INTRODUCING THE 2026 HALL OF FAME CLASS

MCN Metal Construction News

April 2026
VOLUME 48 | NO. 4

IMPs: Sustainability, Safety, and Aesthetics Together

- Selecting Sealants For Metal Buildings
- Keep It Natural With Daylighting Systems
- The Big Impact of Small Expanded Meshes

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Features

30

38

46

Product Tech:
Daylight Systems

Departments

On the Cover

Latitude Climbing + Fitness in Hampton, Va., is one of the many projects taking advantage of the growing technology of insulated metal panels (IMPs).

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Melanie Kowal
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MCN Hall of Fame Matches the Industry's Spirit

One of the things I admire about this industry is its deep respect for experience. This is an industry built on innovation and forward thinking, but it's also grounded in knowledge earned over decades—on job sites, in fabrication shops, and through the people who have dedicated their careers to improving how we build.

That's exactly why *Metal Construction News* established the Hall of Fame in 2012. The goal was simple: to recognize individuals whose work has had a lasting impact on the metal construction industry. Over the years, the program has become an important way to recognize and honor the leaders, innovators, and mentors whose efforts have helped shape the industry as it is today.

In this issue, we're proud to introduce the newest class of Hall of Fame inductees. Their stories reflect the many different paths that lead to influence in this field. Some have advanced the technical side of the industry, helping develop products and building systems that improve performance and durability. Others have helped grow businesses, strengthen industry organizations, or share their expertise with the next generation of professionals.

When the Hall of Fame was created more than a decade ago, it was meant to celebrate the legacy of those contributions. Today, that recognition feels just as important—perhaps even more so. The industry continues to evolve quickly, and it's worth remembering that many of the systems, standards, and best practices we rely on today were developed over years of dedication by people who saw the potential of metal construction long before it became as widely embraced as it is now.

I truly believe this entire issue reflects that same spirit of progress.

Throughout this issue, you'll see several examples of where the metal construction industry is heading—and it's something I'm reminded of often in conversations with contractors, manufacturers, and architects across the market. Expectations for building performance continue to rise as projects work to meet tighter energy codes, sustainability targets, and long-term durability requirements, and metal systems are playing a larger role in meeting those demands.

In these pages, we explore advancements in insulated metal panels (IMPs) that are delivering stronger thermal performance and improved fire resistance. We also take a closer look at a component that rarely gets much attention but is essential to the success of any metal building system: sealants. From silicone and polyurethane products to the proven reliability of butyl in roofing applications, selecting the right sealant remains critical to maintaining watertight performance throughout a building's life. Daylighting is another theme in this issue, highlighted by a community recreation center case study that uses polycarbonate wall systems to create a bright, welcoming space while supporting energy efficiency. And we examine how expanded and perforated metals continue to find practical and creative applications—from precision grating used in urban landscapes to durable gutter guard systems designed to keep drainage systems functioning while reducing maintenance.

Combined together, these stories reflect an industry that continues to push for better performance, smarter materials, and more thoughtful design. And as our Hall of Fame reminds us each year, that kind of progress is made possible by the people who dedicate their careers to improving the industry one project at a time.

Melanie Kowal

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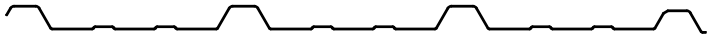

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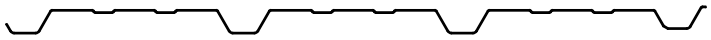
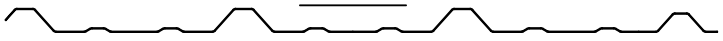
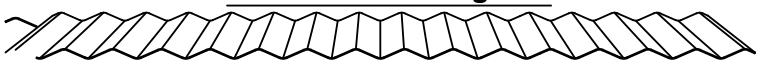


A-Panel

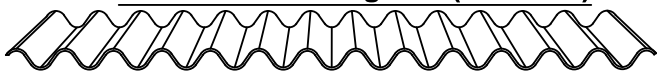
R-Panel



2.67" x 1/2" Corrugated



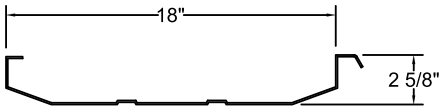
2.67" x 7/8" Corrugated (3/4" also)



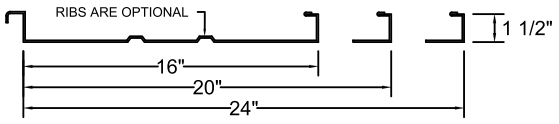
Flex-B-Deck (36") - Roof Deck - Composite Floor Deck - Form Deck

MECHANICALLY SEAMED ROOFING

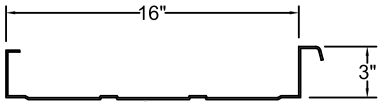
FSS-18 Standing Seam



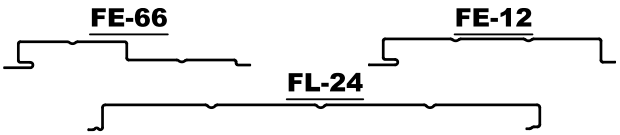
FSS-1.5 Series



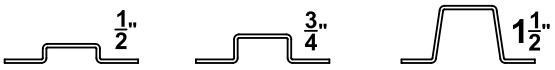
FSS-316 Standing Seam



Architectural Panels



16 & 18 GA. Galv. Subgirts



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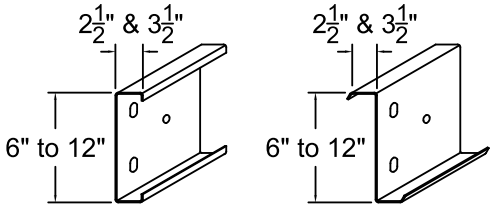

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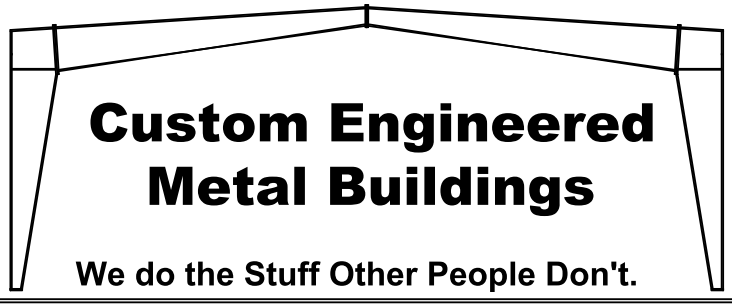

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Winning Coaches Win Games!

By George Hedley

George Hedley, *CPBC, is a certifi ed professional construction business coach and speaker. He helps contractors build better businesses, grow, profi t, improve estimating and fi eld production, and get their companies to work. He is the best-selling author of "Get Your Construction Business To Always Make A Profit!" available on Amazon.com. To schedule a free introductory coaching session, get his monthly Hardhat Hedlines Biz-Tips e-newsletter, download his template package, or watch his webinars and online video courses, visit www.ConstructionBusinessCoaching.com or e-mail GH@HardhatBizcoach.com.*

The construction business used to be a lot easier. All you had to do to be successful was "bid it" then "build it" and finally "bill it!" To grow your company, you work a little harder. To make more money, you work a little longer. To get some more work, you just bid on a few more jobs. To keep your customers happy, you met them on the jobsite and worked out the issues. To get paid, you called your customer to ask when you could pick up a cheque. Simple!

After your first few years in business, it gets more complicated as the company grows and gets more referrals. You must next hire more people to help get all the work done. You now have several jobs under construction at once, and each customer has different demands. They all want perfect service, excellent quality, on schedule completion, and your full attention. You begin to struggle with the everyday tasks of running a business, as well as estimating, project management, and supervision. The job description changes from superintendent and project manager to leader, operations manager, chief estimator, general superintendent, finance manager, office manager, customer service, salesperson, bill collector, purchasing agent, negotiator, and referee.

Think about what it now takes to grow and maintain a successful construction business. What are the most critical aspects to building a profitable company: doing the work right or managing the business? I'm sure you agree it takes both to be successful. Getting jobs completed takes priority over phone calls, problems, and challenges that continually occur on the jobsite and need to be addressed immediately. Plus, all your field crews must be working efficiently, or you'll lose money. But to grow a business and make money takes more than getting the work done right.

> "Get organized and in control, or stay stressed out, overworked, and underpaid."

What plays should I call first to win?

Football coaches need playbooks, coordinators to train their players, and talented, experienced players to execute the plays correctly. The head coach works with his coaches to develop a strategy to win the game, stays off the field, and delegates play-calling to his assistants. To improve and win the game of business, you must create a game plan and then identify what plays you want to call. I provide contractor business coaching and help owners improve their businesses. When owners call for help, they are overwhelmed and frustrated by so many challenges, problems, and stresses; they can't think straight and don't know what to do. They have failed in their attempts to fix everything themselves. The first thing they say is: "Help! What should I do first to get organized, make more money, or grow?"

Take the winning business test: Do you have these?

1. **Playbook:** We have a written and updated strategic business plan with a clear purpose, vision, mission, values, focus, targets, and goals.
2. **Results:** We have a written and updated three-year financial plan with measurable results, including sales, overhead, and profit goals.
3. **Growth:** We have a written, detailed estimating, sales, and marketing program with specific customer and project targets, a marketing activity calendar, and weekly goals and action plans.
4. **Owner's role:** The company owner's top priorities are to profitably grow the business, build customer relationships, develop top talent, monitor systems, and

PHOTO (C) WELCOMIA/GETTY IMAGES

Like a successful football coach, contractors must lead instead of trying to do everything on their own.

provide inspirational leadership, rather than doing the work.

5. **Management team:** The company is building a strong management team to run the business, plus an organizational structure and clear job descriptions with accountabilities and responsibilities.
6. **Financial management:** The owner knows the numbers and has a clear ongoing understanding of the company and project results, job cost data, production rates, receivables, profit and loss, and the balance sheet.
7. **Enforced systems:** There are written company systems and a playbook for the players to follow and use.
8. **Talent development:** We have a people plan that includes programs to recruit, hire, develop, train, incentivize, mentor, coach, and manage the best talent available.
9. **Team meetings:** We hold regular management, project, and crew meetings to review and track results.
10. Our company wins, works well, and delivers the expected results.

Are you the coach or the player?

Imagine you are the head coach of a college football team. What would you concentrate your time and energy on to build a winning team? I attended the University of Southern California (USC) from 1967 through 1972. We had great football teams, often winning the Rose Bowl, and were ranked number one a few times. Coach John McKay led USC to victory during those years, and was followed by another winning coach, John Robinson. Both coaches went on to the NFL as head coaches. After they left, our football program went downhill, and USC was unable to field a winning team. Not until many years later did Pete Carroll become head coach, and then USC started winning again and was ranked number one. Why?

Like in football; to be a winner in business, you need to ensure all areas are working efficiently and at the highest level and surround yourself with the best possible management team. Winning teams are led by coaches who identify their team's needs, hire assistant coaches who are the best at what they do, and recruit and train their players to implement excellence. The coach is the key. The coach doesn't do the work. The coach's job is to identify the plan of attack, develop the strategy, recruit and train good players, and then coach the team to execute the plan. Want to talk about building a winning team? Email GH@HardhatBizcoach.com

Unlike successful football coaches, business owners often fail when they try to run their companies as the quarterback without a playbook or a winning strategy to achieve the desired results. When you try to run your business by the seat of your pants, not knowing the score, without a well-utilized playbook or enough talented players, and keeping everything in your head, the company will not be able to grow or make the profit it should. What's your decision? Get organized and in control, or stay stressed out, overworked, and underpaid. Now's the time to start running your business like a professional coach with a playbook, great coaches, and a winning strategy.

MCA Enhances Focus on Industry Advocacy

By Jeff Henry

Jeff Henry, *MBA, CAE, is the executive director of the Metal Construction Association (MCA). He leads MCA's staff in supporting industry members and elevating the use of metal in construction. For more information, visit metalconstruction.org.*

MCA is proud to welcome Lee Ann Slattery of ATAS as the first female chair in the association's history. With more than 20 years of industry experience, she is a passionate advocate for metal and for the members who power this industry. In her inspiring remarks to the members, Lee Ann highlighted the unmatched virtues of metal cladding and encouraged members and partners alike to fuel MCA's efforts by getting involved, sharing our message, and amplifying our collective voice, while also conveying a vision for MCA's future. We are collectively excited about Lee Ann's stewardship and working with her to fulfill the association's objectives.

We have all heard the phrase that change is the one constant we can depend on. That is certainly true with respect to the business environment in which we operate. At the MCA Winter Meeting, keynote speaker economist Alex Chausovsky described the current environment as "changing from a state of uncertainty to a state of complexity." In such an environment, Alex counseled manufacturers to develop multiple business strategies and to be nimble enough to modify strategy based on emerging events.

Today's environment, with evolving geopolitical policies, requires manufacturers to employ strategies learned during COVID to ensure supply chain diversification. The fluctuating decentralized regulatory environment requires strong advocacy and continuous monitoring of both federal and state agencies. And the shifting marketplace requires that companies have access to timely and insightful data.

Today's environment also demands an active, engaged voice to ensure the continuation of policies that directly benefit and strengthen the industry. With reduced federal government involvement and changes in administrative policy, state legislators and regulatory agencies are likely to become more active in setting regulations. That's why MCA's advocacy efforts remain a top priority. From our involvement in The National Roofing Contractors Association (NRCA) National Roofing Day to participation in industry coalitions, MCA is closely monitoring federal and state legislative, regulatory, and code developments that impact the industry. Whether advocating for increased funding for Pell Grants and reasonable immigration reform or communicating the need for the practical implementation of compliance requirements, MCA is working to create a business climate where members can thrive.

Providing data that helps members make informed decisions is another function of the association. The MCA Market Study provides insights into trends, influences on designers' material use, and the historical and forecasted performance of the industry's various sectors. Using the Census Bureau's nine divisions, the study is being expanded to include regional breakouts of the data. The 2026 study will also include a sentiment index reflecting participants' overall optimism. Many of you may have been or will be asked to contribute to the study. We encourage your participation.

Beyond advocacy and data, MCA continues to invest in market growth and education. This year, we will pilot two regional conferences aimed at architects and designers, key decision-makers in material selection. The first will take place in late May in Chicago, followed by a second event in Southern California in the fourth quarter. These half-day

"Beyond advocacy and data, MCA continues to invest in market growth and education."

programs will feature a keynote presentation, targeted learning sessions, and product showcases, bringing the benefits of metal directly to the design community and expanding opportunities for our members.

We are excited for METALCON, taking place October 7–9 in Orlando, Fla., which is one of the strongest metal markets in the country. The show floor is filling quickly, and an impressive lineup of speakers and educational programming is already generating buzz. Lock your calendar now so you don't miss this event.

If you are interested in learning more about MCA and its activities, please plan to join us at our Summer Meeting on June 23-24 in Rosemont, Ill. It is a great opportunity to connect, learn, and grow together. More information can be found on our website.

Taken together—advocacy, leadership, education, and industry events—these initiatives reflect MCA's commitment to delivering tangible value to the members. We protect your interests. We expand your markets. We elevate your voice. And we create opportunities for connection and growth. Visit www.metalconstruction.org to learn more about our educational resources and member benefits.

Lee Ann Slattery of ATAS International is off and running as the 2026 chair of the Metal Construction Association (MCA). She is the first female chair ever.

Metal Construction News Hall of Fame

Seven more honorees join this year's hallowed halls

This year's Metal Construction News Hall of Fame Class of 2026 comprises four Founders, two Manufacturer-Suppliers, and one Friend of the Industry. Each of these honorees has helped to improve and change our industry. In addition, they have all devoted their time and energy to educating experts and novices alike.

This prestigious awards program was founded in 2012. For the last few years, it has been held during the joint conference between the Metal Building Contractors & Erectors Association (MBCEA) and the Metal Building Manufacturers Association (MBMA), a tradition that will continue in April in Colorado Springs, Colo. This year's seven inductees join the 70-plus previous honorees who represent the breadth of the industry. Please welcome our 2026 Metal Construction News Hall of Fame inductees:

- **Arnold Corbin, Founder**
- **Tony "TR" Raimondo, Founder**
- **Phil Raimondo, Founder**
- **Jeff Alexander, Founder**
- **Richard Ahrens, Manufacturer/Supplier**
- **Ted Wolfe, Manufacturer/Supplier**
- **Mark Detwiler, Friend of the Industry**

The stories of these honorees begin on page 13.

We must also thank our judges, who brought extensive knowledge and perspective to this awards process. They represent the major industry associations, while *Metal Construction News* is the founding partner and underwriter of the Hall of Fame program:

- **Lee Ann Slattery**, chair of the Metal Construction Association (MCA)
- **David Leinbach,** president of the MBCEA
- **Christen Funk,** chair of the MBMA

You can read all about our previous Hall of Fame honorees at metalconstructionnews.com/metal-construction-hall-of-fame.

METAL CONSTRUCTION HALL OF FAME

Ted Wolfe

In the high-stakes, heavy-tonnage world of pre-engineered metal buildings (PEMB), the industry often risks losing sight of the people beneath the steel. Modern corporations frequently succumb to the "commodity trap," viewing the market as little more than rows on a spreadsheet and total tons shipped. But for decades, the industry had a conscience—a "Southern gentleman" named Ted Wolfe who understood that while the factory produces the parts, it is the builder who produces the building.

Ted's career was marked by an upward trajectory, defined by an unmatched ability to bridge the gap between corporate strategy and on-the-ground reality. Starting in Birmingham, Ala., he rose through the ranks of the Butler organization, mastering HR, sales, and management before eventually serving as president. Even in retirement, his influence remained so potent that Nucor sought his counsel to architect a builder model that remains their operational gold standard today. In doing so, Ted helped to shape the dealer networks of the two largest players in the industry's history.

To Ted, the relationship wasn't a secondary part of the business; it was the business. He was the ultimate advocate for the independent builder, standing as a bulwark against the creeping "corporate mindset" that followed the industry's rapid consolidation. He possessed a rare, grounding perspective: he knew that the most advanced engineering in the world, including the industry-leading MR-24 Standing Seam Roof, was worth nothing if it wasn't installed correctly by a skilled hand in the field. He constantly reminded those in the industry that buildings don't erect themselves; they are the result of a complicated, often messy business relationships built on trust.

His technical contributions were as vast as his leadership. Ted was the catalyst for the broad acceptance of standing seam systems, and he was the driving force behind innovations such as the Landmark Truss Purlin for clear span systems and Delta Joist for hardwall solutions. He didn't just recognize a market need; he had an innate ability to marshal resources and be the first to market with solutions such as Butler Advantage computer pricing, Butler Heavy Structures, and insulated metal panels (IMPs). Yet, his true genius lay in the "feedback loop"—working directly with builders to refine these emerging technologies before rolling them out to the wider industry.

As vice-president of sales, Ted was legendary. He was the "calm in the storm," possessing a reassuring tone that never wavered, no matter how frantic the crisis. Builders knew they could pick up the phone and reach him with any problem, large or small. To Ted, these weren't just business associates; they were family. He served generations of family-owned businesses, often becoming so entwined in their lives that he was known to play matchmaker, setting up young builders with their future wives.

If you were to survey the current leadership of the Metal Building Manufacturers Association (MBMA), you would find a "who's who" of executives who were either mentored by Ted or found their career path because of the systems he put in place. He taught an entire generation how to beat competitors and land massive multinational program accounts, but more importantly, he taught them how to have fun doing it.

"Thank you very much for my induction into the Metal Construction News Hall of Fame. Not sure I'm worthy, but it's much appreciated," he said.

Ted represents the pinnacle of an era when relationships reigned supreme. He saw the industry skyrocket to prominence in low-rise construction, and he ensured that as the buildings went up, the people weren't left behind. We are all better off because Ted refused to let a relationship be reduced to a commodity.

"In my nearly 40 years with Butler I was fortunate to work with many many great people..."

METAL CONSTRUCTION HALL OF FAME

Tony "TR" and Phil Raimondo

The history of the metal building industry is often defined by those who can bridge the gap between rigorous engineering and visionary leadership. For nearly four decades, Tony "TR" Raimondo and his son, Phil Raimondo, embodied this balance, transforming Behlen Mfg. Co. from a struggling enterprise into a global industry titan. Their combined leadership represents a unique "father-son" milestone in the Metal Building Manufacturers Association (MBMA) history, marking a legacy of service that has fortified the industry's standards, market reach, and workforce.

TR Raimondo's impact began with a bold move in 1984. Stepping into a company losing millions of dollars annually, TR led a management buyout that stabilized Behlen and set in motion a decades-long trajectory of growth. With a background in operations from giants such as General Motors and Moog Aerospace, TR brought a disciplined, people-focused management style to the metal building sector.

Under his guidance, the industry's scope shifted. TR moved the market beyond simple rural structures, championing larger, highly engineered systems for commercial and metropolitan applications. His strategic foresight led to pivotal acquisitions —including Inland Buildings and EagleSpan Steel—and the landmark Behlen-China Joint Venture in 2002. This international expansion did more than grow a company; it demonstrated the global adaptability of metal building construction.

TR's influence peaked during his 1996 chairmanship of the MBMA, where he provided the industry with a roadmap to navigate complex market cycles and construction trends.

"My father, TR, believed deeply in hard work and treating people with respect. While many knew him as a leader in the industry, we knew him as someone who lived those values every day. Our family is incredibly proud of the legacy he left behind," said TR's son Tony Raimondo Jr., who serves as Behlen's board chair.

> "My father, TR, believed deeply in hard work and treating people with respect."

Phil Raimondo joined the firm in 1990, bringing an engineering and process-driven mindset that would eventually define the industry's modern quality standards. Following in his father's footsteps, Phil became chairman of the MBMA executive committee in 2009. While TR expanded the industry's horizons, Phil strengthened its foundation.

His leadership during the 2020 acquisition of Trident Building Systems further expanded the industry's engineering capabilities and geographic footprint, ensuring that the "Behlen standard" remained synonymous with reliability.

What truly sets the Raimondos apart is their commitment to the "manufacturing ecosystem." Both men recognized early on that the industry's future depended on a skilled workforce. TR launched the "Dream It. Do It." initiative in Nebraska,creating the Career Dream Team, which became a national program through the Manufacturing Institute. Phil continued this mission by advocating for STEM (science, technology, engineering, and mathematics) education and supporting programs such as Women in Manufacturing and the STEP Ahead Awards.

During the global challenges of 2020, Phil's leadership extended to the manufacturing community. He convened weekly briefings for manufacturers across the state to share safety protocols and operational strategies, ensuring the industry remained resilient amid unprecedented uncertainty.

The Raimondos represent the first father-son pair to both chair the MBMA, but their true contribution is the bridge they built between Walter Behlen's founding vision in 1956 and the high-tech, high-standard industry of today. Their leadership was never just about steel and buildings; it was about integrity, community philanthropy, and the belief that a manufacturer has a responsibility to the people it employs and the industry it represents.

"The example set by my father, Phil, has had a profound influence on me. I'm proud to carry forward the principles he believed in and to build on the foundation he created. His examples continue to shape how I approach my own career and contributions to the industry," said Phil's son, Patrick Raimondo.

WE'RE PROUD OF OUR PAST.

NOW WE'RE FORGING AHEAD.

90 Years ANNIVERSARY Celebration

From humble beginnings in 1936 to becoming one of the oldest and most prominent family-owned and operated metal building manufacturers in the country, Behlen Mfg. Co. is proud to see the contributions of TR and Phil Raimondo recognized in the Metal Construction Hall of Fame.

Since 1984, the Raimondo family has guided Behlen Mfg. Co. to global industry leadership. We honor the many contributions TR and Phil made with deep gratitude as we look to the future, Forging Ahead™ with energy, enthusiasm, and innovation.

BEHLEN

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Jeff Alexander

In the world of industrial coatings, few names carry as much weight as Jeff Alexander. As the global vice president of sales for the coil and extrusion division of The Sherwin-Williams Company, Alexander doesn't just help to manage a multibillion-dollar business; he shapes the very aesthetic and structural integrity of the modern built environment. With a career spanning four decades, Jeff's induction into the Hall of Fame recognizes a leader whose impact is measured not just in square footage coated but in the enduring partnerships and organizational cultures he has built.

Jeff's journey began in the steel industry in 1986, providing him with a foundational understanding of the substrates that would later become his life's work. Joining Valspar in 1997, he quickly distinguished himself as a strategist with a rare "customer-first" intuition. By 2000, he had ascended to the vice presidency, beginning a tenure marked by transformative growth.

When Valspar integrated with Sherwin-Williams, Jeff became a central architect of the division's global expansion. His leadership was the catalyst that transformed a regional powerhouse into a dominant multibillion-dollar global entity. From appliances and HVAC systems to high-performance transportation and lighting, Jeff's strategic fingerprints are visible across nearly every major metal-use segment worldwide.

Perhaps Jeff's most visible legacy is the elevation of residential metal roofing. Long considered a niche industrial product, metal roofing's transition into a premium residential standard was accelerated by his dedicated advocacy.

"While niche only a few years ago, our industry has made great strides in gaining share with metal. These share gains have provided investment opportunities for metal roofing manufacturers, steel and aluminum mills, and paint companies," Alexander notes.

He was a driving force behind the Sherwin-Williams MetalVue program—a sophisticated initiative that bridged the gap between manufacturers and homeowners. By strengthening specifications and championing color leadership, Jeff didn't just sell paint; he sold a vision of sustainable, beautiful, and permanent protection for the family home.

Jeff's influence has always extended far beyond the walls of Sherwin-Williams. His commitment to the broader industry is best exemplified by his decades of service to the National Coil Coaters Association (NCCA). Having served in nearly every capacity —from member-at-large and non-coater chairman to president and board member—Jeff has been a steady hand guiding the industry through economic shifts and technological leaps.

His presence is a staple of the industry's history; having attended the very first METALCON in Washington, D.C., he remains as accessible today as he was then. This visible "boots-on-the-ground" leadership has earned him a reputation as someone who builds relationships with both people and organizations. He is known for cultivating high-performance teams grounded in responsiveness and a culture of innovation.

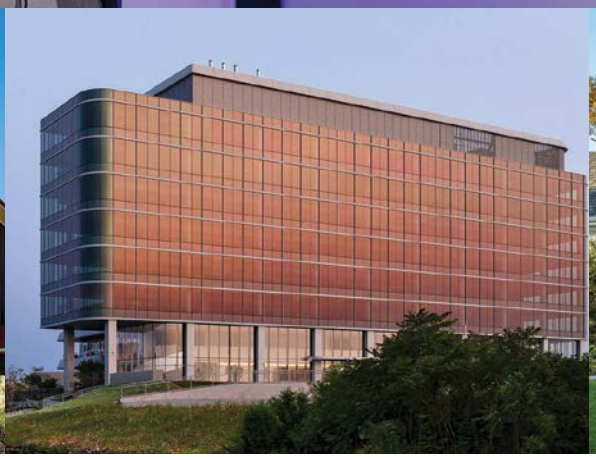
A graduate of Wabash College with a B.A. in Psychology, Jeff's leadership style is rooted in understanding human behavior and motivation—a skill he further refined through executive programs at the Kellogg School of Management and the Center for Creative Leadership.

When he isn't aligning global commercial strategies, Jeff brings his competitive spirit to the golf course or the racetrack. An avid golfer and a devoted race-car enthusiast, he approaches his hobbies with the same precision and passion he brings to the boardroom.

"I'm honored and humbled to even be considered for the Metal Construction News Hall of Fame," Alexander says. "While I certainly appreciate the recognition, any success that I have had is due to the amazing team of people I have worked with at Sherwin-Williams, our customers, and industry partners over the past 30 years.

"While niche only a few years ago, our industry has made great strides in gaining share with metal."

CONGRATULATIONS, JEFF ALEXANDER



HONORED AS A 2026 METALS HALL OF FAME INDUCTEE — AND CELEBRATED FOR THE LEADERSHIP THAT HELPED SHAPE OUR COIL & EXTRUSION BUSINESS INTO WHAT IT IS TODAY.

Jeff played a pivotal role in elevating Sherwin-Williams Coil & Extrusion across North America and globally. His dedication to customer collaboration, technical innovation and strong industry relationships has accelerated our growth and advanced the performance of the coatings that protect and beautify metal every day. His leadership continues to energize our teams and inspire both the industry and our customers — impacting our work for years to come.

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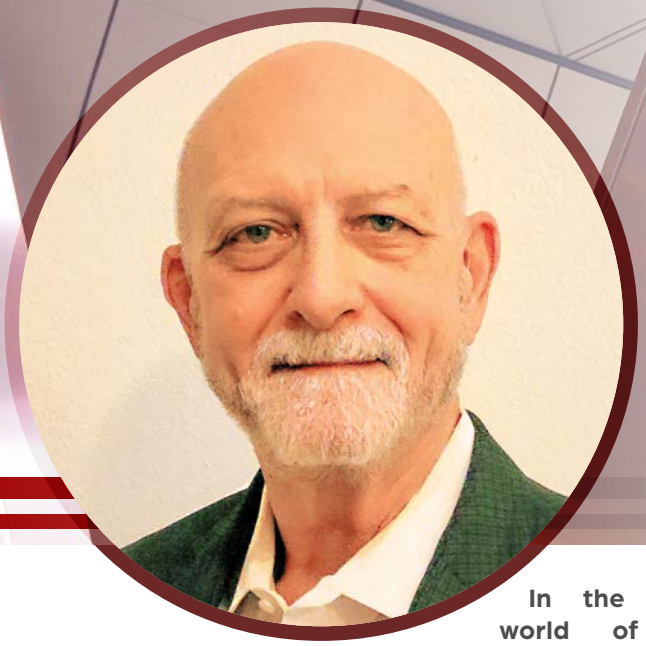

Arnold Corbin

In the specialized world of insulated metal panels (IMPs) and pre-engineered metal buildings (PEMBs), few professionals have bridged the gap between manufacturing precision and jobsite reality as effectively as Arnold Corbin. With a career spanning over four decades at the forefront of the industry's evolution—from the early days of Metl-Span to his current leadership within the Nucor Insulated Panel Group—Arnold has become a foundational figure whose influence extends far beyond the corporate boardrooms of his employers.

Arnold joined Metl-Span in 2002, bringing deep-seated expertise in IMPs and PEMBs that would prove prophetic. At a time when the industry was still siloed, he served as a primary catalyst for growth, leveraging his background to secure elite partnerships with industry giants such as BlueScope, Butler, and Varco Pruden.

His contribution was not merely in sales but in operational excellence. He was instrumental in founding the Field Service Group, a move that shifted the company's focus toward installation startups and jobsite quality. By bridging the divide between manufacturing processes and the end-user experience, he ensured that "quality" was not just a metric on a factory floor, but a tangible reality for the installers in the field. This commitment to precision was further solidified when he achieved Six Sigma Green Belt status, applying rigorous quality standards that helped define Metl-Span as a world-class manufacturer.

Arnold's impact on the industry is perhaps best measured by the sheer volume of knowledge he has disseminated. Following Metl-Span's acquisition by NCI in 2012, Corbin spent years traveling across North America. He led exhaustive training initiatives for dozens of sister companies and their builder networks, presenting at national account sales meetings and district sales meetings for two-and-a-half years.

What truly elevates Arnold to Hall of Fame status is his tireless service to the broader metal construction community. His "regular duties" have never been enough to contain his passion for the trade. For more than 15 years, he has been a stalwart member of the Metal Building Contractors and Erectors Association (MBCEA), including a term on the national board of directors from 2017 to 2019. His 14-year tenure with the Metal Building Manufacturers Association (MBMA) has seen him shape the industry's future through the association's fire and insurance and energy and sustainability technical committees.

Beyond the accolades—including the prestigious 2014 NCI President's Award—Arnold is defined by a "service-first" philosophy. Known for his integrity and a rare willingness to challenge the way things have always been done, he has often pushed for difficult organizational changes to ensure the "better good" of the customer. Whether he is mentoring the next generation of talent in the Nucor technical services department or answering a technical call while recovering from surgery, Arnold's dedication is absolute. To him, hearing this type of praise from his industry colleagues is "very meaningful."

"My wife may not always love that I take calls or answer emails during vacation or even while waiting for surgery—but I've always believed that everything we do ultimately serves someone. Whether it's an owner, a contractor, a teammate, a family member, or even ourselves, relationships grow stronger when we stay committed to the people who rely on us," he said.

> "To think that others believe I've contributed in a meaningful way is both inspiring and deeply gratifying."

On his induction, Arnold admits that seeing the names he is joining, it is difficult not to feel humbled.

"Very few people get the chance to leave a lasting mark on an industry. To think that others believe I've contributed in a meaningful way is both inspiring and deeply gratifying. It motivates me to continue giving back and supporting the next generation of leaders," he said.

Some careers are built. Arnold's was forged.

Congratulations to Metl-Span's own Arnold Corbin on his induction into the *Metal Construction News* 2026 Metals Hall of Fame.

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Richard Ahrens

In the storied history of the Florida construction industry, few figures have managed to bridge the gap between legacy and logic as effectively as Richard Ahrens. A third-generation leader representing a heritage that dates back to 1902, Richard did not merely maintain a family business; he transformed it. By blending the grit of a traditional builder with the analytical precision of an academic, he moved the pre-engineered metal building (PEMB) industry from the fringes of economical utility into the mainstream of high-performance architectural design.

Richard's career is defined by an extraordinary academic foundation. A graduate of the University of Florida, he holds bachelor's degrees in Business Administration, Structural Engineering, and Accounting, capped by a PhD in Marketing. This multi-pronged expertise allowed Richard to view a construction site through four distinct lenses simultaneously: as a structural engineer calculating wind loads, an accountant managing fiscal discipline, a marketer envisioning client needs, and a builder who knows how to get the steel in the ground.

While the Ahrens name was initially synonymous with ornamental ironwork, sheet metal, and roofing, Richard recognized the untapped potential of PEMB systems early in his career. He became a pioneer in South Florida—a market historically skeptical of metal construction—and proved its worth by delivering mission-critical facilities for global giants such as Frito-Lay, National Gypsum, Florida Power & Light, Grumman Aerospace, Fontainebleau Aviation, Rybovich-Spencer Boatworks, Hinckley Yachts, and numerous municipalities and public agencies. His incredible vision for value engineering enabled him to analyze conventional construction plans and re-envision them as efficient, high-performing metal systems that simultaneously improved functionality, energy efficiency, and aesthetics.

However, Richard's most enduring contribution to the industry was not a building, but a framework. In 2003, he served on the Florida Building Code Advisory Board during a pivotal moment in the state's history. Richard was instrumental in unifying the South Florida and Standard Building Codes into a single, cohesive *Florida Building Code* (*FBC*). This formidable task eliminated the bureaucratic friction of conflicting regional standards, establishing a clear, consistent pathway for the adoption of metal systems statewide. By streamlining compliance, Richard was a critical part of leveling the playing field for the entire metal construction industry, turning a patchwork of regulations into a streamlined engine for growth.

Beyond the boardroom and the job site, Richard has been a tireless advocate for the next generation. His service on the Advisory Council for the University of Florida's M.E. Rinker School of Building Construction has ensured that the technical advancements of metal construction are woven into the education of future industry leaders. Known for his profound humility and accessibility, Richard is the rare executive who will spend his evenings or weekends volunteering his time to refine a design or mentor a student, driven by a genuine desire to elevate the trade's standards.

Richard has consistently exceeded the expectations of his role, acting as a trusted educator and a respected ambassador for the trade. He didn't just build a successful firm; he helped build the intellectual and regulatory infrastructure that allows the modern metal building industry to thrive in one of the most demanding climates in the world. His legacy is measured not just in square footage but in the professional standards he helped set and the countless professionals who continue to follow the blueprint he created.

Metal Construction News invites all members of the industry who will be in attendance at the MBCEA Annual Conference to join us at the in-person Hall of Fame ceremony to help us recognize these industry leaders.

METAL CONSTRUCTION HALL OF FAME

Mark Detwiler

Throughout a career spanning the full spectrum of structural engineering—from the granular details of project design to the broad influence of national standards—Mark Detwiler has been a cornerstone of the metal construction industry. His trajectory is defined not merely by his professional advancement from hands-on engineering to senior technical leadership, but by a tireless commitment to the safety, reliability, and advancement of metal building systems. Mark's work represents a rare bridge between the theoretical rigors of applied research and the practical realities of the field.

Mark's influence is etched into the very components that define modern metal construction. His technical expertise has directly shaped the development and optimization of roof and wall systems and cold-formed steel members. Beyond the physical products, Mark's intellectual contributions have revolutionized how the industry understands performance. He has been a primary driver in evolving wind load and uplift performance methods, creating the design tools and testing protocols that ensure the resilience of metal panels, clips, anchorage, and framing systems.

His impact is not confined to a single organization or company; it is commercially deployed and globally recognized. By refining evaluation approaches, Mark has provided the industry with the data-backed confidence required to push the boundaries of what metal buildings can achieve.

Mark's leadership extends deep into the committee rooms where the future of construction is codified. Through his active participation and leadership in the Metal Building Manufacturers Association (MBMA), the American Society of Civil Engineers (ASCE), and the American Iron and Steel Institute (AISI), he has been a steady hand in developing industry specifications.

He didn't just follow the code; he improved it. By advancing evidence-based design through exhaustive testing, Mark ensured that load paths and uplift resistance were understood with unprecedented clarity. These efforts have transitioned research from the academic vacuum into practical, actionable guidance used by engineers, manufacturers, and builders every day. Under his influence, industry practices have evolved to reflect real-world performance better, significantly raising the technical credibility of the entire sector.

What sets Mark apart is his unique ability to communicate across the industry's different "languages." He is equally at home discussing theoretical structural mechanics with academics as he is troubleshooting field applications with contractors.

"It takes an entire team from owners to manufacturers to erectors working daily to make the impossible happen on schedule and under budget, and I'm always humbled at how often this industry pulls that off," Detwiler says.

This versatility has made him a trusted subject-matter expert and a natural leader on research teams. His colleagues recognize him as a person of immense technical command, yet he remains focused on the human element of engineering: the safety and reliability of the structures people inhabit.

The hallmark of a Hall of Fame inductee is an impact that transcends the requirements of a job description. Mark has consistently exceeded the scope of his professional roles by dedicating himself to industry-wide initiatives with immense benefit to the public good.

He took on leadership roles on national technical committees, volunteering his time and expertise to shape standards used across North America. He has been a prolific contributor to the industry's collective knowledge, regularly publishing and presenting findings that improved safety and efficiency for his competitors and peers alike. Mark's career is a testament to the idea that authentic leadership is measured by what one gives back to their field. His sustained, outward-facing impact has driven innovation that will protect and support the metal construction industry for decades to come.

"I've had the great fortune of working for and with many brilliant, creative, and selfless people in this industry."

How Advanced IMP Cores Are Protecting the Future of Metal Construction

By Brian Ng

PHOTOS COURTESY ALL WEATHER INSULATED PANELS

As performance expectations continue to rise across the construction industry, fire safety has become one of the most critical and closely scrutinized elements in building design. Contractors, architects, engineers, and owners are no longer choosing between efficiency and protection; they expect systems that deliver both. Insulated metal panels (IMPs), long valued for quick installation times and strong thermal performance, are evolving to meet increasingly rigorous demands for fire resistance, smoke control, and sustainability. At the heart of this evolution is a new generation of advanced IMP core technologies.

A shifting fire safety landscape

Fire safety regulations have become increasingly complex over the past decade. Updated building codes, tighter insurance requirements, and heightened awareness of fire risk, particularly in large-scale industrial, cold storage, and mission-critical facilities, are reshaping material selection. High-profile fire events and post-incident investigations have created renewed emphasis on passive fire protection: systems designed to help contain fire, limit smoke generation, and protect structural integrity without relying on active suppression.

In metal construction, efficiency and durability have long been core advantages. However, meeting fire performance has historically required layered assemblies and supplemental fireproofing. Today's advanced IMP cores are simplifying that equation by delivering tested fire performance as part of a single, integrated system.

What defines a fire-rated IMP?

An IMP consists of two metal facings bonded to an insulating core, and the

Cold-storage and food processing facilities are driving demand for advanced IMP cores that combine fire resistance, thermal efficiency, and hygienic construction.

characteristics of that core largely determine the panel's performance. Fire-rated IMPs use non-combustible cores such as mineral wool as well as enhanced fire-resistant cores, including advanced engineered foam systems formulated to improve fire performance over traditional PUR/PIR foam. When incorporated into and tested as part of a complete IMP assembly, these fire-resistant cores are designed to withstand higher temperatures, resist flame spread, and limit smoke generation.

Fire performance is verified through a comprehensive set of test standards, including ASTM E84, *Standard Test Method for Surface Burning Characteristics of Building Materials*, ASTM E119, *Standard Test Methods for Fire Tests of Building Construction and Materials*, UL (Underwriters Laboratories) 263, *Standard for Fire Tests of Building Construction and Materials*, NFPA (National Fire Prevention Association) 285, *Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible Components*, and NFPA 286, *Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth*, and

As fire-rated IMP technology matures, adoption is accelerating across a wide range of building sectors.

Factory Mutual (FM) standards that assess fire propagation and smoke generation characteristics. These benchmarks give designers confidence that IMP systems can meet both aesthetic and performance objectives without compromising fire safety.

As IMP core technology advances, manufacturers are developing solutions that push beyond traditional benchmarks, achieving higher thermal efficiency while enhancing fire performance; a balance that previously required trade-offs between insulation and fire resistance.

Exceeding codes through integrated performance

One of the key advantages of advanced fire-rated IMP systems is the delivery of fire resistance without additional layers or complex detailing. In many cases, these panels achieve one-, two-, or three-hour fire-resistant ratings as part of a single assembly, reducing reliance on gypsum board, applied fireproofing, or secondary insulation.

This integration provides clear benefits:

- Simplified assemblies with fewer components and reduced risk of field errors.
- Faster installation, helping projects stay on schedule.
- Consistent performance through factory-controlled manufacturing.
- Lower long-term risk for owners, insurers, and occupants.

As a result, fire-rated IMPs are increasingly viewed not as specialty products, but as high-performance building envelope solutions.

Balancing fire resistance and thermal efficiency

For years, designers faced trade-offs between fire performance and energy efficiency. Non-combustible materials often sacrifice insulation value, while thermally efficient foam systems raise concerns about fire behavior and smoke production. Recent advancements in foam core engineering are closing that gap.

Mineral wool continues to provide proven non-combustibility, while next-generation IMP foam cores are engineered and formulated to deliver low thermal conductivity along with enhanced fire performance. These advanced cores control flame propagation and charring, reduce smoke generation, and maintain resistance under elevated temperatures, offering improved fire performance compared with earlier foam formulations.

This balance is critical in temperature-controlled environments such as cold storage facilities, food processing plants, pharmaceutical manufacturing facilities, and data centers, where both energy performance and fire safety are mission-critical.

Innovation in action: A new generation of IMP cores

A clear example of this evolution is the recent introduction of a next-generation

IMP core engineered to meet today's most challenging performance demands. This panel combines enhanced fire performance, superior thermal efficiency, and sustainability-focused materials without compromising installation speed.

At its core, it is engineered to minimize energy consumption and operating costs. Independently tested, it delivers an R-value of R-8.0 per in. (ASTM C518, *Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus*) at a 75° F mean, in line with U.S. industry standards and ensuring consistent, comparable thermal performance. Full assembly U-values, evaluated according to ASTM C1363, *Standard Test Method for Thermal Performance of Building Materials and Envelope Assemblies by Means of a Hot Box Apparatus*, and ASHRAE 90.1 guidelines, reflect the effects of panel geometry and insulation thickness. This level of insulation efficiency enables high-efficiency applications that were previously constrained by insulation limitations, including cold storage and controlled environments.

From a fire safety standpoint, this IMP has been developed with a focus on reducing smoke generation during fire exposure. Industry standards such as FM 4882, *Class 1 Interior Wall and Ceiling Materials or Systems for Smoke Sensitive Occupancies,* highlight the importance of smoke control in fire scenarios. Limiting smoke generation is increasingly recognized as an essential aspect of fire protection, not only for life safety but also to help reduce asset damage and post-event downtime.

In addition, select configurations have been tested in accordance with ASTM E119, *Standard Test Methods for Fire Tests of Building Construction and Materials*, and achieved a one-hour fire-resistance rating. This provides verifiable protection in building applications where fire-resistant, thermally efficient walls are required.

Fire-rated IMPs are increasingly viewed not as specialty products, but as high-performance building envelope solutions.

Protecting structures and critical assets

Beyond code compliance, fire-rated IMP systems play a vital role in protecting a building's structural framework during a fire event. By slowing heat transfer and limiting fire spread, these panels can delay structural elements, such as steel, from reaching failure temperatures, helping maintain building stability and keeping critical egress routes safe.

For facilities housing high-value equipment or essential operations, this added protection can mean the difference between localized damage and total loss. Fire-rated IMPs enhance resilience, not just compliance, by providing occupants and first responders more time to act while helping reduce recovery costs after an incident.

Expanding applications across building types

As fire-rated IMP technology matures, adoption is accelerating across a wide range of building sectors. Industrial and manufacturing facilities benefit from durable, low-maintenance fire protection. Commercial and institutional projects such as schools, healthcare facilities, and recreation centers leverage the clean aesthetics and integrated performance of modern panel systems.

Cold-storage and food processing facilities are driving demand for advanced IMP cores that combine fire resistance, thermal efficiency, and hygienic construction. Rising regulatory demands are driving the adoption of high-performing IMPs as a critical part of modern building design rather than an upgrade option.

Sustainability and the future of IMP design

Fire-rated IMPs are increasingly aligning with broader sustainability goals. By integrating multiple performance attributes into a single system, they reduce material redundancy, construction waste, and installation time. Their thermal efficiency supports long-term energy savings, while the durability extends service life.

New innovations are advancing this trajectory by incorporating recycled polyethylene terephthalate (PET) into the foam core and recycled steel in the panel faces, supporting the circular economy and lowering embodied carbon. These panels are also manufactured in facilities that prioritize energy efficiency, reduced carbon intensity, and renewable energy use, demonstrating that high-performance buildings can be responsibly produced.

As sustainability and fire safety increasingly intersect, advanced IMP cores are proving that exceptional performance and environmental responsibility can go hand in hand.

Building forward

The future of metal construction depends on systems that do more with less complexity, less risk, and less environmental impact. Advanced fire-rated IMP cores represent a significant step forward, offering integrated protection, efficiency, and sustainability in a single solution.

As building standards continue to evolve, these technologies are not simply responding to today's requirements but anticipate the needs of tomorrow's built environment. MCN

Brian Ng *is vice president of engineering at All Weather Insulated Panels (AWIP), where he brings more than 15 years of experience advancing complex building envelope systems through product development, design, and engineering leadership. A licensed professional engineer (P.E.) and LEED-accredited professional he holds a Bachelor of Science in Civil Engineering with a minor in Technology Management from the University of California, Davis.*

PHOTO (C) ANDRANIK HAKOBYAN/GETTY IMAGES

The Role of Butyl Sealants in Long-Term Metal Building Performance

By Rob Haddock

PHOTOS COURTESY S-5!

Butyl sealants were first introduced to the U.S. metal roofing industry more than 60 years ago and are now gaining traction as a preferred sealant for metal roof and building envelope attachment systems, offering strong weatherproofing and extended service life.

As metal buildings increasingly support a wide range of systems—including roof-mounted snow retention, fall protection, and HVAC equipment, as well as wall-mounted façades, signage, communications hardware, and other structural attachments—understanding which butyl is being used matters more than ever.

Behind the popularity

Butyl sealants are popular because they can be applied at both cold and hot temperatures. Non-curing butyl compounds have a sticky constitution —often compared to chewing gum—that is retained throughout their service lives, even in extreme temperatures. These sealants are sustainable, non-toxic, and environmentally friendly. They require little, if any, surface preparation beyond removing visible dirt and debris. The sealant also "tacks" (clings) to threaded fasteners (see Figure 1 on page 28), providing an additional layer of secondary weather protection. That adhesion and elastic recovery are especially critical on metal building systems, where thermal cycling and panel movement can challenge lesser sealants.

Although pumpable tube grades (72%± solids) are available, extruded tapes (98%± solids) are strongly preferred due to their manufactured dimensional consistency, eliminating the variability of field-applied sealant and guesswork about how much is enough. Over- or under-application can both be detrimental to long-term performance. (see Figure 2 on page 28)

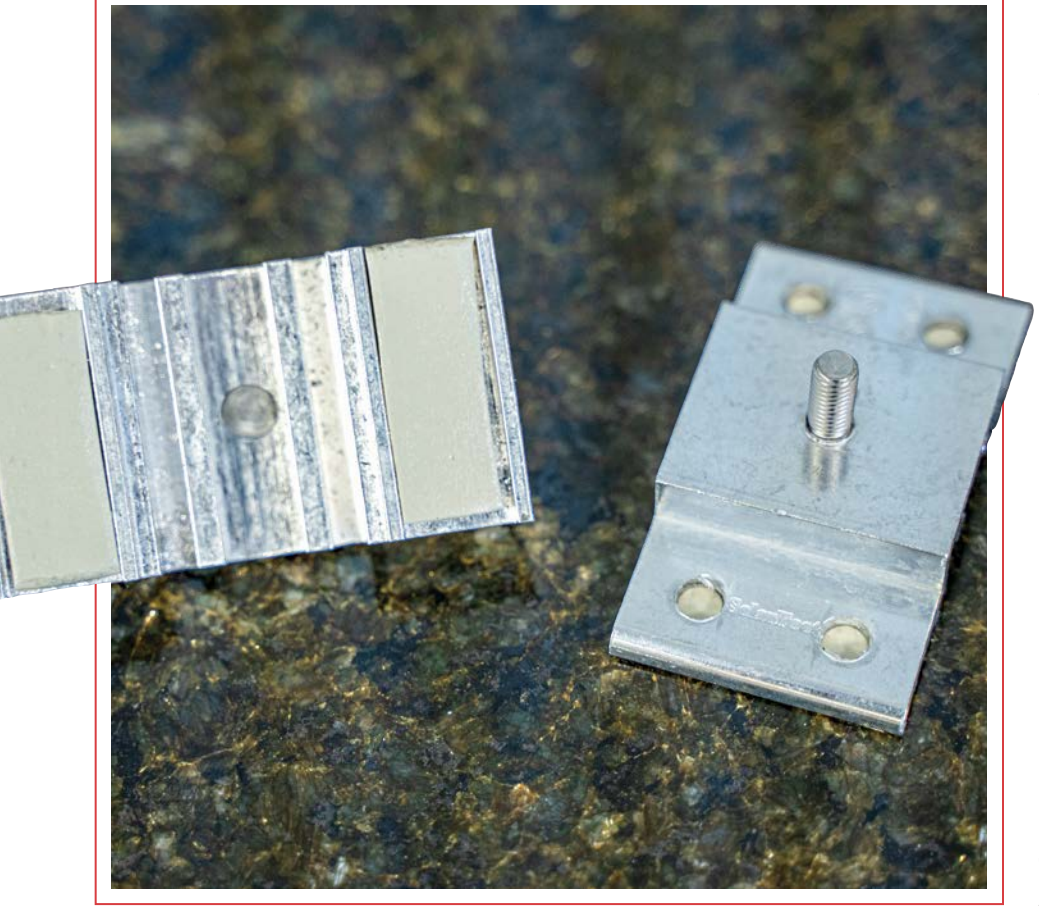
Efficiency that is certified

A service life study conducted by the Metal Construction Association (MCA) demonstrated that certain brand-specific butyls still exhibit exceptional elasticity, adhesion, cohesive tensile strength, and webbing properties after 35 years of service. (see Figure 3 on page 29). Based on laboratory analysis of specimens taken from

FIGURE 1

Tacking of butyl tape to a threaded fastener of an S-5! VersaBracket metal roof attachment.

FIGURE 2



Factory-applied butyl tape encapsulated in the base of an S-5! SolarFoot metal roof attachment.

14 aged roofs, those same sealant chemistries are estimated to deliver service lives exceeding 60 years.

While butyl formulations have evolved, and many have improved over time, it is important to note that not all butyl polymers are created equal. There are currently no industry standards governing butyl composition. Butylene rubber blended with isoprene typically accounts for less than 20 percent of a formulation, and a higher rubber ratio does not necessarily translate into a better sealant. Additives such as ultraviolet (UV) inhibitors and insect or fungal repellents are often included, but exact formulations remain proprietary and vary widely among manufacturers.

A qualified lab chemist may evaluate sealants using tests for cone penetration, tensile strength, and adhesion, but these tests provide only early-life indicators. The only reliable measure of aged performance for butyl polymer sealants is documented, brand-specific performance on real roofs over decades of service. Formulations unable to withstand the test of time can harden, lose adhesion, or exhibit compound breakdown (de-polymerization) in a fraction of the service life of superior counterparts—sometimes within seven or eight years.

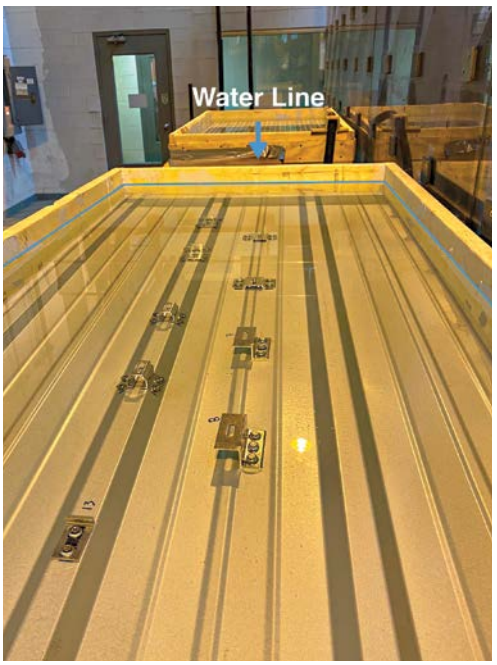
The changing approach to sealants

As more metal construction system manufacturers and attachment producers recognize the benefits

FIGURE 3

Webbing, elasticity, and adhesion of a proven butyl formulation within a joint after 33½ years of service.

FIGURE 4



Penetrative attachments should be tested to ASTM E2140 Static Water Test. The test floods the connection with 152.4 mm (6 in.) of water for six hours. If it leaks a single drop—it fails.

of butyl sealants, they are increasingly incorporating field- or pre-applied sealants during production rather than leaving sealant selection to contractors, who often rely on whatever is most convenient at a local building materials store. This shift represents a meaningful step forward in quality control and long-term building-envelope performance.

Sourcing a butyl compound with at least 40 years of empirically proven performance is critical, but material selection alone is not enough. Proper product design for pre-applied sealants is equally important. Applying the correct amount with the appropriate part and mating sealant geometries—while preventing over-compression and limiting UV exposure—are all critical design considerations. Attachments with pre-applied butyl should incorporate a reservoir to reduce over-compression, thinning, and UV exposure, all of which can compromise service life in metal roof and wall assemblies.

To validate attachment design, leak testing with pre-applied sealants must be conducted in the specific application for which the product is intended. One of the most demanding—and most applicable—tests for metal roof panels and roof attachments is ASTM E2140, *The Standard Test Method for Water Penetration*, a static water test developed specifically to evaluate attachment performance under controlled conditions. (Figure 4)

Further considerations

Beyond selecting a butyl sealant with a proven performance history and designing attachments properly for pre-applied butyl tape, the following best practices can help ensure long-term watertightness:

- Avoid relying on surface-applied sealants for repairs. Surface-applied sealants are exposed to UV radiation, ozone, mechanical abrasion, dirt, and other contaminants. Butyl polymers are particularly vulnerable to UV exposure. If sealants are not properly protected, multiple factors can break down their chemical bonds. While gasket-style applications offer improved protection, the most effective designs fully conceal the sealant and limit extrusion at the attachment perimeter.
- Prevent over-compression. More torque does not equal better performance. Over-tightening fasteners can thin or displace sealing material, reducing effectiveness and service life. The best practice is to use attachment designs that limit compression and protect the sealant by providing a dedicated cavity for the material.

Bottom line

The growing use of non-curing butyl polymers to seal metal roof attachments and envelope interfaces represents a positive trend for the metal construction industry. Butyl is a superior sealant capable of long-term performance when properly sourced, applied, and protected. With increased adoption comes increased responsibility to select durable formulations from proven sources with proven histories and to employ attachment designs that support the sealant throughout the full-service life of the metal roof or metal building system. Pre-applied butyl, combined with thoughtful engineering and validated testing, remains a best practice for long-term envelope integrity.

Rob Haddock *is the CEO and founder of S-5! and the inventor of metal roof attachment solutions. A former contractor turned building-envelope scientist, Haddock has dedicated more than five decades to advancing the metal roofing industry. He is an award-winning roof-forensics expert, author, lecturer, and educator, as well as the director of the Metal Roof Advisory Group, Ltd., a consulting firm specializing in metal roof design, installation, and performance.*

PHOTO COURTESY OATEY CO/© ISTOCK

Sealant Selection Guide for Metal Building Systems

By Sean Comerford

Metal building systems rely on the right caulk or sealant to stay watertight, structurally sound, and protected from environmental stress. Selecting the correct sealant for each application requires matching the substrate, temperature range, and exposure conditions to the sealant's chemistry. Metal expands, contracts, and reacts to weather differently than other substrates. The wrong product can lead to leaks, separation, or premature failure.

Choosing the proper sealant for roofs, gutters, wall panels, penetrations, ductwork, and high-heat components helps ensure that each connection performs as intended.

Understanding how different sealants behave, what conditions they must withstand, and which ones are compatible with specific metal surfaces allows contractors to avoid callbacks and support long-term system performance.

What sealants must withstand in metal building systems

Metal expands and contracts with temperature changes. This places constant stress on sealed joints. Outdoor exposure introduces additional factors such as UV radiation, moisture, freezing conditions, and salt.

For this reason, sealants must remain flexible while maintaining adhesion. Proper curing depends on applying products within the manufacturer's recommended temperature range. When this is not done, seals can fail prematurely.

Common sealant types for metal applications

Silicone sealants

Silicone performs well in exterior and wet environments. It supports movement and resists UV exposure, making it appropriate for gutters, downspouts, and exterior seams. This type of sealant cures tack-free in 30 minutes and fully cures in 24 hours. It operates over a temperature range of -75°F to 450°F and supports 25 percent joint movement, helping accommodate the expansion and contraction of metal assemblies.

Polyurethane sealants

Polyurethane sealants offer strong adhesion and flexibility and are frequently used in gutter systems due to their tolerance for temperature swings and outdoor exposure. The most eco-friendly options offer a 0 percent VOC, polyurethane formulation with a service range of approximately -40°F to 180°F. It is suitable for metal applications that experience routine movement or vibration.

High-heat sealants and cements

High-heat components require materials rated for elevated temperatures. High-heat silicone and high-heat cement maintain structure around boilers, vents, and flues. They can operate over a temperature range of -80°F to +600°F with 25 percent joint movement, supporting seals exposed to continuous or intermittent heat.

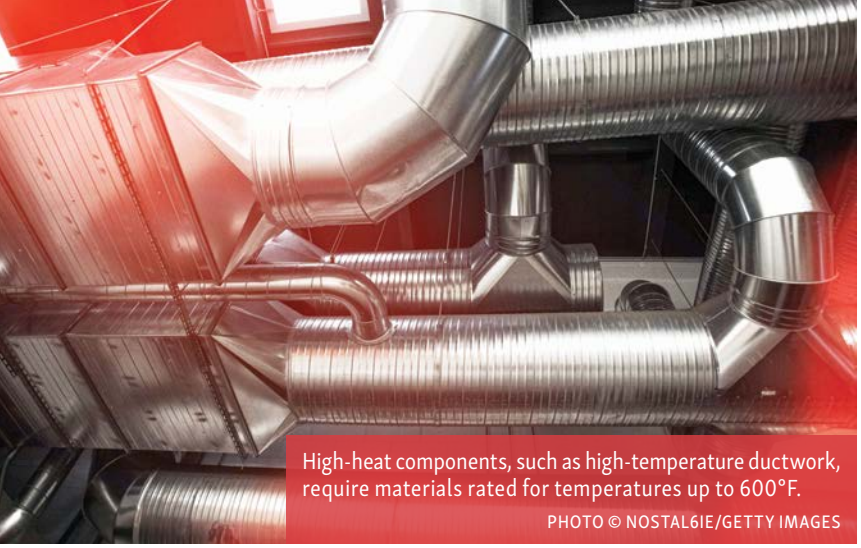
Roof and flashing sealants

Select petroleum-based flashing sealants only when confirmed compatible with surrounding materials, as some can affect rubber components.

Key sealant applications in metal construction

Metal roofs

Metal roofs require accurate placement of penetrations because errors cannot be



High-heat components, such as high-temperature ductwork, require materials rated for temperatures up to 600°F.

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Silicone sealants perform well in exterior and wet environments.

PHOTO COURTESY OATEY CO

concealed once the panels are installed. Roof joints must withstand exposure to the sun, freezing temperatures, and the potential for standing water. Flashings designed for metal surfaces help maintain a secure seal.

Gutters and downspouts

Gutters are exposed to constant moisture and wide temperature fluctuations. Sealants must withstand repeated expansion and contraction at seams, especially in climates with freeze–thaw cycles. Silicone accommodates movement from thermal cycling, while plastic seal supports flexible sealing in joints that experience regular vibration or shifting.

Metal wall panels and facades

Wall panel joints must bond to coated or painted surfaces and accommodate movement resulting from daily temperature changes. Exterior exposure increases stress on vertical seals, especially on elevations with high sun exposure. Sealants adhere to coated substrates and provide a flexible, weather-resistant seal.

HVAC systems and ductwork

Metal ductwork experiences vibration from equipment operation and temperature changes during system cycles. Sealants must withstand airflow pressure and work in conjunction with mechanical fasteners to maintain joint stability in temperatures from 40°F to 180°F, supporting stable joints in systems exposed to continuous airflow and mechanical movement.

Vents, flues, and high-heat components

High-heat components require materials rated for elevated temperatures up to 600°F. High-heat silicone and high-heat cement support joints exposed to continuous heat and thermal cycling around boilers, water heaters, and exhaust pathways. This provides a durable seal for metal flues, furnace transitions, high-temperature ductwork, and other assemblies exposed to sustained or intermittent heat.

Penetrations for pipes and valves

Penetrations through metal often require both sealing and structural support. Pipe sleeves create space for movement and protect the pipe where it passes through a wall or roof. Proper support systems reduce sagging or shifting that may damage the seal over time.

Industrial metal equipment and tanks

Chemical exposure, vibration, and moisture are present every day in industrial environments. Sealant selection must reflect the operating conditions. Compatibility and manufacturer recommendations guide the choice. Plastic sealants, for example, bond to metal and withstand these conditions, supporting joints that experience environmental or operational stress.

Gaskets, fasteners, and small-profile areas

Gaskets and O-rings generally provide their own seal when installed correctly. Supplementary sealant should be used only if supported by the manufacturer's instructions. Screws, rivets, and small gaps require clean, prepared surfaces and sealants rated for the metal and environment.

Environmental and material compatibility

Climate and metal type significantly influence sealant performance. UV exposure, moisture, and freezing temperatures affect how long a seal will last. Metals such as aluminum, galvanized steel, and copper respond differently to sealant chemistries. Surfaces must be clean, dry, and free of grease or debris to support adhesion. Light abrasion can improve bonding when recommended, especially where mild oxidation is present. Petroleum-based products can deteriorate rubber components. Compatibility checks help reduce the likelihood of premature failure.

Best practices for preparation and application

- Ensure the surface is clean, dry, and free of debris, grease, or oxidation.
- Prepare the surface as needed, including light abrasion when recommended to improve adhesion.
- Apply sealants only within the temperature range specified by the manufacturer.
- Monitor weather conditions, since temperature and moisture influence curing and final seal integrity.
- Take accurate measurements before creating penetrations or cuts, especially on metal roofs, where corrections are difficult to conceal.

Inspection and long-term performance

Routine inspection helps identify cracks, gaps, or separations early. Water intrusion or unexpected air movement also indicates seal deterioration. Commercial facilities benefit from annual inspections, with additional checks conducted after severe weather events. Residential structures typically require a seasonal visual review, especially in spring and fall when temperature changes place added stress on metal assemblies.

Reliable sealing depends on selecting the proper product, thorough preparation, and installation that aligns with environmental conditions. These steps help metal assemblies achieve long-term durability across a wide range of applications. MCN

Sean Comerford *is manager, inside sales and tech support at Oatey Co. He is a third-generation tradesman with nearly 20 years of plumbing experience, including serving as the lead plumber for commercial/residential new-construction, service, and fire protection jobs. He holds a State of Ohio Fire Protection License for Sprinkler and Standpipe.*

SMALL MESH, BIG IMPACT: Expanded Metal in Modern Construction

By Manuel Menchaca

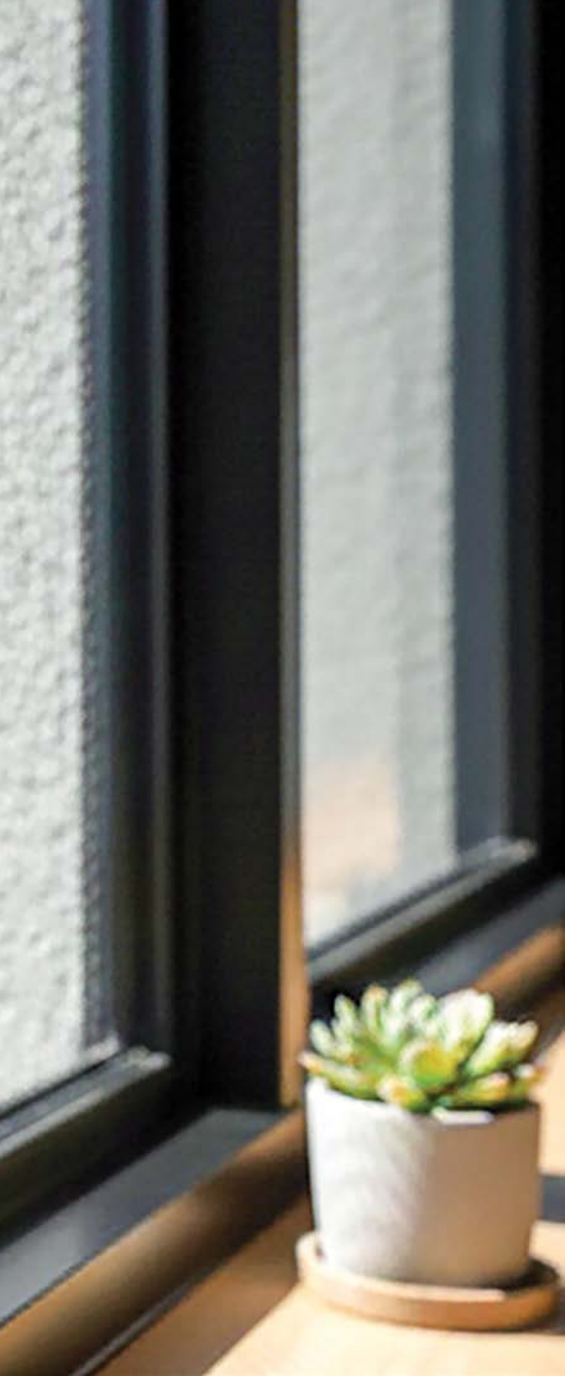
PHOTOS COURTESY WALLNER EXPAC

In building design, the smallest components often play the most significant role in long-term performance. From wildfire resilience and ventilation compliance to acoustic control and structural reinforcement, small openings of expanded metal quietly support critical functions across the building envelope and interior systems. Though frequently specified as a simple screen or accessory, its impact extends far beyond basic protection. When properly selected and engineered, small-mesh material becomes an essential element for safety, durability, and architectural intent.

The basics of small opening expanded metal

While expanded metal with large openings is a construction and architectural staple, those with small holes—typically no larger than 12.7 mm (0.5 in.)—offer a unique blend of structural rigidity and versatility essential for modern commercial and residential construction. In many cases, their use is often a matter of necessity rather than choice. Model codes such as the *International Residential Code (IRC)* and the *International Building Code (IBC)* require that attic vents, ridge vents, soffits, and gables be screened with corrosion-resistant, non-combustible (metal) mesh, such as expanded metal. Most codes limit openings to no larger than 6.3 mm (0.25 in.); however, in wildfire-prone regions governed by Wildland Urban Interface (WUI) provisions, required openings are often reduced to between 1.6 mm (0.063 in.) and 3.2 mm (0.125 in.) to prevent embers from entering while allowing air to flow for ventilation.

When balancing fire protection with ventilation performance, it is essential to consider the Net Free Area. Measured in square inches, it is the total, unobstructed space in a vent through which air can freely pass, excluding blockages from screens, louvers, or baffles. It represents the vent's adequate airflow capacity. It is critical to ensure that proper attic ventilation openings are large enough to meet code requirements to prevent



moisture buildup, mold growth, structural deterioration, and excessive heat accumulation.

Protection against pests

Unscreened vents also offer rodents and birds access to the safety and warmth of the attic or crawlspace. Once they enter, they soon create a mess from feathers and other nesting materials. Aside from the cost of hiring a professional to clean up the mess, they can also destroy insulation, burrow into walls, gnaw on studs and rafters, and chew on wiring, posing a serious fire risk. They also create strong odors from feces, urine, and decomposition if they die. Health hazards can also be introduced via

fleas or ticks. Expanded metal provides maximum protection and allows necessary ventilation. It is tough for an animal to breach, creating a critical, non-combustible barrier that prevents embers from igniting stored items, which is a leading cause of home loss during wildfires.

However, preventing the escape of embers is just as critical. The wind can carry an ember up to a mile, so a chimney cap and its mesh screen effectively trap them before they can exit the flue. Per the International Code Council (ICC), "all chimneys attached to any appliance or fireplace that burns solid fuel shall be equipped with an approved spark arrestor." Additionally, "if it is installed on a masonry chimney, it must be removable for cleaning the flue, the openings shall not be greater than 12.7 mm (0.5 in.) or less than 9.5 mm (0.375 in.) They shall have heat and corrosion resistance equivalent to 19-gauge galvanized steel or 24-gauge stainless steel."

These openings will catch the embers and allow smoke to vent, while reducing the risk of creosote buildup.

Expanded metal for rain gutters

Rain gutters channel rainwater and melting snow from the roof and away from a house or building, preventing soil erosion and pooling water that can lead to mold, mildew, discoloration, and wood rot. To ensure the system works properly and minimize maintenance, adding expanded metal gutter guards is recommended. Without protection, gutters collect leaves, pine needles, shingle grit, and other rooftop debris. This accumulated debris can impede water flow, causing pooling, creating sludge buildup, and becoming a breeding ground for mosquitoes. In extreme cases, it may lead to gutter failure.

Beyond water management, debris-filled gutters can present a fire risk in wildfire-prone regions. Wind-driven embers can ignite dry organic material collected at the roof's edge, one of the most vulnerable areas of the building envelope. Non-combustible expanded metal gutter guards help reduce debris accumulation while creating a durable barrier that limits ember exposure at the eave line. They also offer greater resistance to radiant heat exposure and ember contact than polymer-based alternatives, which may soften, deform, or contribute to flame spread under elevated temperatures. For projects in WUI zones, specifying corrosion-resistant metal components aligns more closely with ember-resistant design principles.

Openings that are up to 12.7 mm (0.5 in.) LWD (Long Way of Diamond) are large enough to allow water to flow into the gutter while filtering acceptable rooftop debris that either washes over the edge or is blown away by the wind. This minimizes cleaning and ensures the system operates properly. Made in 1.2 m (4 ft) lengths from galvanized steel, aluminum, or copper, it is strong, lightweight, and corrosion-resistant. Powder coat can be applied for additional corrosion resistance and is available in multiple colors to match the gutter.

Facing the harshest conditions

For enhanced filtration and a stronger gutter guard system that experiences

Non-combustible expanded metal gutter guards help reduce debris accumulation while creating a durable barrier that limits ember exposure at the eave line.

heavier debris or harsh weather conditions, an expanded metal mesh with larger diamonds can be layered above the micro mesh. The two-stage or dual-layer system maximizes filtration and flow rate. The upper mesh layer stops large debris such as leaves, while beneath, a secondary micro mesh filters out smaller debris, such as pine needles and shingle grit.

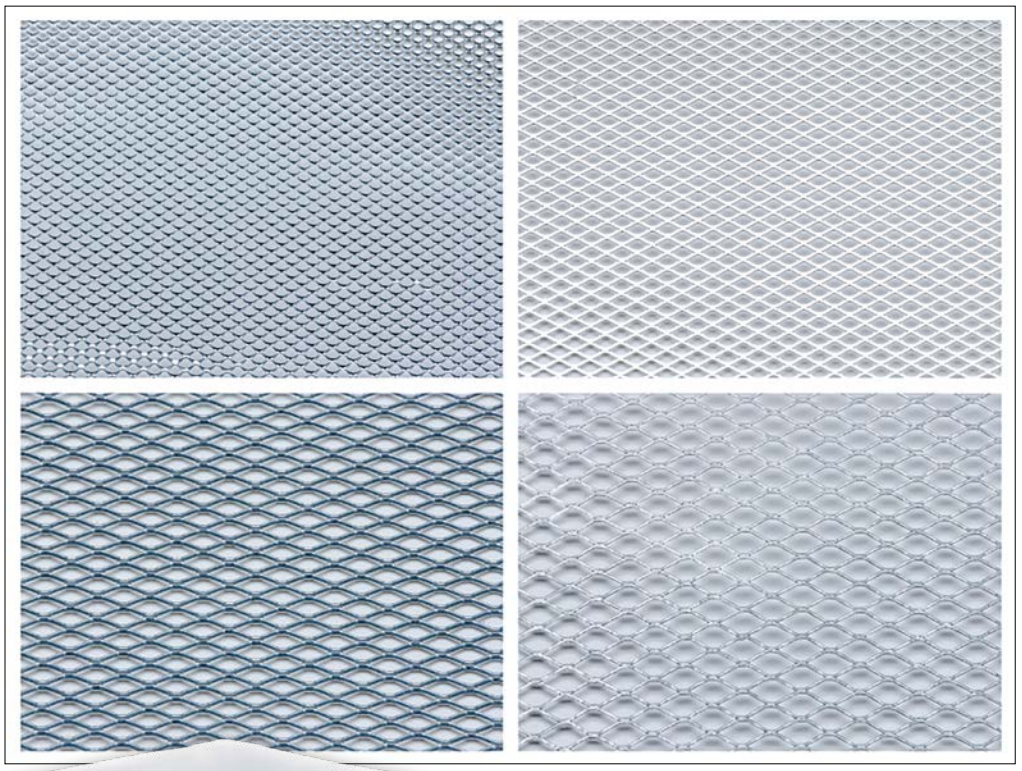
A durable replacement for traditional screens

Small-opening expanded metal meshes also provide a highly durable and secure alternative to a traditional window or door screen. While it is a sturdier option, it still allows light and air to flow, making it ideal for locations that require both ventilation and a strong physical barrier against pets and insects. Manufactured from a single sheet of metal, it resists damage from animal scratches, impacts, and long-term wear and tear much better than a traditional screen. Openings ranging from 0.79 mm x 0.99 mm (0.031 in. x 0.039 in.) to 3 mm x 6 mm (0.118 in. x 0.236 in.) allow airflow, outward visibility, and light transmission while blocking small insects such as gnats. Aluminum and steel are recommended for their corrosion resistance and durability, making them suitable for both interior and exterior applications. Adding powder coat further extends its lifecycle and allows the mesh to complement existing architectural designs. Engineered to last for decades, expanded metal screens reduce the need for frequent replacements or repairs, which can lower long-term costs.

Acoustic considerations

Some environments require sound reduction rather than airflow control. The hustle and bustle of a restaurant can make it difficult for diners to have a quiet conversation and enjoy their meal. Open-plan office layouts may hinder collaboration and concentration. The long hotel hallways can produce echoes that disturb guests. Even the plenum above the ceiling panels, which houses the HVAC ductwork, can amplify its sounds during operation. Engineered for superior acoustic performance, flattened expanded metal ceiling panels with small openings mitigate reverberation and maintain architectural integrity by concealing the unsightly substructure. Steel and aluminum are the most common materials, but the latter especially offers a good balance of sound absorption, durability, and lightness.

Expanded metal ceiling panels can be installed in numerous ways. For a relatively simplified installation, the panels can use the same regular dropped ceiling grid used for acoustic tiles. They may be cut to size and coated at the manufacturing plant if needed, then secured directly onto the grid. For a seamless look, a torsion spring mounting system features a concealed suspension grid. The torsion springs are securely attached to the panels while providing access to the plenum when needed. Adding sound-absorbing material, such as fiberglass or acoustic felt, to the back of the panels further reduces echoes and reverberation by capturing sounds that pass through the openings.



Small openings of expanded metal quietly support critical functions across the building envelope and interior systems.

For chimney caps, expanded metal provides maximum protection and allows necessary ventilation.

Drywall rasps is one of the many uses for expanded metals with small openings.

Another installation option is to vertically suspend the panels for signage, shading, decorative partitions, or solely for aesthetics. Left uncoated, a mill finish offers a modern look, whereas painting or adding powder coat can match the décor. This adaptability, combined with an extensive range of customizable openings and finishes, ensures a seamless blend of high noise reduction and premium aesthetics, making it an excellent choice for offices, hotels, and other public places.

While reducing ambient noise may be necessary, specific environments require sound amplification and transmission, including home theatres, places of worship, and commercial audio systems. Expanded metal speaker grilles offer a unique blend of aesthetics and acoustics for high-end, custom, or contemporary interiors. Unlike standard surface-mounted options, these grilles can be mounted flush to walls or ceilings for a seamless, low-profile design. Beyond their visual appeal, the material is durable enough to withstand impacts, protect delicate components, and allow for clear sound transmission. If a grille with rounder openings is preferred, certain expanded metal is manufactured to look like perforated metal. Either can be coated to match the environment without impeding sounds or compromising its protective advantages.

Not just for interiors

Expanded metal is just as crucial inside walls as it is on the outside. It is a cost-effective material used in masonry for structure reinforcement, preventing cracks in mortar joints, brickwork, and stucco by increasing tensile strength and resisting vibration. Made from galvanized or stainless steel to ensure durability and prevent rust within the structure, the expanded metal is embedded in the mortar on the first or second row of brickwork, then every third or fourth row thereafter. Additional construction uses include commercial and industrial filters, heat guards wrapped around tree trunks and wood posts to protect from string trimmers, sifters, drywall rasps, tool cribs and lockers, and infill panels. This versatility further proves that when it comes to expanded metal, the smallest openings often yield the most meaningful results.

This versatility is possible because small-opening expanded metal functions as much more than a simple screen. It serves as a critical building material in modern construction, essential for meeting safety, airflow, durability, and architectural intent requirements. From precision-engineered micro-mesh for ember protection to heavy-duty reinforcement within mortar and stucco, choosing the appropriate opening size and material finish allows designers and builders to maintain a seamless architectural appearance while ensuring long-term resilience against environmental and structural challenges.

Manuel E. Menchaca, *MBA, is the senior marketing manager for Wallner Expac, a leading manufacturer of expanded metals for the architecture and construction industries, among others, and the world's largest expanded metal manufacturer for HVAC filters. With nearly 30 years of experience, he specializes in marketing strategy, professional writing, and graphics. For the past decade, he has driven marketing initiatives at Wallner Expac, following a successful career leading marketing teams across diverse sectors. Menchaca holds a bachelor's degree from California State University, Fullerton, and an MBA in Marketing from the University of Redlands.*

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Engineered Metal Grating in Urban Landscapes

By Carissa Dau

PHOTOS COURTESY HENDRICK SCREEN COMPANY

Architects, planners, and engineers often struggle to find solutions for drainage and tree protection that meet safety codes while also matching the aesthetics of the surrounding area. Customized grating using profile bar systems helps bridge the gap between heavy-duty engineering and refined design.

This article covers how metal gratings can enhance designs and turn functional transition zones into cohesive design features.

Why metalwork matters in urban design

Thresholds are essential in urban design. Where the street meets buildings, there is an opportunity to complement and enhance the existing architecture.

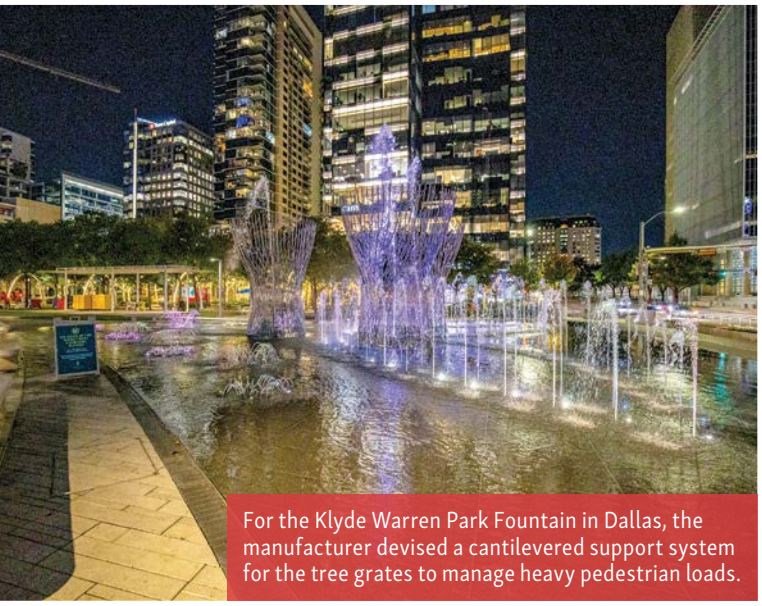
While it is necessary to incorporate functional elements, such as drains or tree grates, it can be done so in an aesthetically pleasing way. Industrial cast-iron or concrete trench drains can disrupt the visual appeal of urban landscaping projects. Every detail contributes to the overall design, including the metalwork of these functional elements.

Customized metal grating for urban landscaping seamlessly integrates the necessary functional elements. Continuous, linear grating lines can visually guide pedestrian flow or extend a building's geometry into the landscape.

Core components of engineered metal grating systems

Custom grating can be used for various components, such as:

- **Tree grates:** Urban trees are vital for reducing heat islands, but they struggle to grow in compact soil. Tree grates protect roots by ensuring sufficient soil volume and preventing excessive soil compaction. They also expand the walkable surface area for pedestrians while allowing water to reach the roots. Tree grates can be designed with removable inner rings to allow for tree growth and/or to accommodate integrated lighting ports.
- **Trench grates:** Plazas need larger, longer trench grates to provide efficient drainage. They can also be used for curb transitions.
- **Fountains and water features:** With customized grating, it can create curved radii to match more organic landscape shapes. This type of grating suits interactive dry-deck fountains, where it needs to be safe for barefoot traffic yet durable enough to withstand constant water exposure.



For the Klyde Warren Park Fountain in Dallas, the manufacturer devised a cantilevered support system for the tree grates to manage heavy pedestrian loads.

Grating features, including hidden lockdown mechanisms or support framing, make it easier for contractors to install.

• **Entrance grilles:** As the first line of defense in building maintenance, entrance grilles play a key role in preventing dirt and debris from reaching lobbies and entranceways. With aesthetic grating designs, it can also maintain a luxury visual appeal.

Manufacturing, materials, and finishes

With custom-designed grating projects, it can go beyond straight lines and basic materials to ensure a bespoke solution for an urban landscape. Working with a custom fabricator means integrating patterns using matching grate spacing or bar orientation to align with the surrounding paving stones or building mullions. With a broad range of manufacturing processes to choose from, it can also include logos,

city seals, or decorative patterns in the solid plate portions of the grating.

Alongside providing aesthetically pleasing solutions, metal grating is also functional. Metal profile bar or wedge wire screens are V-shaped, which helps prevent clogging, maximizes drainage, and makes them self-cleaning.

Unlike cast iron grates, which are prone to rusting and cracking, stainless steel grating is corrosion-resistant. In coastal cities or areas where deicing salts are used, 316 stainless steel is recommended. It also withstands foot traffic and can be a more durable option than plastic grating.

Additional anti-slip finishes can also be applied to metal grating for urban plazas and other applications to maximize safety in wet conditions. These finishes can provide extra traction where it is needed.

Compliance and safety standards

True accessibility means the space is welcoming to everyone who uses it. There are a few key safety standards to incorporate into your designs.

ADA-compliant (Americans with Disabilities Act) metal grating for public spaces helps ensure wheelchair and stroller accessibility without compromising drainage.

Under ADA guidelines, the slot opening must be no wider than 12.7 mm (0.5 in) in the dominant direction of travel to prevent tripping. This precise tolerance means castors or cane tips do not penetrate through the bars and create trip hazards. When designing pedestrian walkways to be high heel-proof, the opening should be no more than 4.8 mm (0.188 in.)

H-20 load ratings are also crucial for plazas that need to provide emergency vehicle access or for delivery trucks. Including an H-20-rated metal grating in a project's design ensures the hardscape can withstand the extra tonnage from heavy vehicles.

Real-world applications

These real-world case studies show how engineered solutions for bespoke metal grating can suit a wide range of urban landscape projects.

Holmberg Pedestrian Bridge

Opened in 2005, the Holmberg Pedestrian Bridge needed a makeover due to its damage-prone glass-paneled structure. A custom-fabricated 316 stainless steel grating was designed to ensure the bridge was both aesthetically pleasing and durable for years to come.

The manufacturer retrofitted the bridge with profile bar grating panels. They used T16 bars with 4.8 mm (0.188 in.) slot

In this project, a proprietary, mechanically interlocked profile bar system worked seamlessly with the wood decking on the exterior of Ringling College's student housing facility.

openings to ensure ADA compliance. Anti-slip coatings on the grating surface provide traction in all weather conditions.

Klyde Warren Park tree grates

Landscape architects needed 60 custom tree grates for a 20,024 m^2 (5-acre) central gathering space in Dallas, Texas, which minimized installation complexity while providing maximum load capacity.

The manufacturer devised a cantilevered support system for the tree grates to manage heavy pedestrian loads. The design featured a sunburst pattern with integrated lighting, proving that functional hardware can serve as a focal point of the park's identity.

Entrance grilles at Ringling College of Art and Design

In this project, a proprietary, mechanically interlocked profile bar system worked seamlessly with the wood decking on the exterior of Ringling College's student housing facility. This project used 316 stainless steel and B12 bars with 3.1-mm (0.125-in.) slot openings. For extra traction, half-inch strips of anti-slip coating were specified.

Installation, maintenance, and life cycle economics

Customized metal grating can have higher up-front costs, but can help achieve long-term savings.

- **Simplifying installs:** Grating features, including hidden lockdown mechanisms or support framing, make it easier for contractors to install.
- **Increased lifespan:** With stainless steel, there is no need to keep on top of paint jobs or rust repairs. The durability and longevity of this material can offer better long-term value than cast iron (or other materials).
- **Sustainability:** Stainless steel bars can be recycled, but their true sustainability lies in their longevity, which eliminates the environmental and financial costs of demolishing and replacing existing structures. If the project is targeting Leadership in Energy and Environmental Design (LEED) certification, added durability can contribute toward Materials and Resources credits.

Partner with a trusted metal manufacturer

Urban landscapes can be functional and visually striking spaces, especially when materials match their surroundings. Engineered metal grating turns essential infrastructure, such as trench grates, tree grates, or entrance grilles, into design assets. To ensure the success of a project, do research and select a partner with experience, aligned with the project's needs, and who supports the vision. MCN

Carissa Dau *is the architectural product manager at Hendrick Screen Company, where she has been employed for eight years. She works closely with architects, designers, and contractors to match Hendrick's products to project specifications and provide detailed quotes and technical support.*

A Matter of Trust: Contractors Weigh in on Daylighting Systems

By Roman Lambright

PHOTOS COURTESY DAYSTAR

Contractors place their trust in rooftop systems that provide brilliant, diffused daylight to interior spaces with easy installation and a high level of leak-free reliability.

Natural sunlight has long been considered superior to artificial light. It contains the full spectrum of colors, and studies show that people are generally happier and healthier living, working, and shopping in sunlit environments. Although windows let natural light into a building, organizations often use artificial lighting indoors. Today, many seek to let natural light illuminate the interior. As a result, homeowners, retail businesses, and warehouse owners are turning to daylighting systems to reduce, and in some cases, eliminate, the need for artificial lighting during the day.

Daylighting systems, which passively harness and enhance sunlight, are not simple skylights. Rather, they apply physics to standard glass domes, which facilitate and diffuse the light entering a building without harshness or glare. These energy-efficient systems can evenly illuminate building interiors of any size with pleasing daylight. The dramatic effect floods the space with bright light, enabling true color perception, which is crucial for selling many products. Even with these tangible benefits, the contractor is usually focused on ease of installation and reliability. Their prime concern typically is "After the job, can I sleep at night without worrying about getting a callback [for leakage] after the first rain?"

After all, any penetration of a watertight roof membrane can introduce a potential pathway for water, which no one wants. Therefore, contractors need exceptional confidence that the systems they install will be leak-free and highly reliable. In the industry, one reliable daylighting system is specifically engineered for leak-free installation. Contractors make it clear to their customers that the installation process gives them confidence in its watertight integrity.

This system is composed of four parts: first, sunlight is gathered and diffused through an ultra-clear outer dome and inner collimation lens. A light shaft made of insulated panels with highly reflective interior surfaces amplifies natural light as it is captured. And finally, a ceiling lens, engineered to diffuse highly concentrated light into a broad lighting pattern, is installed on the interior ceiling. The product comes in three common sizes: 0.61 m x 0.61 m (2 ft × 2 ft), 0.61 m x 1.22 m (2 ft × 4 ft), and 1.22 m x 1.22 m (4 ft × 4 ft), although other sizes are available.

As a general contractor for 30 years, Jonas Yoder, owner of JY Construction, has installed many natural daylighting systems.

"For natural lighting in roofing, I wouldn't consider installing anything but [this particular] system because its lighting and reliability are superior. It is a high-quality product that installs without leaks. With other choices, you may get callbacks when they leak," says Yoder. According to Yoder, in other systems he has used fiberglass construction, which

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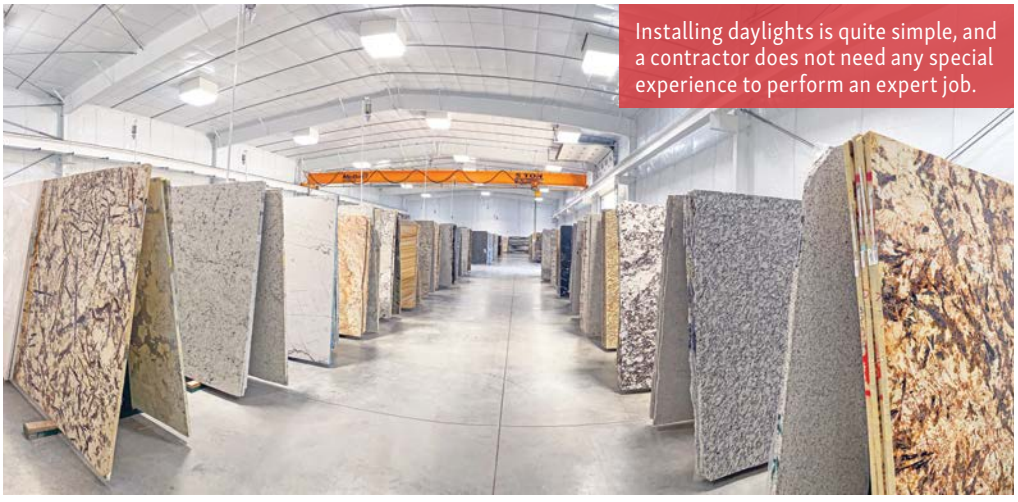
Building owners are turning to daylighting systems to reduce, and in some cases, eliminate, the need for artificial lighting during the day.

Natural sunlight has long been considered superior to artificial light.



Installing daylights is quite simple, and a contractor does not need any special experience to perform an expert job.

is prone to distortion and diminishes natural light over time. In addition, when cracks emerge in the fiberglass, leakage occurs.

One of the reasons for its reliability is its design and engineering to prevent leaks. This begins with a properly installed essential roof curb that provides a level platform for the daylighting components to attach. Rooftop curbs are raised metal frames designed to safely mount structures to the roof.

Typical skylights consist of a dome with pre-attached metal flashing, which the contractor cuts around to fit into an opening, then seals with caulk. However, this arrangement is more prone to leakage. In contrast, these insulated roof curbs are made of Galvalume steel or aluminum, and feature continuously welded watertight seams. The curbs can be fitted to almost any roof pitch and metal rib design. Rib caps are also supplied to fit the roof panel, as well as the mastic sealant to be applied between the roof curb flange and the roof metal.

After concerns about potential water leaks, many contractors seek a system that prevents outdoor hot or cold air from entering the home. This particular system uses an insulated roof curb and a double-glazed top dome with a vinyl thermal barrier. The system's insulated, enhanced light shaft and lens provide 40 to 50 percent better thermal value than other designs. In addition, the system has a low solar heat gain coefficient (SHGC) and U-values that are more than twice those of common skylights. The daylighting installation process is quite simple, and a contractor does not need any special experience to perform an expert job. If the contractor follows the instructions, the system can provide many years of reliable service without worrying about rain leakage. MCN

Roman Lambright, *sales and design consultant at Daystar since 2008, can be contacted at 618-426-1868 or sales@daystar1.com.*

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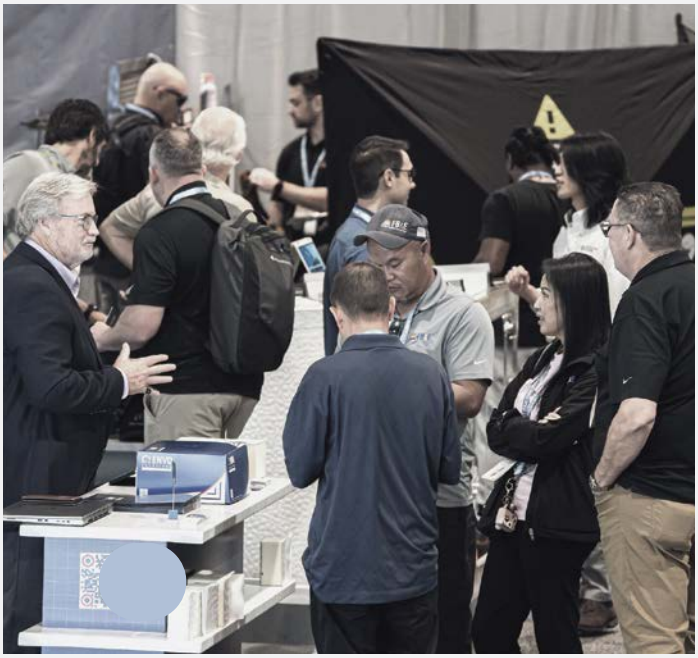

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Using Polycarbonate Wall Systems to Tie in School District Colors

Purple hues and a unique design element help the new Cal Community Center shine

Written by Neall Digert

PHOTOS COURTESY KINGSPAN LIGHT + AIR NORTH AMERICA

Advancing its mission to cultivate a better community through a commitment to youth, healthy living, and fostering social responsibility, the YMCA of Greater Grand Rapids partnered with Caledonia Community Schools (CCS) to build and jointly operate a new, state-of-the-art recreation facility serving both students and community members in Caledonia, Mich. With a location adjacent to the school district's existing education complex, this 4,367 m^2 (47,000-sf) facility would house a wide range of amenities to promote fitness and community engagement for all ages, including a fitness and wellness area, a kids' zone, a basketball court, an indoor track, as well as a splash pad and pool.

The school district and YMCA envisioned this facility as a vibrant community hub for recreation, wellness, and community connection, offering special programs for students, families, and seniors to engage in healthy activities together and create lasting memories.

Challenge

The team was tasked with creating an inviting, comfortable, and visually safe environment, as well as designing a space conducive to play and exercise. The project team knew the facility's interior must deliver abundant access to beneficial natural light.

This required evenly diffusing high-quality daylight throughout the facility —without introducing glare, excess heat, or visual discomfort for guests engaging in high-energy activities. To conserve funds for this facility, which serves as a high-use community resource, the project also called for an energy-efficient lighting solution.

Additionally, the facility design required an inventive, eye-catching aesthetic, intended to promote a playful environment and infuse visitors with community spirit. The exterior further necessitated the use of materials with the versatility to apply unique color options, in order to match customized interior design choices. The project prioritized incorporating the school district's signature purple color, which was integrated throughout indoor areas such as the indoor track and bathroom tile.

Solution

To deliver an innovative, playful aesthetic, Stantec and C2AE Architecture created

The Cal Community Center officially opened in February 2025.

Architects: Stantec and C2AE
General contractor: Rockford Construction
Distributor/installer: Olson Architectural Products / Reliable Sheet Metal, Inc.

To maximize occupant comfort and energy conservation, the design team integrated polycarbonate wall systems into the building's envelope.

a cantilevered translucent form over the facility's main entryway.

This nature-inspired prism element, mimicking the refraction created when sunlight strikes water, provides an uplifting daylit environment for guests as the mix of glass and translucent glazing showcases the recreational activities occurring inside.

To maximize occupant comfort and energy conservation, the design team integrated 232 m^2 (2,500 sf) of Kingspan Light + Air's polycarbonate wall systems into the building's envelope. These translucent wall assemblies distribute uniform, diffused natural daylight into the facility while delivering exceptional thermal performance and limiting solar heat gain. The result is a bright, comfortable environment that supports rigorous exercise and community programs, free from visual discomfort and significant temperature fluctuations. The design team also incorporated glass glazing in select areas to provide views of the outdoors, fostering a connection to the environment. This abundance of high-quality daylight further reduces the facility's dependence on electric lighting, thereby lowering energy consumption and helping to meet the project's sustainability goals.

The wall system also offers unique flexibility to apply a wide range of standard and custom glazing colors. For this project, the design team selected a custom purple matte glazing and aluminum finish to align with the school district's color palette, creating a cohesive visual identity both inside and out.

Results

The Cal Community Center provides students and community members of all ages with an inviting space filled with natural daylight.

The facility is an excellent venue for the community to participate in a variety of recreational and fitness programs and activities.

The facility's diverse amenities, in close proximity to existing educational facilities, serve as a convenient and valuable community resource, with a visually appealing exterior that enhances the local area. The center's abundant natural daylight supports safety and comfort during rigorous activities while creating a welcoming environment for social interaction.

In a Cal Schools Press release from February 2025, Monique Brennan, CCS community education and outreach coordinator, stated that the Cal Community Center was "more than just a building—it's a place for all ages to connect, learn, and create lasting memories. For over 30 years, the Caledonia Resource Center has enriched our community, and this new space allows us to expand that mission, providing a true home away from home for seniors, families, and students. Seeing this vision come to life is truly incredible."

Neall Digert, *Ph.D., MIES, vice president, innovation and market development, Kingspan Light + Air | North America, has over 30 years of consulting and education experience working in the energy/lighting/daylighting design and research fields, specializing in the design and application of advanced lighting and daylighting systems for commercial building applications.*

PHOTO COURTESY ARMSTRONG WORLD INDUSTRIES

Armstrong World Industries Announces Upcoming Leadership Transition

Armstrong World Industries has announced that president/CEO Vic Grizzle will transition to executive chair, and that current senior vice president/COO Mark Hershey will succeed Grizzle, effective April 1, 2026. Hershey will also join the Armstrong board of directors.

"On behalf of the board, we sincerely appreciate Vic's decade of service as CEO and his commitment to ensuring a successful leadership transition," said Roy Templin, chair of the Armstrong board of directors. "Under Vic's leadership, Armstrong transformed into a uniquely focused building products company with a proven record of consistent, profitable growth. His focus on operational excellence, innovation, disciplined capital allocation, and talent development created tremendous value for shareholders, highlighted by nearly quadrupling the company's market capitalization since separating from its flooring business in 2016."

"The selection of Mark as Vic's successor is the culmination of our long-term succession planning process and a demonstration of our ongoing commitment to developing talent at all levels," Templin added. "We have complete confidence in Mark's leadership and dedication to advancing our strategic objectives."

"After 15 exciting and transformative years at Armstrong, including 10 years as CEO, I've decided this is the right time to transition the leadership of this extraordinary company to Mark, with whom I have worked closely throughout my tenure at Armstrong. Over the past 10 years, we have built a more resilient company with a consistent growth profile. It has been an honor and a pleasure to lead Armstrong through this period of significant change and growth," Grizzle said. "Over Mark's 15 years at Armstrong, he has played a pivotal role in each step of this journey, including leading the development and execution of our strategy and the completion of all 14 acquisitions that have built our Architectural Specialties segment. I have full confidence that with his leadership capabilities and his deep understanding of Armstrong's business, strategy, and culture, he will sustain our momentum and guide Armstrong into a new era of success."

"I am honored and excited to lead Armstrong, a remarkable company with a proud 165-year legacy, a culture rooted in excellence and integrity, and a future full of opportunity," said Hershey. "I am also grateful for Vic's outstanding leadership and the confidence the board has placed in me. Driven by the talent and dedication of an exceptional Armstrong team, we will continue to build on our strong foundation, accelerate our growth strategy and innovate–always keeping our customers at the center of everything we do." MCN

PHOTO COURTESY RED DOT BUILDINGS

Red Dot Buildings Announces Sales Leadership Transitions

Red Dot Buildings has announced several updates to its sales leadership team. Darrell Geisendorff has been appointed vice president of business development and national accounts. In this capacity, he is responsible for building Red Dot's reputation among architects and growing adoption of the company's specifications. In addition, Darrell is developing new revenue streams to complement Red Dot's traditional geography-based model, seeking new, recurring relationships with corporate customers, especially those with a national scope. A veteran of the United States Marine Corps, Geisendorff joined Red Dot in 2016 and most recently served as vice president of sales and marketing, achieving record results.

Randy Crawley joins Red Dot as vice president of building sales. In this capacity, he leads the teams of sales managers who serve customers in the company's traditional Texas territory and surrounding states, as well as key markets across the Southwest, Rockies, and Southeastern United States. Crawley has more than three decades of experience in metal buildings and components, having held positions of increasing responsibility at Cornerstone Building Brands and, most recently, as components general manager and building sales director at Whirlwind Steel Buildings

"The past year has been the most momentous in Red Dot's history," said Ted Bush, president/CEO of Red Dot Buildings. "We entered into a partnership with Cordatus Capital. Since then, we have continued to produce record revenues and have made key strategic investments, including a manufacturing plant expansion and the acquisition of ETAS. We are confident that the organizational changes announced today will position us for substantial sales growth in the years ahead." MCN

PHOTO COURTESY STRAIGHT LINE METAL BUILDINGS

Sean Weda Joins Straight Line Metal Buildings as GM

Straight Line Metal Buildings has announced the appointment of Sean Weda as its new general manager.

Weda brings a strong background in leadership and operational excellence to the role. His career includes six years leading Marines in the infantry, followed by more than 13 years of leadership experience in the manufacturing industry. According to a media release, throughout his career, Weda has "demonstrated a proven record of leading teams to maximize productivity while prioritizing training, development, and long-term performance."

In his new role as general manager, Weda is responsible for providing leadership in operations, strategy, and performance, ensuring that daily activities align with the company's long-term goals and growth initiatives.

"We are excited to welcome Sean to Straight Line Metal Buildings," said Randy Carman, president of Rival Rural and Commercial, the parent company for Straight Line Metal Buildings. "His leadership experience, operational expertise, and commitment to team development make him a strong fit for our organization. We are confident he will build upon the solid foundation already in place and help drive continued growth and success."

"I am excited to be joining the team here at Straight Line and being able to build upon a strong foundation," said Weda.

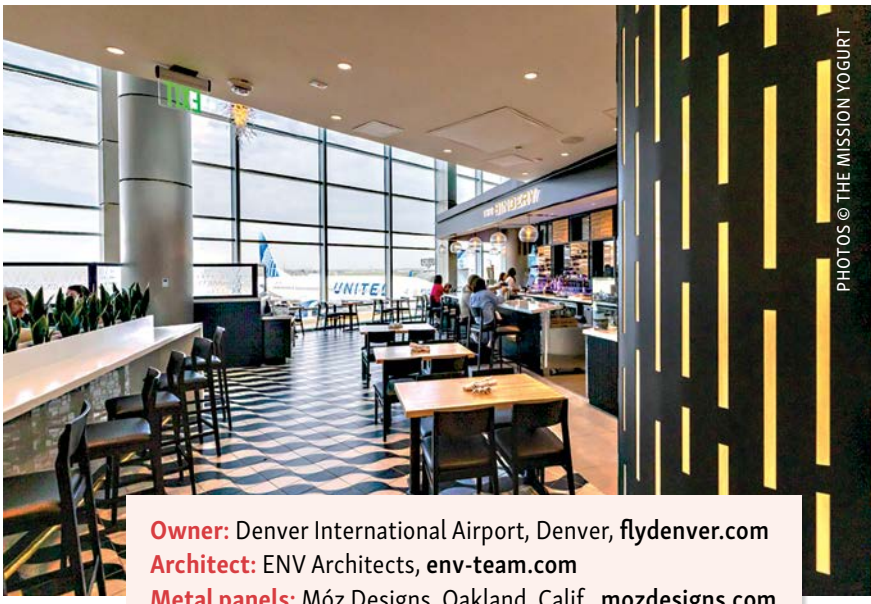
McElroy Metal Adds Fabral to its Family of Companies

McElroy Metal has acquired Fabral, a company in the metal construction industry with nearly 60 years of experience.

Fabral will continue to operate independently, retaining its leadership team, employees, and customer relationships. Dennis Merino will continue to serve as president of Fabral.

"Our top priority is continuity," said Ian McElroy, president of McElroy Metal. "This combination brings together two strong, values-aligned organizations while preserving the people, service, and relationships that matter most." Merino added, "Fabral customers and vendors can expect the same team, the same commitment to quality, and the same focus on service—now supported by the long-term strength and resources of McElroy Metal."

McElroy Metal is an employee-owned manufacturer of metal roofing, siding, and related building products.



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Owner: Denver International Airport, Denver, **flydenver.com**
Architect: ENV Architects, **env-team.com**
Metal panels: Móz Designs, Oakland, Calif., **mozdesigns.com**
General contractor: Swinerton Builders, **swinerton.com**

Denver International Airport, Denver

Móz Designs' latest installation at Denver International Airport (DEN) features 10 custom metal columns that seamlessly connect six beloved local restaurants in the newly renovated Concourse A Marketplace.

In collaboration with ENV Architects and Swinerton Builders, Móz created dynamic, backlit black-and-white columns that establish a striking visual backdrop for travelers moving through Denver.

The project is organized into two distinct zones. Concourse A Center makes a strong first impression with five snow-colored, backlit columns in Móz's Twinkle pattern, helping define the spaces between Tocabe, The Bagel Deli, D Bar, and Williams & Graham—the viral speakeasy hidden behind a bookshelf. The columns create cohesion across varied storefronts while adding light and a welcoming presence for visitors.

Concourse A West features Móz's Black Sand and White Matte powder coat finishes, framing Denver favorites including The Bindery, Uncle, and Maria Empanada. Designed for durability while maintaining a contemporary feel, the columns help create a warm, inviting environment that encourages travelers to linger. MCN

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