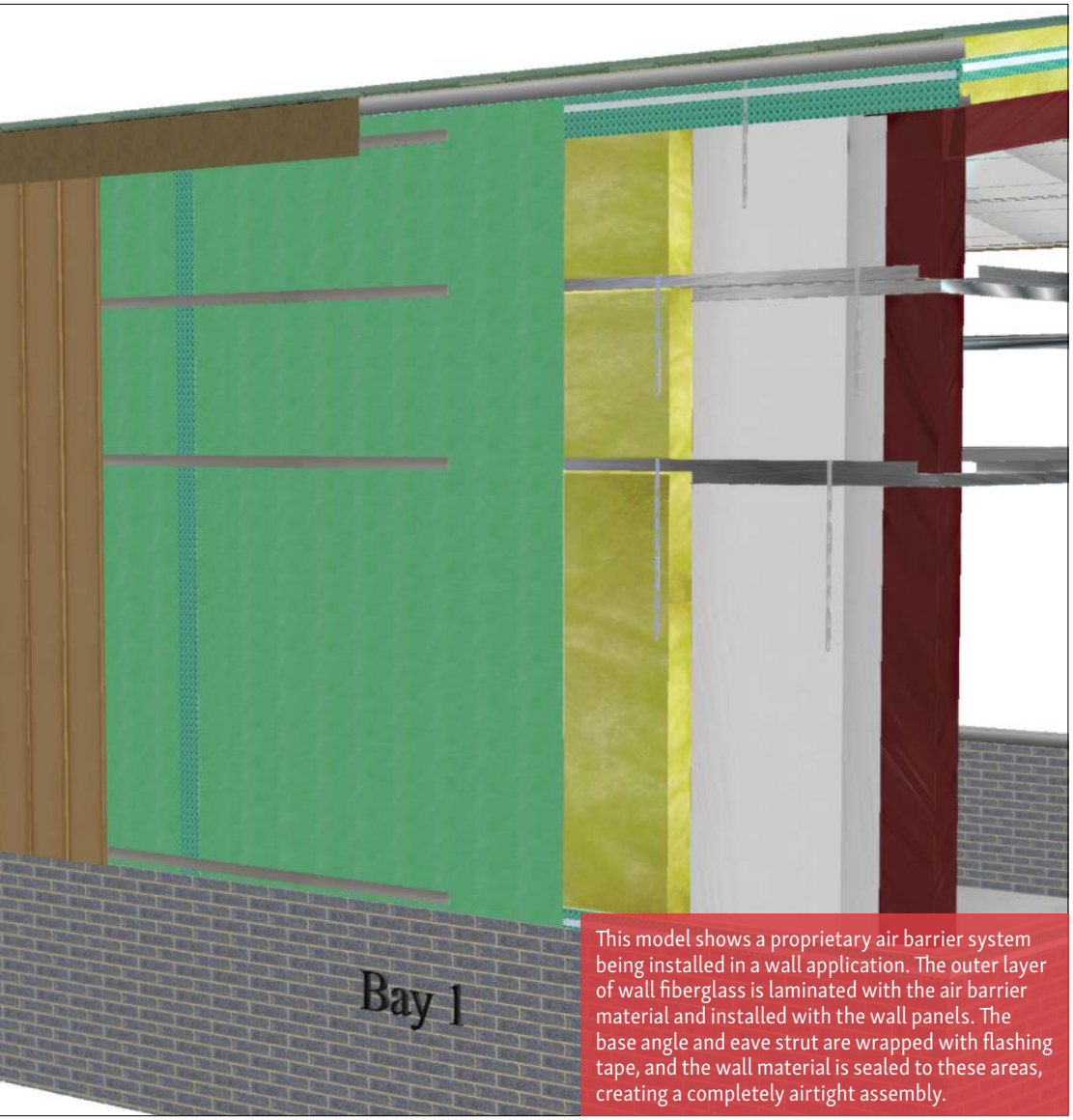
Typically, metal buildings do not leak through the middle of a wall or roof panel. Instead, they are more likely to leak at the transition and penetration points. The most common problem areas include roof-to-wall transitions, wall-to-foundation transitions, corners, and penetrations for vents, louvers, and fenestrations. Each of these locations requires careful detailing to prevent air leakage and thermal performance failure.

These details can be particularly challenging because constructing a building's envelope often involves multiple trades and systems, including roof and wall panels, fiberglass or liner systems, doors, windows, louvers, and mechanical penetrations. If the air barrier is not continuous across all of these interfaces, the building will leak air, even when the components are well-made.

The four layers of defense

To prevent leakage and infiltration, commercial buildings have four control layers that all work together.

Starting from the exterior, the first layer is the weather barrier, which prevents water from penetrating the envelope. Beneath the weather barrier is the second layer, the air barrier.



This model shows a proprietary air barrier system being installed in a wall application. The outer layer of wall fiberglass is laminated with the air barrier material and installed with the wall panels. The base angle and eave strut are wrapped with flashing tape, and the wall material is sealed to these areas, creating a completely airtight assembly.

In some assemblies, the air barrier can also serve as the weather barrier, but the specific construction type will determine whether these layers are combined or separate.

The third layer is the thermal layer, where the insulation is installed. When the weather and air barrier layers are properly designed and installed, the thermal layer can perform as intended. The fourth layer is the vapor retarder. In most climate zones, the vapor retarder is installed facing the warm side, which is usually the interior.

There have been some changes to the classification of vapor retarders in Climate Zones 1-3, but a vapor retarder is still required.

All four control layers must be carefully detailed, and each product selected for the design must work with the others. Critically, they must be able to seal into one another without gaps and withstand building movement and pressure changes over time without breaking or losing continuity.

Material selection is crucial to the overall performance of each layer. Because the outermost layer is the first line of defense against air leakage, it is important to choose a membrane that can serve as the weather barrier, the air barrier or, in some cases, both.

Perforated vs. non-perforated membranes

There are two main types of building air barrier membranes, perforated and non-perforated, and understanding how each one behaves under capillary action is essential. For example, when wind-driven rain wets the outer surface of a building, water naturally moves toward drier areas, including the interior.

In most residential construction, and even some commercial projects, perforated housewraps are often used to wrap the exterior of the building. The small holes, or perforations, in the membrane lower the permeance rating and allow the assembly to "breathe," but they also make it easier for air and moisture vapor to move through the material.

As a result, in systems that rely on perforated membranes, capillary movement can draw moisture into the wall or roof assembly through porous materials such as wood sheathing, drywall, and other products, potentially leading to failures down the road.

In metal buildings, non-perforated flexible membranes with higher permeance ratings—usually greater than 10 perms when tested in accordance with ASTM E96, *Standard test methods for water vapor transmission of materials*—provide a better balance for many assemblies, since their lack of holes helps maintain air tightness and reduces the chance of moisture buildup within the envelope.

What qualifies as an air barrier?

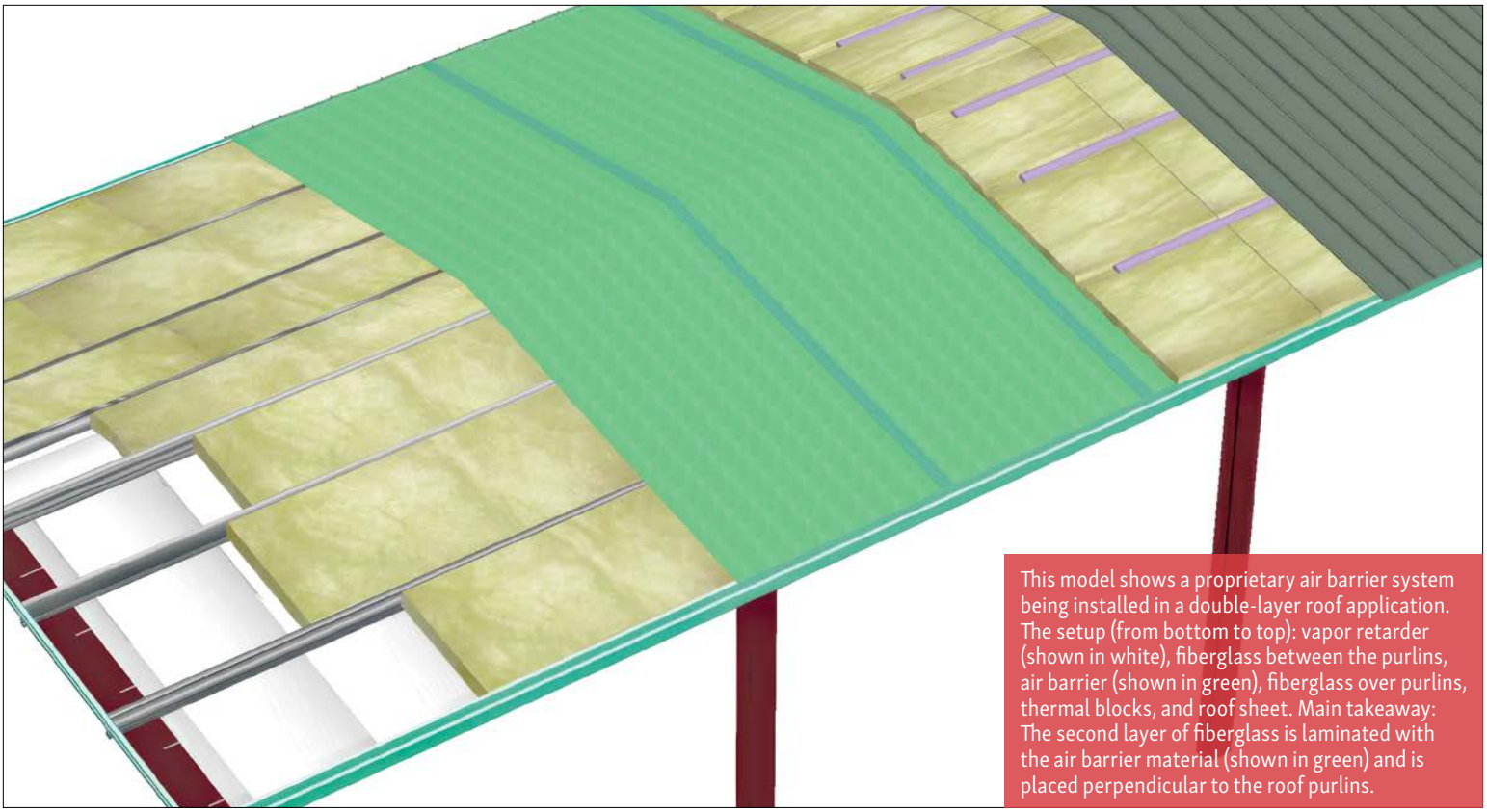
Air barrier systems essentially "wrap" the building shell and help protect it from the effects of air leakage. They create a barrier not only to water vapor, but also to pollutants entering either the building or the building enclosure, such as suspended particulates, dust, insects, and odors.

IECC and ASHRAE 90.1 both list materials that can serve as air barriers. To qualify, a material must meet the maximum allowable air permeance limits of 0.004 cfm/sf at 1.57 lb/sf, when tested in accordance with ASTM E2178, *Standard test method for air permeance of building materials.*

Today, most air barriers on the market meet these criteria. In some metal buildings, the vapor retarder may also act as the air barrier. Board insulation systems and insulated metal panels can also function as part of an air barrier assembly when designed and tested for that purpose.

Air barrier placement in the assembly

In metal buildings, there are three basic placement options for the air barrier. It may be placed on the interior side of the envelope, often serving as the vapor



This model shows a proprietary air barrier system being installed in a double-layer roof application. The setup (from bottom to top): vapor retarder (shown in white), fiberglass between the purlins, air barrier (shown in green), fiberglass over purlins, thermal blocks, and roof sheet. Main takeaway: The second layer of fiberglass is laminated with the air barrier material (shown in green) and is placed perpendicular to the roof purlins.

retarder. It could be installed on the exterior side of the envelope behind the metal siding, for example.

A third option is to locate the air barrier within the assembly itself or any combination of the three. The best location depends on the building type, climate, and the overall wall or roof design. (The Air Barrier Association of America [ABAA] is a great resource for information on air barrier materials, tested assemblies, and best practices across multiple construction types.)

Achieving a code-compliant system, however, requires more than just selecting the right material. Manufacturers' instructions are crucial because field installation errors, such as unsealed transitions, untaped laps, or incompatible tapes, can undermine the entire envelope, even when the products themselves are engineered to perform.

The next generation of air barriers

New air barrier systems are being designed specifically with metal buildings in mind. Systems currently available for metal buildings may incorporate a dedicated air barrier layer in addition to the traditional vapor retarder. In such assemblies, a membrane wraps the exterior of the building much like a housewrap, but it is selected and detailed to meet air barrier performance criteria.

In that system, the air barrier material is placed within the thermal envelope or on the exterior side behind the sheeting, which protects it from damage by trade workers and provides a fully sealed, airtight envelope.

Wind, mechanical systems, and exhaust fans can also create positive and negative pressures that drive air through the envelope. When that air carries water vapor and encounters cold surfaces at or below the dew point, condensation can occur inside the assembly.

Next-generation air barrier systems are designed to interrupt this chain of events, keeping uncontrolled air movement in check, supporting consistent insulation performance, and reducing the risk of condensation-related problems.

Air barrier compliance changes under IECC 2021 and 2024

Air barrier requirements have changed in recent IECC cycles. The compliance path was relatively simple in previous code cycles as builders had three approaches from which they could choose: materials, assembly, or whole-building blower door testing.

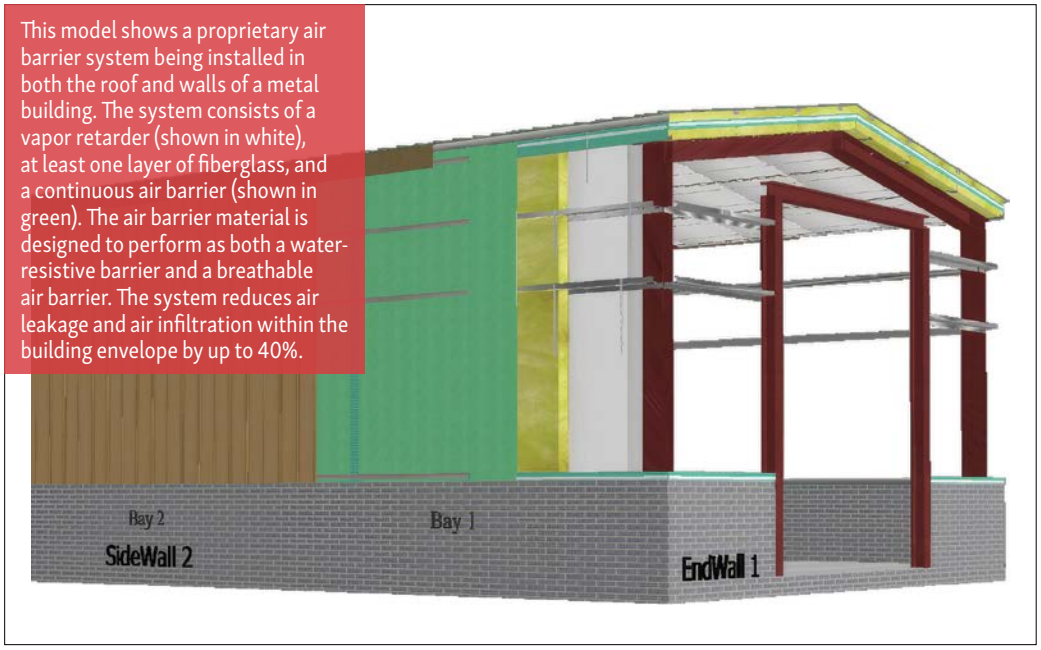
Most chose the materials approach, selecting the material that would serve as the air barrier, detailing it accordingly, and moving forward.

Under IECC 2021 and 2024, however, builders have two compliance methods, and both require third-party testing or verification.

Compliance method #1: Visual verification

This method is almost always the easier choice for a large non-residential commercial building. It requires review of the important components prior to close-in, allowing corrections to be carried out and documented:

- Design review: A registered design professional or approved agency reviews the construction documents to ensure the air barrier details are clearly shown and compliant with the code, including properly selected air barrier and sealing materials.
- Site observation: An approved party inspects the installation of the continuous air barrier and its components during construction.
- Documentation: Any deficiencies found during either the design review or site observation must be documented, along with the details of the corrective



This model shows a proprietary air barrier system being installed in both the roof and walls of a metal building. The system consists of a vapor retarder (shown in white), at least one layer of fiberglass, and a continuous air barrier (shown in green). The air barrier material is designed to perform as both a water-resistive barrier and a breathable air barrier. The system reduces air leakage and air infiltration within the building envelope by up to 40%.

measures taken. In most cases, a final building envelope commissioning report is required to be delivered to the building owner and code official, which includes the equivalent of an issues log and corrective actions.

Compliance method #2: Whole building testing/blower door testing

This may be a risk for large commercial buildings because the project team won't know if they are in compliance until the test is performed. Passing a whole building blower door test requires careful consideration of air barrier details, including installation verification.

Blower door tests may sound intimidating, but building envelopes with proper detailing of all fenestrations and correct installation should not have any problems meeting the whole-building air leakage rate of 0.35 cfm/sf specified in IECC 2024.

Metal buildings tend to perform very well, with results falling well within the allowable leakage rate. Should your building fail the blower door test, then you must make all repairs until it passes. The Metal Building Manufacturers Association (MBMA) has conducted many blower door tests on metal buildings, and has published a best practices guide for the industry.

Sealing the future of metal buildings

Success starts at the design phase with an air barrier system that is properly designed and detailed for all areas of concern. Onsite communication during construction is also critical to ensure all trades understand the sequencing of the air barrier, including all fenestrations and transitions.

As energy codes tighten, continuous air barrier systems are becoming a core part of metal building design. Looking ahead, the metal buildings that perform the best over their full service life will be the ones where air control is planned from the start, with the air barrier location clearly defined, materials selected and tested to meet code, and insulation systems and envelope details all working together to limit air leakage, manage moisture, and protect the building for the long haul. MCN

Bill Beals, *district manager of Therm-All, is a 40-year veteran of the metal building industry and a contributing member of several committees, including the Metal Building Manufacturers Association's Energy Committee and the National Insulation Association's Laminators Committee. Bill also belongs to ASHRAE and the International Code Council (ICC). He has contributed to over 100 articles and reference guides on commercial energy codes, and has instructed AIA-accredited courses for over eight years. Bill was inducted into MCN's Hall of Fame in 2024.*

Curtain walls: prefab versus field assembly

By John Trainor

SOURCE: ARCHITECTURAL GRILLES AND SUNSHADES

The U.S. construction industry is projected to require hundreds of thousands of new workers every year just to keep pace with demand. According to Associated Builders and Contractors, we will need 349,000 net new workers this year, rising to 456,000 by 2027.

Industry surveys show nearly 94% of contractors report difficulty filling open roles, 88% of construction firms face hiring challenges, and 45% report project delays specifically due to labor shortages.

Broader labor data suggests the industry will need 1.1 million more construction workers by 2028 to meet demand—a projection driven largely by retirements and underfilled field positions.

As the industry continues to struggle to find qualified field labor, it has forced contractors and developers to look at methods for reducing the amount of onsite labor required.

For example, the traditional stick-built curtain wall requires a large field crew because it is assembled and glazed in the field. The installation process typically sees ladder frames shipped to the site, with every other bay shipped as knock-down and assembled in the field.

After the frames are installed and the system is sealed per the manufacturer's instructions, the frames are ready for glazing. The glass is installed with either "traditional" pressure plates or structurally glazed. If the project requires structural glazing, the glass is held in place by temporary pressure plates for roughly 30 days while the structural silicone cures. This process requires the installer to come back and remove the temporary pressure plates and caulk the weather seal.

An alternative to stick-built is to use unitized curtain wall, which is fabricated as pre-assembled, factory-glazed panels. Shifting the fabrication and a larger portion of assembly to an offsite manufacturing location can improve efficiency and quality while minimizing the onsite labor required.

While a unitized curtain wall does increase the amount of shop labor and number of parts needed to complete the system, the work is being carried out under controlled temperatures in a consistent work area.

Controlled temperatures allow for predictable curing time and proper adhesion of the structural silicone. A consistent work area helps improve the quality of the system. A shop is almost always cleaner than a jobsite, which helps prevent dust and dirt from contaminating the seals.

Prefab allows all the bays to be assembled and glazed uniformly, whereas traditional curtain walls require installers to use scaffolding, boom lifts, or swing stages under a myriad of field conditions.

Properly coordinated, the prefab curtain wall can be fabricated, glazed, bunked, and stored while the building itself is still being worked on. When the structure is complete, the prefab curtain wall components allow for faster enclosure. In fact, this is often done to compress the construction schedule.

Labor shortages are compelling construction companies to seek new ways of getting the job done. While selecting the best curtain wall solution still depends on project-specific factors, prefabricated building systems are becoming an increasingly important strategy for reducing onsite labor requirements. MCN

***John Trainor** is the president of Architectural Grilles and Sunshades, which specializes in custom sunshades, grilles, and other aluminum architectural elements. John founded AGS in 2003 and has over 30 years of experience in architectural metal design.*

Specifying cool roof-rated colors, such as the stone-coated steel option shown here, can help keep homes cooler in hot weather, reducing reliance on air-conditioning.

Cooler by design

How reflective surfaces and ventilated assemblies can improve roof thermal performance

By Robin Anderson

PHOTOS: WESTLAKE ROYAL BUILDING PRODUCTS

As energy performance expectations rise, roofing contractors are increasingly being asked to balance durability, style, and thermal performance within a single roof assembly. Roofing systems designed to better manage heat transfer can help reduce cooling demand, save on energy costs, and support long-term building performance.

Metal roof systems are often specified for energy-conscious homes, thanks to their reflectivity and resiliency. However, thermal performance is influenced by more than just the roofing material itself. While reflective roofing surfaces are an important component, factors such as ventilation, airflow, and overall roof assembly design can have an equally important impact on thermal performance.

Reflective roofing surfaces

One approach to improving thermal performance is to use roofing materials that are designed to reflect more of the sun's rays. The Cool Roof Rating Council (CRRC) lists products that have been rigorously tested for their solar reflectance and thermal emittance.

CRRC defines solar reflectance (SR) as the amount of solar energy a roof reflects, while thermal emittance (TE) measures how well the roof releases heat. The Solar Reflectance Index (SRI) combines SR and TE into one value, allowing roofing products to be compared by how effectively they stay cool in the sun and reduce heat flow into a building.

SR and TE are used to calculate a roofing material's surface temperature under ASTM E1980 conditions. CRRC-1 Roof Product Rating Program Manual requirements may also apply.

SRI is then determined by comparing that calculated surface temperature with standard white and black materials under the same conditions.

For example, CRRC notes that a standard white material may have an SR of 0.80, TE of 0.90, and SRI of 100, while a standard black material may have an SR of 0.05, TE of 0.90, and SRI of 0.

Many high-performing roofing materials are available in cool roof colors that feature specialized pigments that help reflect the sun's heat back into the atmosphere. The level of reflectance varies from product to product; one stone-coated steel product, for instance, is listed to reflect as much as 53% of the sun's solar energy compared to 10% for a standard asphalt shingle.

By providing effective temperature regulation, high-reflectance color options keep homes cooler in hot weather. This can reduce the owner's reliance on air-conditioning and lower energy costs, and could potentially extend the life of the cooling system itself. Similarly, the lower surface temperature of a cool roof can help reduce heat-related stress on the roof assembly.

Ventilated roofing assemblies and systems thinking

While reflective surfaces can help increase solar reflection, ventilation within the roof

The Summergate condo re-roofing project had a direct, positive impact on energy efficiency.

assembly itself can play an important role in thermal management. For example, such a system could consist of:

- Reflective stone-coated steel panels.
- A thermally insulating, reflective roof underlayment.
- An elevated batten system that allows air to circulate and provides a path for upward airflow.
- A continuous ridge vent that provides a path for circulating air to exit the roof system.

In this example, the components work together to allow rising warm air to exit through the ridge vent, drawing outside ambient air across the roof deck. This continuous airflow creates a cooler attic and living space in the home, and reduces AC usage.

The Summergate condominium project in Orlando, Fla., was reroofed with stone-coated steel using a cool roof-rated color. The switch had a direct impact on energy efficiency, according to Nick Johnson, president of the Summergate Community Association.

"The first thing that I noticed as a third-floor unit owner was energy decreases. Right in the middle of the summer, my energy bill was almost $100 less than it normally would have been, and that's still tracking throughout the year."

Testing by Oak Ridge National Laboratory shows that elevated battens on a dark roof are just as important as reflective roofs in achieving energy efficiency. The lab's 12-month study on the effects of infrared-reflective (IRR) pigments versus metal roofs installed with an airspace showed above-sheathing ventilation can reduce heat flow into a building by nearly 30%.

The roofing system is the first line of defense in the face of extreme weather, and it can provide a similar defense against heat. Contractors can help increase energy efficiencies by considering the full roof assembly, from the reflectivity of the color to ventilation, airflow management, underlayment selection, and installation quality—all without sacrificing aesthetics.

Robin Anderson *is technical and strategy development manager for Westlake Royal Building Products, Roofing Solutions.*

The efficiencies of in-plant production become more important once you start targeting agricultural, commercial, or other higher-volume markets.

Shop versus jobsite rollforming

Choosing the right tool for the job

By MCN Staff

PHOTOS COURTESY METAL ROLLFORMING SYSTEMS

Jobsite rollforming and in-plant rollforming both have a place in the metal construction industry. The right choice depends on the application, panel profile, target customer, available labor, and production volume required.

And to help guide you toward the choice that is right for you, Metal Construction News spoke with Bill Griffin, president of Metal Rollforming Systems, who tells us that it's not about one method being universally better than the other. Every tool has a job, and certain jobs require specialized tools.

"Ultimately, your customer's needs will dictate which tool you use to best meet those needs," Bill says.

When jobsite rollforming makes sense

Jobsite rollforming is most useful when logistics make transporting finished panels difficult or impractical. A common threshold is panel length. A strong case can be made for jobsite rollforming once panels exceed roughly 53 feet, because transportation may require additional permits, flagging, signage, or other oversized-load considerations.

Long panels are one of the clearest applications for onsite forming. Remote projects can also benefit, especially where access is challenging or where delivering finished panels creates additional handling risk. Smaller custom roofing jobs may also be well suited for onsite production because a contractor can remain flexible without investing in the overhead of a full plant operation.

For a residential roofing contractor or small shop, onsite rollforming can be a practical and cost-effective entry point. It allows a company to service customers at a lower facility cost, less inventory, and a smaller operational footprint.

Advantage of in-plant production

In most higher-volume applications, in-plant rollforming remains the stronger option. A plant environment provides better environmental control, higher production speeds, better access to coil inventory, and more consistent quality control.

The speed difference alone is significant. An in-plant line may run 150 to 200 lineal feet per minute, while an onsite machine may run closer to 30 to 50 lineal feet per minute. That difference affects labor, scheduling, throughput, and the ability to support larger customers.

In many cases, logistics also favor plant production. A delivery truck carrying plant-formed panels can deliver 40,000 pounds or more of finished product. A truck-and-trailer setup for onsite rollforming may be limited to roughly 10,000 pounds of coil and equipment. Once a company begins targeting agricultural, commercial, or other higher-volume markets, the efficiencies of in-plant production become more important.

Through-fastened panels, which still represent the bulk of the metal roofing and siding industry, are also better suited to in-plant production. The shop-versus-

Manufacturers should take steps to protect panels during loading, transit, and unloading.

jobsite comparison is most relevant with concealed-fastener profiles, such as snap-lock and standing seam. Through-fastened profiles are efficient to produce, stack, package, transport, and deliver in volume from a plant.

The growth path from onsite to in-plant

For many companies, the move from onsite rollforming to in-plant production is not a single leap but a phased process. It may start with the desire to form your own trim on a CNC brake, then progress to slitting, and soon you reach the point where you have the space, inventory, customer base, and staff to support the leap.

"That transition point is different for every company, but is usually driven by volume, customer mix, labor efficiency, and the desire to serve broader markets," Bill notes.

A contractor focused on residential work may operate successfully with a small shop and portable machines. A company pursuing agricultural, commercial, or distribution work will usually need the speed, inventory, and consistency of an in-plant operation.

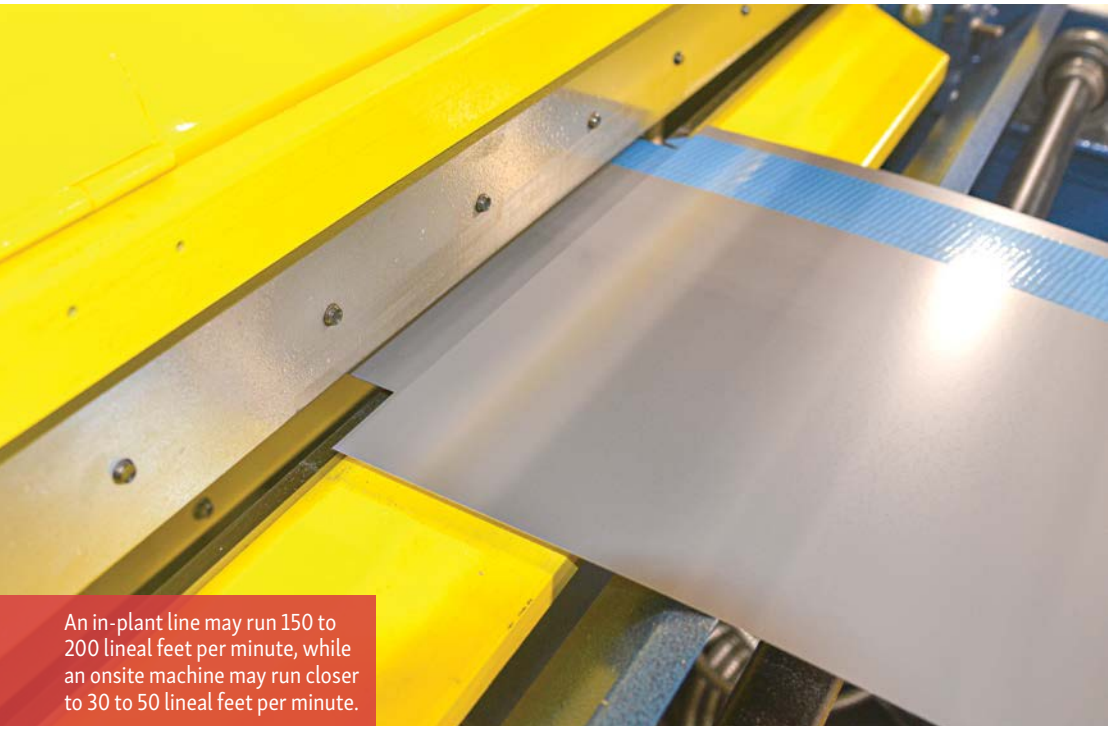
Transport damage vs. field variability

One of the most common arguments in favor of jobsite rollforming is in-plant product damage during transport, and this is a serious consideration. Finished snap-lock and standing seam panels require careful packaging. Manufacturers should use protective tape or film on vulnerable edges where rubbing can occur, along with bundle crates or other packaging methods to protect the panels during loading, transit, and unloading.

Those precautions do add time and cost, but they are often nominal compared with the overall economics of the job.

Onsite rollforming eliminates some transportation risks but introduces new quality-control challenges.

Field conditions are harder to control than a plant environment. The ground may



An in-plant line may run 150 to 200 lineal feet per minute, while an onsite machine may run closer to 30 to 50 lineal feet per minute.

"For many companies, the move from onsite rollforming to in-plant production is not a single leap but a phased process."

not be level. The weather may change. Coil handling can be more difficult. Dust, mud, water, and wind can all affect the process.

The field operator may also be under pressure to produce panels while working around other trades and site constraints. Additionally, he may not fully understand machine setup, adjustment, coil handling, and troubleshooting, resulting in poor-quality product.

While not impossible, it is much more difficult to make high-quality product in the field.

Labor and operator skill

Whether a machine is operating in the plant or on a jobsite, it needs a competent operator. This is becoming a larger issue as manufacturers and contractors continue to struggle finding and retaining skilled employees.

The productivity difference between the two methods matters. If an in-plant line can produce several times the output of a portable jobsite machine, the labor efficiency can be substantial. It may not translate perfectly one-to-one, but it does reduce the number of skilled operators required to produce the same amount of material.

With jobsite rollforming, the operator's job also extends beyond making panels. They may need to haul the machine, transport coil, set up the trailer, stage material, manage site conditions, run the panels, troubleshoot problems, and pack everything back up. In an eight-hour day, the machine's actual runtime may only be a few hours.

Transportation can also create staffing challenges. Once a truck-and-trailer setup begins hauling meaningful amounts of coil and equipment, the requirements for someone with a commercial driver's license (CDL) may become an issue.

"That means a contractor may need someone who is not only a competent machine operator, but also properly licensed to transport the equipment and material," Bill points out.

Weather, equipment life, and machine design

As mentioned earlier, weather can be a challenge for onsite production. Manufacturing cannot always stop because rain moves in, but transporting equipment and coil while exposed to the elements is never ideal. No amount of tarping or weatherproofing can completely eliminate the risk of water penetration. If moisture works its way into coil, it can create paint issues and potential warranty concerns.

Equipment life is another consideration. Portable machines must balance durability, weight, mobility, and setup requirements. They are exposed to road vibration, dirt, weather, and jobsite conditions. In-plant lines can be built heavier, more precise, and more robust because they are not being transported.

Several factors matter for contractors choosing a portable machine, starting with weight and potential CDL requirements. You also want versatility, interchangeable cartridges, notching options, and factory support.

The priorities are somewhat different for in-plant equipment. Most machines sold today are pre-cut rather than older, post-cut technology (which has largely gone by the wayside). Pre-cut is cleaner and much more versatile. For in-plant production, look for pre-cut capability, speed, and future expansion options.

You decide the best tool for the job

"In the end, shop versus jobsite rollforming is not a debate with a single answer. It is about matching the equipment and production model to the customer, market, and work being performed," Bill advises.

It really hinges on the contractor's business model. A residential contractor serving smaller custom jobs may be well served by onsite flexibility. A company looking to grow into agricultural, commercial, or higher-volume production will likely need the speed, control, inventory, and consistency of an in-plant operation.

Because both onsite and in-plant rollforming equipment can have a long service life, you'll be entering into a long-term relationship with whichever manufacturer you choose ... so do your homework and choose wisely. MCN

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SOURCE: SNIDE12 / ADOBE STOCK

Kansas needs skilled manufacturing workers. Bradbury aims to help.

This fall, the Bradbury School of Manufacturing and Innovation (BSMI) is set to launch at Central Christian College of Kansas (CCCK) in McPherson, tackling the demand for skilled manufacturing workers in the state.

BSMI will prepare students for high-skill careers in modern manufacturing through hands-on training, industry-aligned instruction, and stackable credentials that lead from technical foundations to leadership-level preparation, says the college.

According to The Bradbury Group—a manufacturer of automated coil processing and rollforming systems—Kansas continues to grow as a manufacturing hub, with increasing demand for skilled workers every year. BSMI is being developed specifically to address this need.

BSMI students will gain experience in a range of areas, including:

- Automation and robotics
- Mechatronics
- Manual machining
- Production systems
- Precision machining and CNC technology
- Process optimization

Further, the school will offer multiple entry and exit points for students at different stages of their journey, including:

- Industry-recognized certificates
- Associate's degree in Manufacturing Technology
- Bachelor's degree in Manufacturing Technology

"We have designed the program alongside industry leaders to ensure that students are being equipped to hit the ground running as they enter the workforce," said program director Kash Farney.

Farney says the key strength of the program is its close partnership with industry leaders from across the nation. BSMI is made possible through a partnership with the Bradbury Family Foundation.

"While BSMI will directly benefit students and the Bradbury legacy, its impact will extend far beyond campus. By developing a stronger, more skilled workforce, the program will support manufacturers across Kansas and contribute to the state's economic growth," Farney added.


SOURCE: ATAS INTERNATIONAL

First place ATAS projects showcase metal at its best

ATAS International—a manufacturer of metal roofing, wall cladding, ceilings, perimeter edge metal, and accessories—announced the first place winners of its 2025 Project of the Year competition.

"Congratulations to the winners of the 2025 ATAS Project of the Year Awards," said Jim Bush, vice president of sales and marketing. "These outstanding projects reflect the innovation and craftsmanship that continue to advance our industry."

Plant Hall Music Room in Tampa, Fla. (photo), received first place under the **Commercial Roofs** category. Stainless steel Field-Lok panels with a 1.5-in. seam height were installed on this project. Project participants included Rowe Architects, Quality Roofing Inc. (metal roof panels installer), and Spec Building Materials (distributor).

Brookley Flats in Boston, Mass., took first place in the **Commercial Walls** category, where Rigid Wall II panels in .040 aluminum were used to clad these affordable condominiums in the Jamaica Plain neighborhood. Six colors were used to create the unique design. The building was designed by JGE Architecture & Design. Longarone Exteriors was the installer, and the panels were purchased through Kamco Supply.

A private residence in Margate City, N.J., scored first in the **Residential Roofs** category, where .040 aluminum standing seam metal panels were installed. The house was designed by TJC Architect while Leeds Builders acted as the general contractor. The panels were installed by D&A Home Improvement, and the distributor was ABC Supply Company.

Under the **Residential Walls** category, a private residence in Harsens Island, Mich., took first place. DesignTeam Plus Inc. designed this custom home, which features .032 aluminum Opaline panels in Classic Bronze. The panels were purchased through Core Supply.

The International Dark Sky Discovery Center in Fountain Hills, Az. (opening January 2027), took first in the **Accents** category. Swaback Architects & Planners designed a dome manufactured from luned and curved .040 aluminum panels in a custom color. Global Roofing Group installed the panels, and McCarthy Building Company served as GC on the project.

Taking first place in the **Sustainable** category is the TransEdge modification center in Allentown, Pa. Isoleren ML steel-faced insulated metal panels in Charcoal Gray, and SterraCore aluminum composite material panels in Brite Red and Dove Gray, were installed by Schlosser Steel Buildings. MKSD Architects was the architect for the project, and Boyle Construction was the GC.

Ewing Town Center in Ewing, N.J., won first place in the **Interiors** category. City Interiors installed Lineair Linear ceiling panels in the Birch woodgrain finish. FM Construction Group was the general contractor, and the distributor was Fantin Supply House.

"The diversity and creative application of metal panels highlights the durability, aesthetics, and adaptability that metal contributes to today's architectural design and construction," Bush added.

More photos on MCN's website, tinyurl.com/pbnwjs6z.

SOURCE: META

Meta's America's Workforce Academy targets data center construction labor shortage

With its "America's Workforce Academy," Meta aims to create construction-ready career pathways for data center construction technicians. The program will launch in Louisiana, Ohio, Indiana, and Texas as the 2026 pilot states.

"The AI revolution is bringing change but also historic opportunities," said Meta president and vice chair Dina Powell McCormick. "Skilled workers electrified rural America one pole at a time. They manned the factories that built the arsenal that won World War II. Now a new generation will pour the foundations and lay the fiber that secures American strength in this new age."

The program is a $115 million investment in the next generation of construction professionals that includes a five-week training program and a job offer from contractors working on Meta projects at the conclusion of the program.

Meta is partnering with the National Urban League, Associated Builders and Contractors, and CBRE, alongside community partners that include the U.S. Hispanic Chamber of Commerce, STRIVE, Boone County Economic Development Corp., Richland Parish Chamber of Commerce, Workforce Solutions Borderplex, and Ohio Chamber of Commerce.

"This new program is an innovative talent solution that is a critical part of addressing the construction industry's ongoing workforce shortage and creates an accelerated, new-entrant strategy for jobseekers," said ABC president and CEO Michael Bellaman.

Once an online application process is complete, scholarships, travel, housing, and stipends for living expenses are granted to qualified jobseekers. They will then participate in career-readiness and safety training, followed by five weeks of hands-on education, which includes core and craft training.

The academy partnership aims to:

- Establish scalable, repeatable workforce development models that align industry, training providers, and workforce systems to meet ongoing demand.
- Provide standardized, industry-aligned training that equips participants with the skills, safety knowledge, and jobsite readiness needed to contribute quickly and effectively.
- Prepare participants to meet industry and project-specific safety standards and contribute productively on the jobsite from the outset.

"The sustained demand for data center construction technicians means the industry needs an all-of-the-above approach to address this shortage and grow the construction talent pool," Bellaman added.

SOURCE: BERIT KESSLER / ADOBE STOCK

Construction materials prices surge 2.6% in May, up nearly 10% year over year

Construction input prices increased 2.6% in May 2026 from the previous month, according to an Associated Builders and Contractors analysis of U.S. Bureau of Labor Statistics Producer Price Index data.

"Construction input prices surged again in May and are now up nearly 10% year over year," said ABC chief economist Anirban Basu.

Compared to one year ago, overall construction materials prices are 9.6% higher while nonresidential construction input prices are 9.7% higher, the latter increasing 2.4% for the month.

Prices rose in two of the three energy subcategories last month. Crude petroleum prices increased 11.8% and unprocessed energy materials increased 6.9%. Natural gas prices were down 18.2% in May.

"Oil prices, pushed higher by the ongoing Iran conflict, made a significant contribution to the rise in overall materials prices, yet the greater concern is the continuing price growth in tariff-affected inputs like iron, steel, and copper," Basu added.

While contractors remain optimistic that profit margins will expand over the next six months, according to ABC's Construction Confidence Index, Basu believes materials price escalation and "stubbornly high borrowing costs" could eventually weigh on profitability.

SOURCE: MALCO GROUP

Malco's safety team accepts the 2025 Governor's Workplace Safety Award. From left: Nick Voigt, assembler; Anthony Rivera, environmental health and safety manager; Robbin Bauer, technical support analyst; Nick Miller, shipping associate.

Malco earns Governor's Workplace Safety Award

The Malco Group has earned the 2025 Governor's Workplace Safety Award for demonstrating excellence in safety and health, protecting its workforce from injuries, illnesses, and workplace incidents.

"Malco's top priority is keeping our team members safe," said Anthony Rivera, environmental health and safety manager. "Safety isn't a choice; it's a commitment that we make every day."

Presented by the Minnesota Safety Council, the award recognizes employers across the state that achieve an incidence rate better than the 50th percentile of both the state and national averages for their industry.

Malco—a manufacturer and distributor of HVACR and building construction products—has earned the Governor's Safety Award 16 times in the last 21 years. The company was presented with the Silver Achievement Award during a ceremony in May.

Malco's health and safety program encompasses:

- A safety management system, with annual safety goals.
- A safety committee that reviews safety procedures, undertakes additional training throughout the year, and monitors progress.
- Monthly reviews of safety performance metrics.
- Paid time for associates to participate in safety-related activities.
- Regular safety inspections and safe work observations.

"We are proud to be consistently recognized by the State of Minnesota for our efforts to develop successful safety and health programs that make Malco a great place to work," Rivera added.

SOURCE: SCHWEISS DOORS

A team from Schweiss Doors, including owner Mike Schweiss (fourth from right), came to see Chapter 25's newly completed hangar.

Schweiss donation helps EAA Chapter 25 build new hangar

Based in Lakeville, Minn., Chapter 25 of the Experimental Aircraft Association had been fundraising for several years to build a new hangar. The existing one was running out of space for chapter events; plus, the furnace system was loud, and the hangar door was acting up.

Fundraising had been going well, but the chapter felt they were still years away from a new hangar.

That all changed when Chapter 25 board member Patrick Halligan approached Mike Schweiss, owner of Schweiss Doors, to secure a deal on a hangar door.

"[Schweiss] looked at me and said, 'I'll give you a door'," Halligan recalls. "It was a very generous offer. I was hoping he'd give us 20% off."

With the gift of this door, Chapter 25 decided to sell the old hangar and use the proceeds to build a new structure. Within a few months, the chapter was breaking ground and putting up walls.

An additional donation from the widow of a late chapter member helped pay for the Extreme Panel insulation kit from Schweiss Doors, as well as the 54 x 16-ft bifold door's installation.

Located at the Airlake Airport, the new home of EAA Chapter 25 is a 4,800-sf wooden hangar that provides enough space for meetings and events, as well as for storing a few project aircraft.

SOURCE: PVECT02 / ADOBE STOCK

Gen Z increasingly sees skilled trades as a path to financial stability and AI resilience

Just over half of current college students (52%) say the skilled trades feel safer than office jobs in an AI future, according to the SimplyWise Trades & Technology Index—a survey that tracks how young Americans think about the trades, higher education, AI, and career opportunities.

SimplyWise publishes software for tradespeople and contractors.

The June index surveyed 1,140 Gen Z adults, aged 18 to 29, asking which careers are the safest as AI reshapes the economy. Respondents said they would be nearly as likely to choose trade school or an apprenticeship as a four-year degree if they were starting over.

Key findings at a glance:

- 52% of current college students say skilled trades feel safer than office jobs in an AI future.
- 66% of Gen Z would encourage a friend to consider a skilled trade.
- 34% of Gen Z identify trade school as the top path to financial stability by age 30 (versus 23% who would choose a four-year degree).
- 30% of Gen Z name skilled trades as the single most-respected career path today.
- 25% would choose trade school if starting over.

Gen Z has not turned against college, notes SimplyWise, but has stopped treating it as the default path to success. When asked which path is most likely to deliver financial stability by age 30, more respondents choose trade school or an apprenticeship (34%) than a four-year degree (23%). Nearly half (49%) say they would pick trade school over college if they were choosing today. Even among students already enrolled in college, one in three (35%) say the same.

At the same time, attitudes toward higher education remain nuanced. About half of respondents (49%) said a four-year degree is worth the cost. Yet when asked which path they would choose today if starting over after high school, Gen Z was almost evenly split between a four-year college (26%) and trade school or an apprenticeship (25%).

"The findings suggest that college remains highly valued, but no longer enjoys the clear preference it once did among young Americans," says SimplyWise.

The survey suggests respondents see the skilled trades as among the occupations least vulnerable to AI, with hands-on careers consistently ranked as safer than knowledge-based professions such as software development, accounting, and graphic design.

The SimplyWise Trades & Technology Index also suggests that changing attitudes toward the trades extend beyond economics. Two-thirds of Gen Z (66%) would encourage a friend to consider a skilled trade, while only 10% said they would discourage it.

Seven in 10 respondents say their generation holds the trades in higher regard than it did a few years ago. Notably, when asked which single career path earns their respect most, skilled trades ranked first (30%), ahead of small business ownership (22%), academic and professional careers (12%), corporate careers (12%), and technology and AI careers (10%).

Respondents who know a college graduate struggling financially are significantly more likely to favor trade school over college, suggesting personal experience is shaping perceptions of post-secondary education.

The survey's findings suggest many young Americans are rethinking long-held assumptions about education, career security, and economic opportunity, says SimplyWise.

"Across multiple measures, respondents viewed skilled trades as offering a compelling combination of financial stability, job security, and resilience in an AI-driven economy."

FGIA publishes documents describing the "good, better, best" category of aluminum finishes

The Fenestration and Glazing Industry Alliance has released updated editions of AAMA 2603-26, 2604-26, and 2605-26, covering voluntary specifications, performance requirements, and test procedures for pigmented, high-performance, and superior-performing organic coatings for aluminum extrusions and panels used in architectural products.

According to FGIA Technical Director Rich Rinka, the documents define the industry's "good, better, best" categories of aluminum finishes and are intended to help architects, owners, and contractors specify coatings that provide long-term durability, weatherability, and appearance.

REVERE COPPER PRODUCTS INC.

Revere Copper Products' campus in Rome, N.Y.

Revere Copper celebrates 225 years of U.S. manufacturing

Revere Copper Products—named after its founder and Revolutionary War hero, Paul Revere—is commemorating its 225th anniversary this year and celebrating its status as the oldest continuously operating manufacturer in the United States.

Headquartered in Rome, N.Y., Revere serves numerous markets, including architectural, electric vehicle, power distribution, electrical and telecom, air conditioning, and industrial machinery.

Working under contract with the U.S. Navy in the 1790s, Paul Revere launched the continent's first copper rolling mill. By 1801, he was rolling copper sheets and supplying roughly 12,000 feet for use on the famous frigate USS Constitution (also known as "Old Ironsides").

His contributions to America's defense did not end there. The company supplied cannon and round shot for Union ships during the Civil War, and supported America's "Arsenal of Democracy" during WWII.

Revere Copper Products has been a private, employee-owned company since the 1980s, when Brian O'Shaughnessy took the reins as chair, president & CEO. Today, Mike O'Shaughnessy leads the company.

"Everybody knows about Paul Revere's midnight ride, and that's very important, but when you dig deeper, you realize that he played a critical role in the earliest growth and success of this nation," said O'Shaughnessy.

Today, Revere Copper's manufacturing footprint encompasses over 1 million square feet across the copper mill and headquarters in Rome and a second facility in Mebane, N.C.

SOURCE: TRAC-RITE

Efrain Fernandez joins Trac-Rite as sales manager

Steel roll-up door manufacturer Trac-Rite has taken on Efrain Fernandez as sales manager serving Texas, Louisiana, Oklahoma, New Mexico, and Latin America.

"We are excited to welcome Efrain to the Trac-Rite team," said Kellen Anderson, vice president of sales. "His industry experience, relationship-focused approach, and bilingual communication skills will be a tremendous asset to our customers throughout the Southern U.S. and Latin America."

Based in the Houston, Texas area, Fernandez is fluent in both English and Spanish, and brings several years of experience in the self-storage industry.

He will work with customers and partners throughout his territory to help deliver Trac-Rite's door and building solutions to the self-storage market.

"I'm excited to join Trac-Rite and continue working in an industry I know and enjoy," said Fernandez. "I look forward to building strong relationships across my territory and helping customers find solutions that support their business goals."

SOURCE: AISC

AISC's IDEA awards for structural steel now accepting submissions

The American Institute of Steel Construction is calling for entries for what it describes as "the pinnacle of design achievement in the structural steel industry"—the IDEAS Awards.

The 2027 edition invites submissions showcasing the versatility of structural steel across five categories:

- Adaptive reuse
- Architecture
- Constructability
- Engineering
- Sustainable design and construction

In addition to completed projects, the IDEAS|next award recognizes concepts that are still on the boards. Projects with a client and designated site are eligible for recognition before the first piece of steel is erected.

"It is an honor to continue to recognize the premier structural steel projects in the U.S., whether they are already standing or are still inspiring visions being refined in a design studio," said AISC director of architecture Nima Balasubramanian.

Entries are due by August 31. Visit aisc.org/ideas for more information.

MCA announces 2026 scholarship recipients

The Metal Construction Association announced the recipients of the 2026 MCA Scholarship Program, which supports the educational goals of employees of MCA member companies and their families. Congratulations to the following:

- Hannah Bergthold (McElroy Metal)
- Mattias Carney (S-5!)
- Colton Burks (McElroy Metal)
- Rory Huck (CEI Materials LLC)
- Drew Sailors (Logan Stampings)

Now in its third year, the MCA Scholarship Program awards $2,000 scholarships to students pursuing postsecondary education, including college, vocational, and trade programs.

Recipients are selected through a blinded, competitive review process based on their academic achievements, personal essays, extracurricular involvement, and demonstrated commitment to their future careers.

SOURCE: SUPPLIED

From left: Direct Metals owners Tom Hoover and John Hoover

Direct Metals celebrates 30 years of supplying specialty metal and fiberglass

Specialty metal and fiberglass provider Direct Metals Company LLC is celebrating its 30th anniversary.

"As we celebrate this anniversary, we thank our customers for supporting our mission to provide reliable products for many industries and end applications," said president Tom Hoover.

Founded in 1996, Direct Metals carries perforated metal, bar grating, expanded metal, safety grating, fiberglass grating, architectural metals, and wire mesh products. Its products are available in carbon steel, stainless steel, aluminum, copper, brass, bronze, fiberglass, and galvanized metal.

Headquartered in Kennesaw, Ga., with a warehouse in Wisconsin, the family owned and operated business also offers a range of fabrication capabilities.

SOURCE: SHINTARTANYA /ADOBE STOCK

Business conditions worsened at architecture firms in May

After approaching growth earlier this year, the AIA/Deltek Architecture Billings Index (ABI) for May 2026 fell to its lowest level since January, with a score of 44.5.

The ABI is a leading monthly economic indicator based on billings at U.S. architecture firms that uses AIA data to predict nonresidential construction activity 9 to 12 months in advance.

ABI scores greater than 50 indicate growth, while scores below 50 indicate contraction.

AIA says the weaker May reading likely reflects broader economic softness stemming from the ongoing Iran conflict, as higher gas prices and inflation prompted some clients to pause new projects.

This is also reflected in the inquiries index, which slipped below 50 for the first time in four months. The value of newly signed design contracts also weakened to its lowest level since January.

Architect sentiment about future work also declined this quarter. At the end of Q1 2026, 21% of responding firm leaders reported that they expected

their firm's billings to decline by 5% or more in the second quarter; now, 1/4 of firm leaders expect their billings to decline in the third quarter.

Nearly half (46%) expect their billings to remain about the same, while 30% expect their billings to increase by 5% or more.

Business conditions were soft across the country in May. Billings remained closest to growth at firms in the South, as has been the case for most of the year. However, billings weakened significantly at West Coast firms, which had also been close to growth earlier this year.

Firms of all specializations reported declining billings this month, after firms specializing in multifamily residential projects reported flat to modestly increasing billings in March and April. Business conditions continued to weaken at firms with an institutional specialization, even though they also reported growth in March.

SOURCE: MULEHIDE

Shane Mills

Brendan Britsch

Conner Wilson

MuleHide welcomes new territory managers Mills, Britsch, and Wilson

Low-slope roofing manufacturer MuleHide welcomed three new territory managers.

Leading the Tennessee territory is Shane Mills, who joined MuleHide after two years with ABC Supply, where he served as an outside sales associate in the Washington, Pa., branch. He began his roofing career as a sales manager with AmeriPro Roofing.

Brendan Britsch will manage the West Central and Southwest Florida territory, which includes Tampa, Bradenton, Clearwater, Sarasota, Fort Myers, Lakeland, and the surrounding communities. Prior to joining MuleHide, Britsch served as a technical sales rep with Trufast.

Conner Wilson will serve the Northern California territory, which includes San Francisco, Sacramento, Redding, and Chico, as well as Reno, Nev. Wilson was a field sales rep with H.B. Fuller before joining MuleHide. Prior to that, he was a sales consultant with residential roofing contractor Cobex Construction Group Inc.

Mills, Britsch, and Wilson are the company's primary customer contacts in their respective markets.

SOURCE: AMERICAN BUILDINGS

Building of the Year, Gold. Rock Lititz POD 1B Clair Global

American Buildings' Authorized Builders showcase metal building expertise

From commercial and industrial facilities to highly customized projects, metal building systems continue to serve an increasingly diverse range of applications. The winners of American Buildings' 2026 Excellence in Design Awards demonstrate how the company's Authorized Builders are applying creativity and expertise to meet a wide range of project requirements.

"The awarded projects represent both aesthetic appeal and practical utility, featuring the adaptability of metal buildings in today's competitive and dynamic construction industry," said Carlie Smith, marketing director for Nucor Buildings Group. "Our builders consistently deliver sophisticated and inventive solutions using our building systems."

Awards were granted across several categories. First place category winners were subsequently nominated for consideration as the overall 2026 Building of the Year (Gold), 1st runner-up (Silver), and 2nd runner-up (Bronze).

Building of the Year

- Gold: Rock Lititz POD 1B Clair Global, Lititz, Pa. (photo). Builder: E.H. Beiler Industrial Services LLC
- Silver: Papillion Sanitation, Bellevue, Neb. Builder: K.C. Petersen Construction Co.
- Bronze: Martin County Event Center, Stanton, Texas. Builder: Butler-Cohen Design + Build

First place category winners

- Agricultural: United Cooperative, Waupun, Wisc. Builder: Keller Inc.
- Auto Dealership: Bell Ford, Arlington, Wisc. Builder: Keller Inc.
- Church/Religious: Hutto Bible Church, Round Rock, Texas. Builder: Aday & Associates
- Commercial: Inland Truck Parts & Service Center, Shreveport, La. Builder: Hand Construction LLC
- Community/Government: Martin County Event Center, Stanton, Texas. Builder: Butler-Cohen Design + Build
- Manufacturing/Industrial: Papillion Sanitation, Bellevue, Neb. Builder: K.C. Petersen Construction Co.
- Office: ABC Office Headquarters, Madison, Wisc. Builder: Advanced Building Corp.
- Recreation: WSFS Bank Sportsplex (Philadelphia Union), Chester, Pa. Builder: Building Concepts of America Inc.
- Retail: Esh's Grocery, Windsor, Colo. Builder: Traverse Builders LLC
- Special Projects: Rock Lititz POD 1B Clair Global, Lititz, Pa. Builder: E.H. Beiler Industrial Services LLC
- Transportation: Wicomico Regional Airport, Salisbury, Md. Builder: Bob Breeding General Contractors Inc.
- Warehouse/Distribution: Pitt Plastics Warehouse, Pittsburg, Kans. Builder: Koehn Construction Services
- Martin County Event Center (Stanton, Texas). Builder: Butler-Cohen Design + Build

Nucor brand American Buildings is a supplier of custom-engineered metal building systems. It organizes the Excellence in Design program every year for all of its Authorized Builders. This year, judges reviewed around 100 submissions.

More photos on MCN's website, direct link tinyurl.com/y3652vxu.

Scorsone and Clements complete leadership development program

ATAS International recognized John Scorsone, director of Metalwërks, and Mike Clements, director of operations in Elkton, Md., for successfully completing the six-month leadership development program through the Manufacturers Resource Center's Manufacturing Leadership Institute.

SOURCE: ATAS INTERNATIONAL

From left: ATAS International's Jim Bus, Jason Eberts, Mike Clements, John Scorsone, Glenn Hechler, Mark Bus, and Dave Smith.

Both John and Mike have dedicated more than 20 years to the Metalwërks Series product line, says ATAS, and continue to play a vital role following its acquisition by ATAS in 2025.

"At ATAS, investing in people is a top priority, and we are proud to support the professional development of our employees," says the company.

ABC warns Faster Labor Contracts Act would harm construction industry

Associated Builders and Contractors—a national trade association founded on the merit shop philosophy—believes strongly that the passage of the Faster Labor Contracts Act (FLCA) in the U.S. House of Representatives would be devastating for construction businesses and workers.

"The FLCA imposes arbitrary and unrealistic deadlines on employers to finalize negotiations with newly elected unions or face 'binding interest arbitration of first contracts'," said ABC president and CEO Michael Bellaman.

The association explains that, under FLCA, an employer must begin bargaining with a newly recognized union within 10 days of receiving a request to collectively bargain.

If the employer and union do not reach an agreement on a first contract within 90 days, the parties must participate in mediation.

If mediation is also unsuccessful after a few weeks, a three-person arbitration panel chosen by the parties will settle the dispute by majority vote, and the decision will be binding.

Should the parties fail to identify individuals to join the arbitration panel within two weeks, the federal government will select an arbitrator who will impose a collective bargaining agreement between the parties.

According to ABC, this means that—for the first time in American history—the federal government could appoint an individual "to dictate exactly what is included in a contract between two private negotiating parties."

"The consequences of this misguided bill include destroying voluntary agreement and good-faith labor-management negotiations, and could expand to disputes over wages, benefits, and working conditions to include social or political issues unrelated to the day-to-day needs of workers and employers," Bellaman continued.

ABC says it supports legislation that upholds the intent of the National Labor Relations Act. However, that act was designed to promote voluntary collective bargaining, not government-imposed contracts.

"By mandating arbitration for negotiation delays," ABC explains, "the FLCA removes workers' right to vote on contracts and deprives businesses of due process protections under the Fifth Amendment. The consequences would be devastating for construction businesses and workers, forcing companies to accept unworkable contract terms that threaten their viability."

ABC is calling on the Trump administration and U.S. Senate to "reject this egregious legislation [and to] stand with workers, entrepreneurs and small businesses" instead.

Learn more about ABC's position on the Faster Labor Contracts Act at protectingamericanworkers.org.

SOURCE: SERGEY / ADOBE STOCK

Safety organizations petition OSHA to update outdated PPE standards

Alongside eight other safety organizations, the International Safety Equipment Association submitted a petition urging OSHA to update its references to several key PPE standards.

"Safety regulations should reflect the best knowledge and protective practices available today—not from decades ago," said ISEA president & CEO Cam Mackey. "Updating these references is a straightforward step OSHA can take to ensure its regulations keep pace with innovation and support the safety science and practices already widely used across industry."

Some of OSHA's PPE regulations reference consensus standards dating as far back as 1989, ISEA notes. The petition calls on OSHA to update the regulatory references for standards covering eye and face protection (ANSI/ISEA Z87.1), occupational head protection (ANSI/ISEA Z89.1), and workplace first aid kits (ANSI/ISEA Z308.1).

Together, these standards affect more than 125 million Americans who rely on PPE and emergency safety equipment every day to stay safe on the job, says ISEA. Updated standards incorporate improvements such as enhanced impact testing, clearer product markings, expanded protection against biological hazards, and updated first aid guidance.

The petition notes that updating incorporated references to current consensus standards will impose no additional regulatory costs. The updates would simply replace outdated references with the most recent editions.

Be sure to check out our conversation with Cam Mackey in this episode of Editor's Corner, "How to choose the right safety gear in 2026," on MCN's website, direct link tinyurl.com/365t89sx.

Windsor grows Louisiana footprint with Acadiana

Windsor America has expanded its presence in Louisiana through a partnership with Acadiana Garage Doors, a residential and commercial overhead door company specializing in custom design, installation, replacement, repair, and maintenance services.

The partnership with Windsor provides Acadiana with additional operational resources, expanded purchasing power, and access to a broader range of products and services while maintaining the same local leadership team and culture.

Acadiana owner Ty Greneaux will remain engaged in the business's expansion throughout Louisiana. He will also join Windsor America's executive leadership team as president of service and replacement, helping scale service operations and best practices across the broader organization.

PHOTOS: MICHAEL LEGRAND PHOTOGRAPHY, COURTESY OPEN CITY ARCHITECTURE

Designed around the climb

Stone Climbing, Jacksonville

Outside, corrugated steel wraps Stone Climbing's new 15,500-sf PEMB in Jacksonville, Fla. Inside, patrons will find climbing experiences for all skill levels.

According to Open City Architecture, the design originated from a desire to integrate the exterior landscape into the building and create an atmosphere similar to outdoor rock climbing.

That concept led to the development of a "climbing canyon"—a building form that changes in height based on the interior spatial needs, allowing the architecture to shape itself around the climbing experience.

The building's roof varies in height from 25 feet to 55 feet, accommodating the activities below. Lower sections shelter bouldering areas and support spaces, while taller sections accommodate climbing walls and advanced routes.

Large windows and skylights connect climbers to the sky and surrounding landscape, reinforcing a connection to the outdoors within a controlled indoor environment.

The project garnered the Commercial Real Estate Development Association's Award of Excellence for Best New Building (under $15 million), which was presented to Open City (architect), Stone Climbing (owner), and Urban Partners Construction (GC).

The project's metal partner was Lifetime Steel Buildings—a full-service design-build and metal building solutions contractor. MCN

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