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EDITOR'S NOTE

BY KATHLEEN RILEY

The View From Above

As we close this edition of *Rural Builder*, I find myself thinking about time spent in small airplanes with my father when I was a child — lifting off from rural strips, watching patchwork fields slide by below, and realizing early that the built environment looks very different from above. You see planning. You see function. You see whether something was built to last. That perspective still sticks with me and shapes how I read every story in this issue. A good building reveals itself from any altitude — in the layout, the materials, the purpose, and the discipline behind the work.

This month's lineup is packed with forward motion and field-tested ideas — the kind you can put to work immediately, whether you're managing crews, planning expansions, or refining how you operate day to day.

We highlight the mikeroweWORKS Work Ethic Scholarship and its role in helping Avery Tauke launch a business straight out of school. It's more than a success story — it's a preview of where the skilled trades are headed. Motivated, trained, and ownership-minded builders are entering the field ready to produce results, not just resumes.

We dig into regional building differences that can quietly determine whether a project thrives or struggles — from climate loads to site realities to material performance. We also explore smarter feeding and watering system options that improve chore efficiency, animal health, and long-term maintenance planning. These are the kinds of choices that pay off every single day after the ribbon-cutting.

Our project, which focuses on airplane hangars, looks at wide spans, door systems, wind exposure, and specialty-use demands — one of the most technically interesting and visually striking rural build categories right now. These structures combine engineering precision with practical performance, and they're becoming more common across private and commercial rural properties.

You'll also find practical reads on why fire-rated materials carry extra importance in rural environments where response times can be longer, how tidy jobsites directly improve safety, morale, inspection outcomes, and profit, and how stronger branding — with insights from Randy Chaffee — turns reputation into measurable revenue. Operational discipline and brand discipline are closer cousins than many builders realize.

And of course, our **Project of the Month** continues to showcase the kind of work that sets the bar for the industry — real builds, real solutions, real execution. These features are widely read, widely shared, and often referenced long after publication.

Now here's the part where I lean in a bit more than usual:

We need your projects!.

If you're building something you're proud of — agricultural, commercial, equine, storage, specialty, or hybrid — submit it for **Project of the Month**. Send the high-resolution photos. Send the materials list. Send the build story and the challenges you solved. Visibility matters. Credibility matters. And your project may be exactly the example another builder needs to see.

The same urgency applies to our upcoming **Source Book**. If you supply products or services to rural builders, make sure you're included. This is not a shelf piece — it's a working reference. Builders circle it, flag it, and rely on it all year. If you're not in it, you're harder to find when it counts.

Show us what you're building. Make sure buyers can find you. And keep raising the standard — from the ground, and from the air.

— *Kathleen Riley*

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Gary Reichert,
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MIKE ROWE WORKS FOUNDATION

WORK ETHIC SCHOLARSHIP

From School Straight to Business Owner

Age Doesn't Have to Hold You Back

BY LINDA SCHMID

Avery Tauke knew about hard work from the time he was a kid working on his dad's and grandparents' farms in Earlville, Iowa. The work agreed with him. In fact, he thought he might follow in his father's footsteps when he grew up. Even when he began a career in the trades, he thought he might work on the farm part-time. But that didn't work out; his dad quit farming in 2020.

Actually, his dad was the person who initially introduced him to his future career. On the farm there were a lot of things to mend or build, and Tauke experienced concrete work, roofing, carpentry, and everything from plumbing to welding.

"I particularly liked welding because you could make a lot of different things – and the tools were the coolest, too," Tauke said.

He began working with welding at school and creating a lot of items for fun. Eventually he found that he had nowhere to go with his creations anymore. Then he began making and selling skid loader attachments and other pieces of equipment. With the profits, he bought better tools which got him more excited about welding. At this time he began hearing rumors that welders are well-paid, and he began to think he would get some training in welding, get a welding job, and eventually start his own shop.

FORMAL EDUCATION

He started classes at Kirkwood Community College in Cedar Rapids and continued working at the granite countertop installation job at Imperial Stone that he'd had in high school. He learned how to handle customers at this job, and he made good money.

Tauke's great-uncle advised him that he needed to apply for scholarships because, he said, sometimes people get scholarships just because no one else applied. So apply he did. He was awarded several scholarships including awards from the American Welding Society and the FFA organization.

"Applying for the Work Ethic Scholarship was different, really unique," Tauke said. "Applying for this scholarship was kind of cool. You had to make a video and answer questions and all of it tied into the S.W. E.A.T. (Skill and Work Ethic Aren't Taboo) pledge you were required to take, which represents everything the Foundation stands for."

He said, "My scholarship allowed me to focus on my studies without worrying about paying for tuition and room and board. My first semester I worked during the week and it was hard to focus on my studies. I had class from 7 a.m. to noon, then work from 12:30 to 5:00 p.m. In the evening I did class assignments. However, once I didn't work that job I could spend more time on my studies.

To replace my job, I sold custom signs and bale spears for tractors, and on the weekends I fulfilled those orders. I was making

As a result of a collaboration with mikeroweWORKS Foundation (www.mikeroweworks.org), *Rural Builder* is featuring profiles of Work Ethic Scholarship recipients in each of its issues. Over 2,600 scholarships have been awarded to trade-school students who value hard work and taking personal responsibility. *Rural Builder* applauds these students and wants to acknowledge their choice to apply their talents to skilled trades. Thank you, mikeroweWORKS Foundation, for your continuing efforts to close the skills gap and "reconnect the average American with the value of a skilled workforce."


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about the same money, so it worked out well. I was already a part-time business owner."

PREPARING FOR FULL-TIME OWNERSHIP

Tauke graduated from the welding program a few weeks early, and the Imperial Stone company he had worked for previously wanted him to come and work for them full time. He did, and it enabled him to save money toward his future business. He sometimes thought about quitting and getting a job welding for someone else, but he was making more money where he was, and he was getting welding experience part time on the weekends so he kept at it.

"I wondered how long I should keep working at my full-time job, but the more research I did online, the more I read that experienced people advised that you should stay longer than you think you need to while saving money," Tauke said.

Generally entrepreneurs recommended saving enough to cover the bills for six months while the business ramps up. Tauke believes that was good advice.

Tauke said, "I think the transition from part-time to full-time business was helped by the fact that I'd been doing it part-time for quite a while. I didn't suddenly quit just hoping this venture was going to work; it already was. You could see year-over-year improvement in the company books. When I went full-time I already had a big job lined up that would keep me busy for a month and a half," he added.

RUNNING YOUR OWN COMPANY

While it may be unusual for someone new to a trade to start their own business without ever having worked in the industry, it made sense for Tauke; he' already had the training, he'd been

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welding for years, many of those years as a part-time business, and he had all of the tools. He has been running his business full time for a year now, and it's going well.

Tauke's brother works for him part-time. They do some industrial welding, but the majority of their work is custom handrails.

It's nice to work largely by yourself, according to Tauke, because he doesn't have to worry about making payroll or having a lot of overhead, but on the other hand it means he has to do everything himself. He plans to bring his brother — or someone else — in full time in the next couple of years.

One thing that Tauke learned early on in his years installing countertops is that when you run into challenges and it's getting late and you want to go home, you can't just walk away. You need to think out of the box and if there is any way at all that you can complete the job you do. This lesson helped prepare him for business ownership because when something goes wrong, there is no one to hand it off to, and if he has to make two trips somewhere that is going to add to the cost of the job.

Tauke said, "You are not always on your own with a problem. Sometimes a general contractor or other subcontractor on a job may be able to help you out or give you an idea of how to resolve it. Often the guys on the jobsite will do what they can to help you out because everybody has had some kind of challenge at one time or other. There is often a sense of camaraderie."

While challenges on the job may not sound like fun, they actually make the work more interesting. "It's really rewarding when you solve those problems; you get a real sense of pride in your work," Tauke said.

ADVICE FOR NEWCOMERS TO THE TRADES

"Find something that you like to do," Tauke said. "You are going to work your whole life; you might as well find something that you enjoy doing."

Once you are on the job, watch how you act. "If you don't want to be treated like a kid, then don't act like one," Tauke said. Listen to those around you. Find someone who knows what they are doing and goes about their work professionally, and emulate them.

If somebody criticizes your work, listen to them and try to improve. In time, as people see that you are trying and you are improving, you will become part of the crew, and if you are pulling your own weight, your age won't make any difference," Tauke said. **RB**

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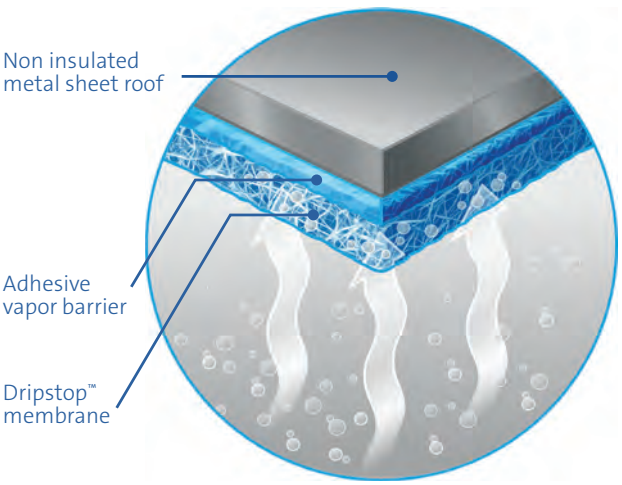

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One Country, Many Builds

Why Regional Differences Shape How (and What) We Build

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Rural builders learn quickly that what works in one region can fail spectacularly in another. A roof design that thrives under Upper Midwest snow loads may struggle against Gulf Coast wind uplift. A wall assembly that performs beautifully in dry mountain air may trap moisture in a humid southern climate. These differences aren't about preference or tradition. They're about necessity.

Across the country, builders face the same big-picture pressures: rising material costs, labor shortages, stricter energy codes, and owners who expect more durability and efficiency from every structure. But the way builders respond to those pressures is deeply regional—shaped by climate, code enforcement, labor availability, and local risk.

So how do regional realities shape rural construction today? And more importantly, what can builders learn from how others are solving similar problems in very different places?

CLIMATE STILL CALLS THE SHOTS

Despite advances in materials, software, and construction methods, climate remains the most powerful design driver.

In northern regions, snow load and freeze-thaw cycles influence nearly every decision. Roof pitches are steeper to shed snow. Structural systems are engineered for heavy loads. Foundations are placed deeper to stay below frost lines. Builders rightly obsess over condensation control, because moisture trapped inside a cold building envelope doesn't forgive mistakes.

In the South, priorities shift dramatically. Heat and humidity dominate, and strong winds are a constant threat. Builders focus on continuous load paths from roof to foundation, reinforced connections, and assemblies that allow moisture to escape rather than trap it. In coastal areas, corrosion resistance becomes just as important as structural strength.

Western builders face their own set of challenges. Large temperature swings, seismic activity, wildfire risk, and some of the nation's most demanding energy codes all shape design decisions. Exterior materials are chosen with fire resistance in mind. Connections are designed to flex, not fail. Entire sites are planned around defensible space and insurance requirements.

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Regional knowledge isn't optional. It's foundational.

CODES VARY. EXPECTATIONS DON'T.

National building codes may provide a common framework, but local enforcement tells a very different story.

Builders working across county or state lines often encounter a frustrating reality: details that pass inspection in one jurisdiction may be rejected just a few miles away. Wind exposure categories change. Snow-load assumptions vary. Post spacing, connection details, and foundation requirements can differ dramatically—even within the same state.

At the same time, owners everywhere are asking for the same things. They want buildings that last longer, cost less to operate,

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and adapt to future uses. Those expectations are pushing builders in every region to go beyond minimum code requirements.

Many rural builders now design above code by default. The payoff is fewer callbacks, better long-term performance, and a stronger story to tell when selling their work. In an increasingly competitive market, performance has become a differentiator.

MATERIALS TELL A REGIONAL STORY

Material choices often reflect what's familiar, proven, and locally available.

In agricultural regions, post-frame construction remains popular for its speed, flexibility, and cost efficiency. In areas with a strong tradition of metal buildings, steel systems, and insulated metal panels are gaining ground for their durability and energy performance. In other regions, masonry or hybrid systems are preferred, especially where fire resistance, sound control, or long service life are priorities.

But those regional lines are starting to blur. Builders are increasingly borrowing ideas from outside their home markets—adding higher-performance building envelopes in traditionally mild climates, or adopting moisture-management strategies developed in wetter regions. As products become more widely available and information travels faster, the rural construction industry is evolving into a network of shared knowledge.

LABOR AND LOGISTICS SHAPE DESIGN

Labor availability may now be one of the most significant regional differentiators in rural construction.

In areas with a strong, experienced workforce, builders can take on more complex assemblies and detailing. In remote or labor-constrained regions, simplicity is key. Builders favor prefabricated components, systems that require less on-site labor, and materials that can withstand longer weather exposure.

Transportation costs add another layer of complexity. A system that's affordable near a manufacturing hub can quickly become cost-prohibitive in distant rural markets. Savvy builders address logistics early—during design and material selection—rather than discovering problems once the project is underway.

WHAT BUILDERS ARE LEARNING FROM EACH OTHER

One of the biggest shifts in rural construction is how openly builders are sharing ideas across regions.

Cold-climate builders have led the way in insulation continuity and condensation control—lessons now being applied in milder regions to extend building life. Southern builders have refined connection details and wind-uplift strategies that are increasingly used well inland. Western builders are pushing conversations about resilience, risk reduction, and long-term adaptability as wildfire and seismic concerns grow nationwide.

Rural construction has always been local. Today, it's also connected.


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REGIONAL REALITIES

THE NORTH

Built for Cold, Snow, and Staying Dry

In northern climates, winter is the ultimate stress test. Snow loads drive roof design, while deep frost lines shape everything below grade. Builders here think constantly about condensation, because moisture trapped in cold assemblies can lead to rot, mold, and structural damage.

Key considerations:

- Steeper roof pitches to shed snow
- Higher snow-load engineering requirements
- Deep foundations and frost-protected slabs
- Continuous insulation and vapor control
- Ice-dam prevention and cold-weather detailing

Builder takeaway: In the North, durability starts with managing both liquid water and water vapor—year-round.

What others are borrowing: Continuous insulation and vapor-control strategies developed for cold climates are now improving durability in much milder regions.

THE MIDWEST

Balancing Extremes and Budget

The Midwest may not grab headlines for extreme weather, but its wide temperature swings, wind exposure, and seasonal moisture make it one of the most demanding regions to build in. Add agricultural use, and flexibility becomes as important as strength.

Key considerations:

- Wind-load design for open terrain
- Roof systems that handle snow and summer heat
- Cost-effective spans for ag and storage buildings

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- Ventilation strategies for mixed-use spaces
- Designs that allow for future expansion

Builder takeaway: Midwest buildings must handle a lot—and do it affordably.

What others are borrowing: The Midwest's ability to balance performance and price is influencing agricultural, storage, and multipurpose buildings nationwide.

THE SOUTH

Heat, Humidity, and High Winds

In the South, the challenge is keeping buildings cool, dry, and standing after a storm. Heat and humidity complicate insulation choices, while hurricanes and severe storms demand robust connections from roof to foundation.

Key considerations:

- Wind-uplift resistance and continuous load paths
- Moisture management in hot, humid conditions

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- Corrosion-resistant materials and fasteners
- Reflective roofing and efficient envelopes
- Elevated foundations in flood-prone areas

Builder takeaway: In the South, airflow and attachment details matter as much as structural strength.

What others are borrowing: Hurricane-driven connection details are now standard practice far beyond coastal zones.

THE WEST

Resilience Meets Regulation

Western builders face some of the most complex construction environments in the country. Seismic zones, wildfire risk, strict energy codes, and insurance requirements all influence design and material choices.

Key considerations:

- Seismic engineering and flexible connections
- Fire-resistant exterior materials
- High-performance energy envelopes
- Long spans for equestrian, storage, and commercial uses
- Insurance-driven design decisions

Builder takeaway: Western construction focuses on building smarter today to reduce future risk.

What others are borrowing: Fire-resistant materials, energy-focused designs, and resilience planning are reshaping building practices nationwide.

DIFFERENT REGIONS. SHARED LESSONS.

Rural builders work in very different climates and code environments, but the challenges they face—and the solutions they develop—have more in common than ever. From moisture control in cold climates to wind-resistant connections in storm zones, regional expertise is no longer staying regional.

The strongest builders know their local conditions inside and out. They're also paying attention to how others solve similar problems in different places.

Build local. Think national. Apply what works, share what you learn, and help shape the future of rural construction—one region at a time. RB

PRODUCT FEATURE

BY LINDA SCHMID

Feeders and Waterers

Guiding Customers in Finishing the Animal Facility

PHOTO COURTESY OF CENTURY PRODUCTS.

For many rural builders, feeders and waterers sit just outside the traditional scope of building design. Yet these systems directly affect animal health, labor efficiency, and operating costs—and poor choices can undermine an otherwise well-designed agricultural facility. Builders who understand how feeding and watering systems work, and how they interact with layout, traffic flow, and environmental conditions, can provide valuable guidance to their agricultural clients.

While ranchers and livestock producers often know their animals exceptionally well, builders are frequently in a position to help translate those needs into practical equipment and site decisions.

START WITH THE RIGHT QUESTIONS

Across manufacturers, the first questions tend to be consistent. Species and animal size matter most, followed closely by herd size and feeding method. A feeder designed for calves will not work for mature cattle, and head spacing, bar configuration, and overall height must match the animals using it. Ration type also plays a role. Grain, silage, total mixed ration (TMR), hay, and mineral supplements all place different demands on feeder design.

Usage patterns are just as important. How many animals need access at one time? In larger herds, it is common for 30 to 40 head to water simultaneously. Undersizing feeders or waterers is one of the most common mismatches, particularly when equipment is selected without considering peak demand.

Environmental conditions should never be an afterthought. Temperature extremes, freeze risk, soil conditions, and drainage all affect performance and longevity. A system that works well in a mild climate may struggle in cold weather or muddy conditions if not designed and installed correctly.

COMMON FEEDER TYPES AND WHERE THEY WORK BEST

Open feed bunks remain a staple in many operations. These non-automated feeders are simple, durable, and adaptable. Single-sided bunks can be placed along fence lines, allowing feeding without entering pens, while double-sided bunks increase access in larger feeding areas. Open-top designs work well for silage, TMR, and some hay applications.

Self-feeders are widely used where labor efficiency and feed control are priorities. These feeders allow animals to eat when they choose, reducing crowding and minimizing waste when properly adjusted. In range cattle operations feeding more than 200 tons of feed per year, self-feeders can significantly reduce losses – often to around five percent compared to feeding hay directly on the ground, which can result in 25% to over 50% waste due to trampling, soiling, and weather. Like feed bunks, single-sided self-feeders save space and work well along fence lines, while double-sided units allow more animals to eat at once.

Creep feeders are designed specifically for cow-calf operations. By using creep gates that allow calves through while excluding mature cows, these feeders let calves supplement their diet while still grazing with the herd. Over a grazing season, creep feeding can add substantial weight gain before weaning.

Hay feeders come in a wide range of designs, from basic ring feeders to cone-style units designed to keep hay centered and

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off the ground. Cone feeders and skirted designs tend to be more efficient, particularly in snowy or muddy conditions. Bar configuration matters; slanted or S-shaped bars reduce wasted feed compared to vertical bars, which can encourage animals to pull hay out and drop it on the ground.

Portability is another consideration. Free-standing feeders that can be moved regularly help manage mud, reduce corrosion, and distribute manure more evenly across a pasture. Many producers rotate feeders weekly to avoid excessive wear and waste buildup.

Hay Feeders need to allow animals access without danger of getting in or getting stuck. PHOTO COURTESY OF PETERSON METAL PRODUCTS LLC

WATERERS: FROM SIMPLE TANKS TO ENGINEERED SYSTEMS

Water delivery ranges from basic tanks to highly engineered systems. Simple stock tanks—made from poly, galvanized steel, fiberglass, or concrete—remain common. Poly tanks are popular for their durability, forgiving nature in cold weather, and ease of cleaning. Larger operations may use tanks ranging from several hundred to 1,000 gallons or more to meet peak demand.

Automatic waterers introduce a continuous supply using inlet lines and float valves. These systems reduce labor by eliminating frequent refilling and help ensure consistent access. Ball-style automatic waterers add insulation and reduce freeze risk by limiting surface exposure.

Cold-weather strategies vary widely. Some producers rely on earth-tempered systems, burying tanks five to six feet below grade so ground temperature helps prevent freezing. Others use circulating systems where water flows through long troughs and recirculates back to a below-grade tank. Electric heaters and water agitators are also used, though they add energy and maintenance

considerations.

Regardless of design, access and safety are critical. Barriers are often needed to prevent animals from climbing into tanks or damaging plumbing. Many free-standing commercial waterers incorporate these protections, while site-built systems require careful planning.

LAYOUT, DRAINAGE, AND TRAFFIC FLOW MATTER

Feeder and waterer performance is closely tied to placement. Builders should think in terms of animal movement, equipment access, and waste management. Areas around feeders and waterers should be sloped for drainage to prevent animals from standing in water, ice, or manure. Concrete aprons in front of feeders allow scraping with tractors or skid loaders and help maintain footing.

Inside confinement or housing barns, clearance for equipment is essential. Feeders must be positioned so skid loaders can deliver feed and remove manure without tight turns or obstructions. Ventilation also plays a role; poor air movement around feeding areas can contribute to moisture buildup and ammonia accumulation, affecting animal health.

ANIMAL BEHAVIOR AND WELFARE CONSIDERATIONS

Feeder and waterer design can influence animal behavior more than many builders may realize. Dominant animals can crowd timid ones, particularly in undersized systems. Providing multiple waterers or feeders can reduce competition and improve intake across the herd. Self-feeders help mitigate bullying by allowing animals to eat at different times throughout the day.

Head size and neck spacing are critical safety factors. Improperly sized openings can lead to animals getting stuck or injured. Matching feeder design to animal size– and buying the correct model rather than attempting field modifications – is essential.

MATERIALS, DURABILITY, AND MAINTENANCE

Longevity varies widely by construction and maintenance. One-piece welded feeders made from heavy tubing and protected with powder coating, paint, or plastic coatings can last 20 to 30

years when maintained. Bolted, multi-section feeders may offer flexibility but often have shorter service lives as seams weaken over time.

Moisture is the primary enemy of metal feeders. Corners and pan edges tend to rust first, especially if wet feed accumulates. Drain holes are a key indicator of good design. Regular cleaning—removing wet feed and debris—is the most effective maintenance step, even if it is done simply with water.

Poly water tanks can last decades but can be damaged by impact, such as striking frozen sides to break ice. Using heaters or circulation devices instead of force reduces the risk of cracking or seam failure.

HELPING CLIENTS MAKE BETTER CHOICES

For builders, the goal is not to replace the producer's knowledge but to support it. Many ranchers know their animals intimately and appreciate builders who ask the right questions and help anticipate problems before they show up in the field. Properly sized, well-placed feeders and waterers reduce waste, protect animal health, and lower long-term maintenance costs.

When feeders and waterers are coordinated with building layout, traffic flow, and environmental conditions, they become part of an integrated agricultural system rather than an afterthought—and that is where builders can add real value. **RB**

Single Sided Self Feeder for Steers.
PHOTO COURTESY OF SPANIER WELDING LLC

BY LINDA SCHMID

The New Vale Hangar in Tasmania built by Bison Constructions. PHOTO COURTESY OF SCHWEISS DOORS

Aircraft Hangars

What It Takes To Create These Structures

AIRCRAFT HANGARS AND BUILDING MATERIALS

Whether building a huge, grand, multi-use aircraft hangar or a small functionality-focused hangar, there are unique demands on the building's structure, layout, and components that engineers and builders must take into consideration. Unlike general-purpose storage buildings, a hangar's primary job is to protect a high-value aircraft while meeting airport requirements for clearance, height, and access. For that reason, steel-frame construction is often the preferred approach.

Steel construction offers several features that are important in hangar applications, according to Warren Bott of Worldwide Steel, with strength at the top of the list. Aircraft represent a significant investment, and owners expect a building that can protect that investment from severe weather. Steel framing provides predictable structural performance and long clear spans, which are critical for accommodating aircraft wingspans and tail heights. Speed of construction is another benefit; steel buildings typically go up fast, helping owners get aircraft under a roof quickly. Some steel building systems also offer flexibility in siding options and make it easier to incorporate living quarters, either on the main level behind the aircraft area or on a second floor above it.

One of the biggest challenges in hangar construction is balancing large clear spans and oversized doors with exposure to wind, snow, and extreme temperature swings. In colder climates, ice management and air infiltration can directly affect safety, door operability, and overall energy performance. Height requirements also vary by airport and location, and builders must ensure the structure complies with those rules while still providing adequate interior clearance for the aircraft.

Those hangars that incorporate living quarters add another layer of coordination between structure, layout, and code requirements. These challenges are best addressed by prioritizing envelope performance and climate-responsive design early in the project rather than relying on operational fixes after construction.

According to Cornerstone Building Brands, successful hangar projects depend on a well-coordinated building design, with all components properly engineered and installed. Systems that affect airtightness, durability, and thermal efficiency deserve particular attention to achieve long-term performance and protect sensitive aircraft. Insulated wall and roof assemblies with tight seams help limit air infiltration, while properly engineered framing systems efficiently support wide spans for clearance. Door selection is a major consideration according to Powerlift Doors. Large hydraulic doors are common in hangar construction and can be designed to work as part of the building's structural system. Hangar projects that deliver the best results don't treat the door as an accessory to the building, but instead look at the building and door as an integrated system. When large doors are installed in an end wall, the structure must be specifically engineered to support the door's weight, movement, and required clearances. In mixed-use hangar facilities, hybrid construction approaches can provide flexibility while maintaining performance standards and accommodating architectural and occupant needs.

Another consideration when choosing the door is safety, according to Schweiss Doors. Things like override switches and warning lights add an extra layer of protection to people and aircraft.

One of the most common mistakes made on hangar projects is not determining early on what door will be used, then not designing the building around it from the start. Underestimating environmental exposure, particularly wind, snow, and ice, can also lead to performance issues with doors and exterior assemblies.

The Green Bay Packaging Aircraft Hangar.
IMAGE COURTESY OF STAR BUILDING SYSTEMS® / CORNERSTONE BUILDING BRANDS

The Green Bay Packaging Aircraft Hangar includes offices and mezzanine.
IMAGE COURTESY OF STAR BUILDING SYSTEMS® / CORNERSTONE BUILDING BRANDS

The Green Bay Packaging Aircraft Hangar encompasses 25,200 square feet.
IMAGE COURTESY OF STAR BUILDING SYSTEMS® / CORNERSTONE BUILDING BRANDS

This 50' x 30' x 14' Colorado Hangar is engineered for 40PSF snow load and 115mph winds. PHOTO COURTESY OF GABLE STEEL

New Hangar in Colorado, designed with plenty of storage space. PHOTO COURTESY OF GABLE STEEL

New Hangar in Tullahoma, Tennessee. PHOTO COURTESY OF WORLDWIDE STEEL

Another frequent misstep is insufficient coordination between structural systems, which can create constructability challenges or scheduling delays. Builders and material specifiers must also understand site-specific and airport requirements early in the process, including whether sheet metal siding is permitted and what maximum peak height is allowed.

Successful hangar projects prioritize early collaboration and careful coordination among designers, material suppliers, and builders. Aligning structural systems, door selection, envelope performance, and regulatory requirements from the outset helps ensure the finished building does what it is supposed to do: protect the aircraft and serve the owner reliably for decades.

GREEN BAY PACKAGING AIRCRAFT HANGAR

The 25,200-square-foot private aircraft hangar for Green Bay Packaging is part of a five-building corporate aviation and operations campus in Green Bay, Wisconsin. Designed by Fisher & Associates LLC, the final development includes the hangar and mezzanine, an equipment bay, offices, a parking garage, and a central lobby — bringing together flight operations and daily business functions within a cohesive site. Blending pre-engineered and conventional steel construction, general contractor SMET Construction Services Corp. teamed up with M.R. Neubert Construction LLC to erect a facility that accommodates large clear-span requirements alongside architecturally complex, occupied spaces.

Design and construction decisions prioritized performance, safety and long-term reliability in a cold-weather environment. In-ground heating beneath the slab at the hangar door and exterior ramp helps prevent ice buildup and supports reliable door operation during winter conditions. The exterior envelope incorporates insulated metal wall panels, including Double-Lok® concealed fastener panels provided by Star Building Systems, a brand in the

Cornerstone Building Brands portfolio, paired with enhanced roof insulation to reduce air infiltration and thermal loss.

TENSION FABRIC RIGID-FRAME AIRCRAFT HANGARS

Rigid frame and tension fabric aircraft hangars have the same demands upon them as any other hangar. Legacy Building Solutions uses structural steel I-beam framing, combining tension fabric cladding with rigid-frame engineering. This approach allows them to easily customize every project to provide the exact dimensions and building features required by the customer. The use of I-beams allows for complete design flexibility, including the ability to add offset peaks, lean-tos or other layout arrangements for a hangar.

Tension fabric provides a variety of operational benefits. Its translucency allows for natural daylighting inside a building, which cuts down on artificial lighting needs. Fabric also has thermally nonconductive properties, which help keep building interiors warmer in the winter and cooler in the summer. In some cases, building owners will opt to insulate the structure, which can be done by applying insulation behind a fabric liner.

Fabric buildings can be designed and constructed much more quickly than tilt-up construction or other conventional methods – up to four times faster, in fact, depending on the supplier.

Many fabric buildings — especially rigid-frame structures — are engineered to be permanent while being designed to be portable. Should the need arise to change locations, some buildings can be disassembled and reconstructed elsewhere. In some cases, aircraft hangars and other aviation facilities are built on leased property, which can present a conundrum: The building must be solid enough to handle all required tasks, but its use on the original site may be limited to 10 years or less, requiring a balancing act.

The climate in a given location can present a challenge to an aircraft hangar. The steel frame and attached fabric must

The right door is very important for aircraft hangars. This 80' x22' hydraulic door complete with turn-key installation fit the bill for this Spearfish, South Dakota hangar. PHOTO COURTESY OF POWERLIFT DOOR.

This tension fabric aircraft hangar was built for Solar Ship, Inc. PHOTO COURTESY OF LEGACY BUILDING SOLUTIONS.

This 40,957 square-foot tension fabric Solar Ship hangar at the Brantford Municipal Airport in southwest Ontario features some natural daylighting and solar panels, creating an off-the-grid structure. PHOTO COURTESY OF LEGACY BUILDING SOLUTIONS.

be designed to handle all environmental factors, such as wind loads, snow loads and seismic codes. This is particularly important for airports, which tend to be located in wide open areas with higher exposure to the wind and other elements. Fabric rigid-frame buildings can stand up to these challenges. For example, Legacy has achieved a number of applicable certifications related to weather, such as Florida Product Approval for high-velocity hurricane zones.

Corrosion protection is an important issue. Solid I-beams are well suited to withstanding the basic long-term effects of corrosive elements as well as surviving high-humidity environments. Hot dip galvanizing has been among the most popular techniques for protecting steel, but it's important to note that galvanization only slows down the corrosion process by sacrificing its thin layer of zinc over time. For applications that require it, a more robust epoxy coating can create a permanent barrier between corrosion and steel surfaces.

For hangars housing large aircraft, the hangar doors can measure hundreds of feet wide, so they demand substantial load support from the building frame. Quality rigid-frame fabric buildings can support even their most massive door offerings, as verified by major door manufacturers.

The I-beam design has been proven in the engineering community to bring strength and longevity to these structures. Another benefit of a rigid-frame structure is the ability to handle hanging or live loads, such as overhead maintenance cranes or fire suppression systems.

The type of fabric used can have a big impact on longevity. At one time, Polyethylene (PE) fabric was the most widely used material in the industry, while polyvinyl chloride (PVC) was usually reserved for higher-end projects due to its price point. However, many building owners have realized that PVC's long-term benefits and increased lifespan effectively offset the initial investment. A high-strength woven fabric with additional primer and lacquer layers to provide more durability, such as ExxoTec™ PVC, retains more than double the tensile strength of a standard PE fabric and carries a longer life expectancy.

Prime Metal Buildings and Components' New Texas Aircraft Hangar.
PHOTOS COURTESY OF SCHWEISS DOORS.

PRIME METAL BUILDINGS AND COMPONENTS HANGAR

Prime Metal Buildings built their own corporate hangar at the Stephenville Clark Regional Airport in Stephenville, Texas. They wanted something more than just a simple metal hangar building. They were planning a showcase project, something to present to customers and demonstrate what Prime Buildings can do.

The uniqueness of the Prime hangar begins with its slanted roof, a necessary design choice so they could get the height they wanted while staying under the airport's height restrictions. The slant is repeated on the shorter side addition, which houses a lounge space for pilots and passengers. The lounge has large windows, seating and even a kitchenette, creating a comfortable place to relax while waiting for takeoff. The hangar itself has plenty of space for aircraft and even has a separate garage area for land vehicles with its own garage door. A line of windows lets in natural light.

When deciding on the hangar door, Prime decided to go with a hydraulic door from Schweiss Doors. The door is 70-feet wide by 17-feet high and includes additional features such as top over-ride switches, warning lights, a horn and a two-speed valve. With the two-speed valve the door opens and closes smoothly and allows the door to close softly also. **RB**

Request editorial topic coverage by reaching out to Kathleen Riley at kathleen@shieldwallmedia.com.

Large Doors Aren't Accessories — They're Structural Decisions

When large hangar doors are treated as add-ons, builders inherit the consequences.

"PowerLift designs, fabricates, and installs hydraulic hangar doors as integrated structural systems. Builders don't get a door — they get a coordinated solution."

PowerLift Hydraulic Door

- Distributed loads around the opening
- No high-cycle cables or straps
- Predictable behavior in all positions
- Engineered as part of the building system

Bi-Fold Door

- Concentrated loads at hinges and lift points
- High-cycle straps, cables, and pulleys
- Clear opening height lost when open
- Variable load behavior during operation

Hydraulic Tilt-Up Door

- Gravity-closed operation prone to binding
- Wind loads concentrated at door corners
- Snow and rain infiltration common
- Opening motion reduces clear headroom

POWERLIFT® Hydraulic Doors

Call or email for more information
(844) 275-9351 ▪ Sales@powerliftdoors.com

40+ LOCATIONS ACROSS NORTH AMERICA

Find and contact your local representative here:
www.powerliftdoors.com/our-locations

BY RURAL BUILDER STAFF

Building for the Worst Day

Why Fire-Rated Products Are Becoming a Smart Standard in Rural Construction

In rural construction, fire safety has always mattered - but today, it matters more than ever. Longer response times, larger building footprints, mixed-use ag and commercial spaces and rising expectations from owners and insurers have pushed fire protection to the top of the list. Fire-rated products are no longer just niche upgrades; they're practical, proactive choices that improve safety, compliance, and marketability.

WHAT "FIRE-RATED" REALLY MEANS

A product or assembly is "fire-rated" if it has been tested to resist fire for a set period, usually 30, 60, 90, or 120 minutes, while maintaining integrity against heat, smoke, and flame. Ratings come from standardized tests such as ASTM E119 or UL 263 and are confirmed by independent third-party certification agencies.

As Dr. Gabrielle Peck, PhD, MRSC, Technical Director FCIA & NFCA, explains, "Fire-resistance rated walls and floors are a core component to effective compartmentation. They provide protection to contain a fire to the room of origin and minimize damage and risks to occupants when fire occurs."

Ratings apply to full assemblies - walls, ceilings, doors, floors, and structural components, not individual products. For builders, that distinction matters: changing one element without verifying the full system can unintentionally void the rating.

WHY FIRE RATINGS MATTER IN RURAL SETTINGS

Rural buildings often face higher fire risk due to wide spacing, limited hydrant access, and longer response times. In that environment, fire-rated construction adds a layer of defense that buys critical time.

Fire ratings serve multiple purposes:

- **Slowing fire spread** across large or open interiors
- **Protecting critical structures** from early failure
- **Compartmentalizing hazards** and aiding safe evacuation
- **Providing evidence of safety to insurers and code officials**

"Fire ratings are part of the building's passive fire protection strategy," says Dr. Gabrielle Peck, PhD, MRSC "Passive fire protection through fire-resistance rated assemblies and firestopping maintains the fire-resistance rating of effective compartmentation. When properly designed, installed, inspected, and maintained, it performs to protect people and property."

This system approach, design through inspection, and maintenance, helps protect people and property when it matters most.

WHERE FIRE-RATED PRODUCTS SHOW THE MOST VALUE

Fire-rated components aren't needed everywhere, but they deliver strong value in the right locations.

Walls & Partitions

Fire-rated walls separate offices from shop space, livestock from storage, and commercial from residential areas. Pre-engineered assemblies simplify compliance and reduce field guesswork.

Ceilings & Roof Assemblies

In large open-span buildings, rated ceilings and roof systems help delay structural collapse, especially in arenas, equipment buildings, and manufacturing spaces.

Insulated Metal Panels (IMPs) & Specialty Products

Fire-rated IMPs combine insulation, durability, and fire resistance in one system. Mineral wood cores offer strong fire performance while maintaining thermal efficiency and faster installation.

Fire-Rated Doors & Glazing

Fire-rated doors and glass help keep areas separated while still allowing natural light and visibility.

CODES, INSURANCE, AND OWNER EXPECTATIONS

Building codes set the minimum requirements for fire resistance, but that is not the whole story. Fire protection often needs to go beyond these minimums, especially when insurers are involved.

Industry trends show that insurers and risk managers are paying more attention to construction type, compartmentation, and passive fire protection when assessing a building's risk. Using fire-rated construction can sometimes lead to better insurance terms or fewer restrictions.

Owners of agricultural facilities, rural schools, or mixed-use commercial spaces want to know their buildings protect people, livestock, equipment, and inventory.

BALANCING COST AND VALUE

Fire-rated products may cost more up-front. However, when you consider benefits like smoother plan reviews, fewer change orders, lower risk, and better resale value, many rural builders

RESOURCES

- 3M-https://www.3m.com/3M/en_US/building-construction-us/applications/firestop/
- Firefree Coatings-https://www.3m.com/3M/en_US/building-construction-us/applications/firestop/
- National Fireproofing Contractors Association -https://www.nfca-online.org/ -
- Firestop Contractors International Association - https://www.fcia.org/
- HSI - https://hsi.com/
- MAAC Foundation-https://maacfoundation.org/

find the investment worthwhile.

As Peck says, "Effective compartmentation via fire-rated solutions and proper firestopping delivers lasting safety by containing hazards from fire, buying time for evacuation and response, and reducing the overall risk to people, property, and investments in the event of a fire."

THE BUILDER'S TAKEAWAY

Fire-rated construction is not about overbuilding. It is about building smart by choosing materials and assemblies that protect people and property, meet code and insurance requirements, and give clients peace of mind.

As fire safety standards change and expectations increase, using fire-rated products wisely gives rural builders a competitive edge. This is something you can be proud to stand behind when you visit a jobsite.

RURAL BUILDER FIRE-RATED FIELD GUIDE

A Builder-Focused Reference for Safer Rural Construction

Why this matters:

Rural projects often have longer response times, larger buildings, and mixed uses in one space. Fire-rated construction is not about overbuilding; it is about building smart, protecting investments, and helping projects move smoothly through plan review and inspection.

START HERE: KNOW THE REQUIREMENTS

☐ Identify all occupancy types (ag, commercial, industrial, mixed-use)

☐ Confirm required fire-resistance ratings (30 / 60 / 90 / 120 minutes)

☐ Verify separation requirements between uses and hazard areas

☐ Coordinate fire protection early — before pricing and layout are locked

Rural Builder Reminder:

Fire ratings apply to **entire assemblies,** not individual products.

USE TESTED, LISTED ASSEMBLIES

☐ Specify UL, Intertek, or equivalent listed assemblies

☐ Verify wall, ceiling, roof, and floor ratings meet code

☐ Confirm all components are compatible within the assembly

☐ Avoid field substitutions without written approval

Builder Reality Check:

One swapped fastener, a missing layer, or an unsealed joint can void a rating.

STRUCTURAL FIRE PROTECTION

☐ Determine if steel framing requires protection

☐ Select appropriate method:

- Intumescent coatings
- Spray-applied fireproofing
- Encasement systems

☐ Verify thickness, coverage, and application requirements

☐ Confirm impacts on clearance, appearance, and maintenance

PENETRATIONS, JOINTS & OPENINGS

☐ Firestop all penetrations through rated assemblies

☐ Maintain ratings at:

- Electrical and plumbing
- Mechanical and ventilation
- Equipment and conveyors

☐ Use the listed joint systems where movement occurs

☐ Maintain ratings at doors, glazing, and overhead openings

SYSTEM-SPECIFIC WATCH POINTS

Post-Frame Buildings

☐ Maintain continuity at posts and girts

☐ Follow fastening and gypsum schedules exactly

☐ Protect load-bearing elements as required

Metal Building Systems

☐ Coordinate fire protection with PEMB suppliers early

☐ Protect exposed steel where required

☐ Maintain ratings at panel joints and transitions

Agricultural Facilities

☐ Separate livestock, storage, and equipment areas

☐ Isolate combustible materials (hay, bedding, fuel)

☐ Protect exit paths for people and animals

INSTALLATION & FIELD VERIFICATION

☐ Install materials exactly per the tested assembly instructions

☐ Photograph rated assemblies before concealment

☐ Train crews on why fire ratings matter

☐ Perform internal checks before inspections

CLOSEOUT & OWNER HANDOFF

☐ Provide listings, documentation, and cut sheets

☐ Verify labeled components remain visible

☐ Review maintenance responsibilities with the owner

☐ Archive records for insurance and future modifications

THE RURAL BUILDER TAKEAWAY

Fire-rated systems give you more time for evacuation, emergency response, and damage control. When built correctly, they protect people, property, and your reputation. RB

Keeping a Worksite Tidy

Why Clean Jobsites Build Safer Crews, Better Projects, and Stronger Reputations

On a rural jobsite, clean doesn't mean spotless. It means intentional. Mud, wind, weather, and wide-open spaces come with the territory. So do long days, tight schedules, and multiple trades working at once. Even under those conditions, an organized jobsite matters. Clean sites are safer, more efficient, and easier to manage—and they send the right message to clients and inspectors.

A tidy worksite saves time, reduces rework, and shows that the builder is paying attention.

CLEANLINESS STARTS WITH A PLAN

One of the most common mistakes builders make is treating cleanup as an afterthought. The best crews build it into the workflow from day one.

Before the first post is set or the slab is poured, establish:

- Designated zones for lumber, steel, panels, and fasteners
- Clearly marked areas for scrap, recyclables, and hazardous waste
- End-of-day cleanup expectations for every trade

When everyone knows where things go, messes don't pile up—and productivity improves.

SAFETY COMES FIRST

Cluttered jobsites lead to injuries. Period.

Loose strapping, scrap metal, cords, packaging, and tools left in walkways create trip hazards and slow emergency response. In rural areas, where response times are often longer, that risk is amplified.

A tidy site helps:

- Reduce slips, trips, and falls
- Keep access routes open for equipment and emergency vehicles
- Prevent sharp or heavy debris from becoming hidden hazards

Many builders report fewer minor injuries once cleanup becomes routine—and fewer headaches when insurance conversations come up.

ORGANIZATION SAVES TIME

Every minute spent searching for tools or materials is a minute

not building.

On large rural sites, small delays add up quickly. Organized storage, labeled bins, and consistent tool placement lead to:

- Fewer delays waiting on materials
- Less reordering due to "lost" supplies
- Faster transitions between construction phases

Some crews assign a rotating daily site lead to manage material flow and organization. It's a simple step that often pays off immediately.

WEATHER RAISES THE STAKES

Rural builders don't work in controlled environments. Wind spreads debris. Rain turns scrap piles into hazards. Snow hides cords and metal until someone finds them the hard way.

- That makes jobsite cleanliness even more important:
- Secure lightweight materials daily
- Elevate supplies off the ground when possible
- Keep access paths clear—even in mud or snow

Messy sites become dangerous fast when weather hits. Organized sites stay manageable.

RESPECT FOR THE LAND—AND THE CLIENT

Many rural projects sit on farmland, family property, or environmentally sensitive areas. Debris left behind doesn't just look bad—it can damage soil, harm livestock, or violate local rules.

Clients notice clean sites. They see:

- Respect for their property
- Attention to detail
- A project that's under control

For builders who rely on referrals and repeat work, that impression matters.

MAKE CLEANUP EVERYONE'S JOB

Cleanup shouldn't fall on one person at the end of the day. The strongest crews make it part of the culture.

Simple rules help:

- Clean as you go
- Don't leave a mess for the next trade
- End every day with a site walk

When cleanup is routine—not punishment—crews take pride in their work area. That pride shows in the finished building.

SMALL HABITS, BIG PAYOFF

Keeping a site tidy doesn't require expensive systems or extra labor. It requires consistency.

Habits that work:

- Five-minute cleanups before breaks and quitting time
- Clearly labeled waste and recycling bins
- Weekly site-wide cleanups on longer projects
- Quick walkthroughs before inspections

These habits reduce stress, improve safety, and keep projects on schedule.

A CLEANER SITE IS BETTER BUSINESS

Jobsite cleanliness reflects how a builder runs their business.

It affects safety records, schedules, inspections, crew morale, and client trust. In a competitive market where reputation travels fast, those details matter.

A tidy jobsite doesn't just look better, It works better.

CREW RULE OF THUMB:

If the next trade can step in and get to work safely—no matter the weather—you've done it right.

EDITOR'S NOTE

Clean jobsites aren't about appearances. They're about safety, efficiency, and professionalism. Organized sites reduce injuries, speed inspections, and cut down on rework. In rural construction—where weather, distance, and logistics already add pressure—jobsite cleanliness provides a real advantage.

A tidy site protects people, keeps schedules on track, and reinforces the professionalism clients expect. It's not extra work. It's smart business. **RB**

Jobsite Cleanliness Toolkit

Practical guidance crews can use every day.

Start of day

- ❑ Walk the site and identify hazards
- ❑ Confirm material zones and walk paths
- ❑ Check weather and plan protection

During the workday

- ❑ Return tools after use
- ❑ Keep cords and hoses out of walkways
- ❑ Dispose of scrap as you go

End of day

- ❑ Collect scrap and fasteners
- ❑ Secure lightweight materials
- ❑ Clear access routes
- ❑ Store tools and lock containers
- ❑ Final site walk (5 minutes)

BY RANDY CHAFFEE

You Already Have a Brand

How rural builders shape perception, protect margin, and grow without losing who they are

MAREKPHOTODESIGN.COM-STOCK.ADOBE.COM

You don't get to decide whether you have a brand. Your customers already did. Picture this: you're at the coffee shop, the lumberyard, or standing at the edge of a jobsite when someone asks, "Who built that place?" Your name comes up. What follows—that conversation when you're not there to explain yourself—is your brand. Not your logo. Not your website. Not your slogan. It's the story people tell about you when you're not in the room.

Every rural builder has a brand, whether they've ever thought about it or not. The real question is whether that brand is working for you—or quietly working against you. Most builders didn't set out to "build a brand." They set out to build structures, businesses, and reputations. Branding simply showed up along the way. Today, the challenge isn't whether you have a brand. It's whether you're taking ownership of how the market perceives you.

BRAND IS PERCEPTION, NOT PROMOTION

Brand, at its core, is perception. It's not what you say about yourself; it's what people actually believe about you. That perception is formed every day through your actions—how you answer the phone, how your crews show up, how problems get handled, and how a job looks long after you've packed up and left. You don't need advertising for that perception to exist. It's already there. Left unmanaged, it forms randomly. Managed intentionally, it starts working in your favor.

MOST BUILDERS ARE STRONGER THAN THEY THINK

Here's something I've learned after decades around builders: many of you already have strong brands. You just don't call them that. You call it reputation. Word of mouth. Being known as fair, dependable, honest, or good to work with. In rural markets, those things matter more than anywhere else. What's changed isn't the value of reputation—it's visibility. Reputation still opens doors, but visibility determines how many doors you even get a chance to walk through.

BRAND STARTS LOCAL—ALWAYS HAS

Branding has always started local, and it still does. It doesn't begin with social media, a logo redesign, or a marketing plan. It begins with how you treat people, how you follow up, how you handle mistakes, how consistent your crews are, and how predictable your process feels to customers. That's the foundation. If that part isn't right, nothing else matters. But once it is, visibility becomes a force multiplier. You're not changing who you are—you're simply broadening how many people get to see it.

VISIBILITY IS NOT EGO—IT'S CLARITY

This is where some builders push back. "I don't need social media." "We've done fine without all that." I get it—and I respect it. But here's the reality: when someone hears your name today, the first thing they do is look you up. If they can't find you, uncertainty creeps in. And uncertainty erodes trust. Visibility isn't about ego or showing off. It's about removing doubt. You don't need to be everywhere; you just need to exist somewhere in a way that reflects who you already are.

SOCIAL MEDIA IS AN AMPLIFIER, NOT THE BRAND

Social media doesn't replace reputation—it amplifies it. If you already do good work, treat people right, and care about your craft, digital platforms help more people see that. Used well, visibility shortens the trust-building process, warms up leads before

the first call, reinforces credibility before the estimate, and makes sales conversations easier. Used poorly, it looks fake—and rural markets spot that fast. The goal isn't volume. It's consistency and honesty.

A SMALL STORY WITH A BIG LESSON

Let me give you a simple example. I'm known for wearing cool socks. It wasn't planned or strategic—it just happened. Over time, people noticed, then commented, then remembered. I've had people walk up to me at trade shows asking what socks I'm wearing that day. I've even had customers send me socks as gifts. That's branding—not because socks matter, but because it's human, authentic, and memorable. Your version won't be socks, but you already have something people associate with you. Once you recognize it, you can lean into it.

BRANDING MAKES SALES EASIER AND PROTECTS MARGIN

Strong branding makes sales easier. When your name already carries trust, you don't start every conversation from scratch. Objections soften, pricing discussions become more comfortable, and conversations feel more relaxed. Branding doesn't close deals for you, but it earns you the opportunity to close them. It also protects the margin. When you're clearly positioned, you stop being compared purely on price. You become different, not interchangeable—and that's how you avoid the race to the bottom.

BRANDING ATTRACTS BETTER PEOPLE

Branding also attracts better people. Customers aren't the only ones paying attention. Good employees want to work for businesses that feel stable, professional, and alive. When your brand reflects pride and momentum, you attract people who want to be part of it. That doesn't require hype. It requires consistency.

Five Brand Signals Every Builder Sends

Whether you mean to or not, the market is paying attention.

1. **How Problems Get Handled**
   Mistakes happen. Builders are judged by the response.
2. **What People Say When You're Not There**
   The real brand conversation happens at the coffee shop and lumberyard.
3. **Consistency Across Crews and Jobsites**
   Inconsistency creates confusion—and confusion erodes trust.
4. **Visibility and Findability**
   When someone hears your name, can they find you?
5. **Personal Connection**
   People trust people, not logos.

None of these requires a marketing budget. All of them require awareness.

THE CHALLENGE

Branding is more than a sign out front, a logo, or an occasional ad. It's a living thing. Think outside the box. If you're already thinking outside the box, beat the box up—or better yet, stop looking for boxes at all. Your name matters. Your reputation matters. And in today's world, visibility matters.

YOU ALREADY HAVE A BRAND.

The question is whether you're ready to take ownership of it.

A SIMPLE PLACE TO START

If this feels big, that's okay. You don't need to do everything. Start by asking:

- What do people already say about us?
- What do we want them to say?
- Where does our message show up today?

Where is it missing?

Then pick one place to make it visible. Just one. **RB**

Randy Chaffee brings four-plus decades of experience to the post-frame and metal roofing industries. Author of #1 Amazon Best Seller "Asphalt and Algorithms," he is a board member for the Buckeye Frame Builders Association and the National Frame Builders Association. Find his podcast at facebook.com/BuildingWins or call (814) 906-0001 at 1 p.m. Eastern on Mondays to listen in.

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Visit us at the Post-Frame Builder Show, June 10-11, York PA

Dutch Tech Inc

Stop Fighting the Heat: The Secret to a Better Build

Ever feel like you're working inside a giant oven? We've all been there—standing in a metal building in the middle of July, sweat dripping off your nose before you even grab your hammer. Most guys think the only way to stop the heat is to pack the walls with more itchy pink stuff. But the folks at Dutch Tech Inc are proving that there's a much smarter way to get the job done.

WHAT IS THERMA≡GUARD?

The company manufactures a product called **THERMA≡GUARD**. Think of it like a "space blanket" for a house or a barn. While old-school insulation just tries to slow down heat, this stuff actually **reflects** it.Imagine you're holding a hot coffee in a foam cup. Now, imagine that cup is wrapped in a shiny mirror that bounces the heat back where it came from. That is exactly what this insulation does for your shop or warehouse. It uses a special silver film that blocks the sun's rays from coming through the roof.

BUILT FOR THE JOB SITE

We know what you're thinking: *"Is it going to tear the second the wind blows?"* That's the best part. The guys at Dutch Tech Inc designed this for people who actually get on roofs. It's not flimsy. It has a tough, woven backing that makes it incredibly strong. That's why they call it America's Strongest Reflective Insulation. You can pull it tight, staple it down, and it won't crumble or tear like the cheap stuff. Plus, it's **wrinkle-free**, so when you finish the job, the building looks clean and professional, not like a crumpled bag of chips.

WHY IT MATTERS

- **No More Itch:** You don't need a hazmat suit to install it. No tiny glass fibers sticking to your skin.
- **Lower Bills:** It keeps the heat out in the summer and the warmth in during the winter. Your customers will love the lower power bills.
- **Tough as Nails:** It acts as a vapor barrier, meaning it helps stop moisture and mold from ruining your hard work.

THE BOTTOM LINE

Next time you're quoting a job for a metal building or a barn, don't just do things the "old way" because that's how it's always been done. Check out the tech at **www.dutchtech.com**. It's easy to install, it's built to last, and it'll make you the hero of the job site when the owner realizes they don't need to blast the AC all day.

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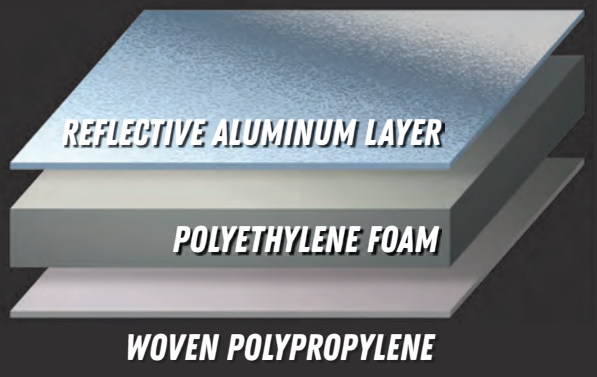

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Perma-Column LLC

Why Sturdi-Wall® is the best-selling post-frame anchor bracket

If limited to just three words, it would be as simple as tested, certified, and proven. That's why professional post-frame builders turn to Sturdi-Wall®. As the only brackets on the market that are fully ICC-ES-certified, Sturdi-Wall® has a decades-long track record of proven performance— with zero failures. No other anchor bracket even comes close.

This standout foundation solution is specifically engineered for connecting post-frame structures to monolithic slabs, formed walls, and existing concrete pads. Recognized for its precise blend of strength and durability, Sturdi-Wall® is robotically welded, powder-coated, and backed by a lifetime warranty.

Since every post-frame project is unique, Sturdi-Wall® offers a range of application options.

-Sturdi-Wall® drill-set models are designed and engineered for applications in which the concrete foundation has already been poured and cured.

-Sturdi-Wall® Plus wet-set anchors are engineered to be installed when concrete is still wet, eliminating the tedium of drilling and then securing with concrete fasteners.

-Sturdi-Wall® Universal drill-set brackets are engineered to securely anchor columns to the foundation at corners and doors where connection space is limited.

-Sturdi-Wall® Custom produces anchor brackets to meet distinct project needs.

With its comprehensive product line, Sturdi-Wall® is a foundation solution with combined advantages for post-frame builders.

THIRD-PARTY TESTED

Sturdi-Wall® and Sturdi-Wall® Plus brackets are the only ICC-ES-certified post-frame anchor brackets on the market, with High-Velocity Hurricane Zone code compliance. Being ICC-ES-compliant can mean quicker permits and approvals.

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Lifetime warranty protects your reputation and guarantees every Sturdi-Wall® product to be free from defects in material or manufacturing, protecting you and your customer.

In living up to its name, Sturdi-Wall® is the world's most durable professional-grade post-frame anchor bracket. It's a product line that's trusted by builders because it's tested, certified, and proven—and delivers unmatched business advantages.

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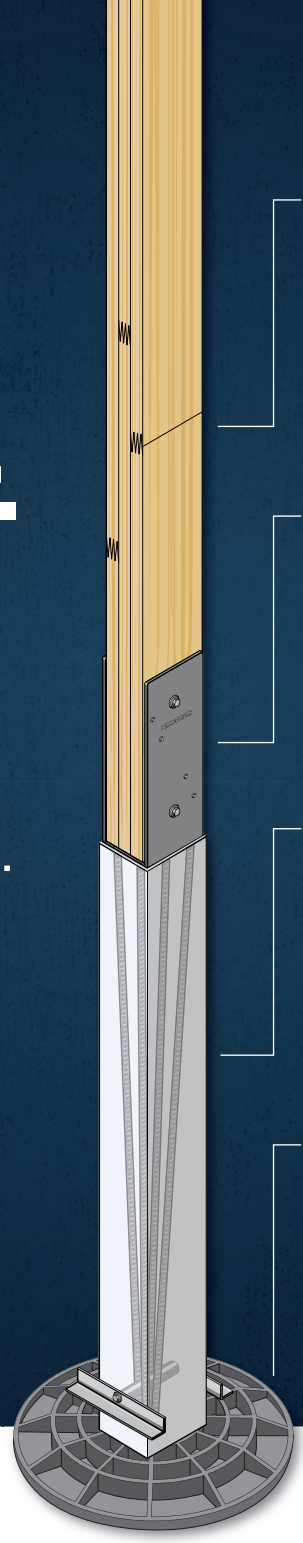

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SmartBuild Systems

The post frame industry continues to change quickly, and SmartBuild is entering 2026 with the same commitment that has guided us from the beginning. We listen to builders, we solve real problems, and we keep improving the core product that so many rely on every day. This year already feels like one of the most promising in our history.

Many of you know that Keith is moving into a well deserved retirement season, and Johnny Drozdek is stepping into his role. With that transition comes a renewed focus on strengthening what already works. Our team is concentrating on speed, efficiency, and overall performance. The goal is simple. Make SmartBuild faster and easier to use while continuing to deliver the features and fixes our builders ask for. The mission has not changed. Take care of our customers and keep raising the standard for post frame software.

We are also expanding SmartBuild's reach through partnerships and integrations that solve broader industry needs. One example is our integration with Struxsure Plans, which helps builders meet the growing demand for engineered plans as code requirements increase. Another is our mobile friendly 3D website configurator integration with IdeaRoom. More customers shop from their phones than ever before, and this tool helps suppliers capture that audience and close more leads with less effort.

For those focused on metal roofing, SmartBuild RF is receiving a major upgrade. It will offer a simple and accurate roofing only solution built on the same intelligence as our core product.

With a growing team and a clear roadmap, improvements will arrive faster than ever. We are grateful for the builders who continue to push us and trust us. The future of SmartBuild is bright, and we look forward to sharing what comes next.

Director of Sales and Marketing - Royden Wagler

Hangar building takes flight

JULY 2004 FLASHBACK

Then vs. Now: Airplane Hangars, 2004–2026

In 2004, airplane hangars focused on basics—wide-open spaces for moving planes, different types of doors for getting aircraft in and out, and keeping costs low for private pilots and small fleets. Steel prices remained steady, building codes were simpler, and energy conservation was rarely a concern.

By contrast, in 2026, hangars have become advanced buildings. Designers now focus on features such as strong structures to withstand severe weather, better-insulated, sealed buildings to save energy, fire-safe materials to slow a fire, and space for offices, shops, and up-to-date aircraft electronics for navigation and communication. Owners today want hangars that last, adapt, and save money—not just a simple aircraft shelter.

The mission endures, but success now demands foresight.

BC Schmidt Construction of Williams, Calif., specializes in building airplane hangars, a fast-growing market. "There are so many fun things, so many exciting things you can do with a hangar," says Carrie Schmidt. BC SCHMIDT CONSTRUCTION PHOTOS

As a segment of the rural building market, airplane hangar construction has been flying under the industry's collective radar screen. While sexier buildings like horse barns or more frequently-purchased commercial structures hog the spotlight, builders who either specialize in hangar construction or devote a good chunk of time to hangars have discovered it to be a lucrative source of projects.

"People are realizing now that hangars are an untapped market, an expanding market," says Carrie Schmidt of BC Schmidt Construction in Williams, Calif. "There is a need for them. They're a good income stream for us."

Consider the following facts gathered by the U.S. Census Bureau:

- There are currently 612,000 licensed airplane pilots in the United States, 244,000 of whom have private pilot's licenses. It is interesting to learn that among this group, it is not just the oldest and wealthiest pilots who buy hangars. "It might surprise you if you thought of these people that have the bucks to buy a hangar as someone in the older age group," says Peter Karubas of metal building manufacturer Agate, Inc. "Lately younger and younger people have

BY RURAL BUILDER STAFF

Most hangars are designed and built like any other steel or post-frame building — with the exception of oversized doors.

been doing this. A large amount of people in their 40s are buying these units — the younger generation is somehow coming up with the bucks."

■ There are 218,000 general aviation aircraft in the U.S. Some of them appreciate in value at such a rate that they can be considered investments, and those investments need protection. "A lot of people have suddenly realized that their aircraft has increased in value two or three times in the last 10 years," says Rob Roberts of metal building manufacturer R&M Steel. "They're all of a sudden realizing 'I have this valuable piece of machinery here, maybe I better take care of this.'"

Even the most inexpensive hangar beats the alternative: tying a plane down to a tarmac, leaving it at the mercy of the elements. "People are really tired of having their expensive plane sitting out tied down to concrete, being exposed to the elements, when they can afford to put their plane in a hangar," says Karubas. "But availability isn't always there. Some of these airparks have two-year waiting lists just to get onto it."

■ There are 19,000 airports across the country; 14,000 of them are private. With government aid an inconsistent revenue stream at best, airports have found selling hangars to be a veritable cash cow. "Airports for some reason seem to drag their feet in regard to building hangars," says Roberts, who is also an instructor pilot. "They don't take up too much space, and they're relatively inexpensive, but many airports drag their feet. You've got to have tenacity to stick with it."

That goes for marketing hangar projects, not just fighting through bureaucratic red tape. Whether the customer is a city or county, an individual plane or homeowner, or even the military, potential hangar buyers loom just about everywhere.

"They're out there," says Matt Robbins of South Carolina builder Hightower Construction.

WHO'S BUYING?

The majority of hangar customers can be broken down into two broad categories: municipal-run airports like those found in any city or county, and residential airparks, where homeowners have access to a

Walters Buildings got creative with this Kentucky project, which combines a personal hangar with a downstairs living quarters area. WALTERS BUILDINGS PHOTOS

There's always room for mega-hangar jobs: South Carolina builders Hightower Construction presided over this C17 hangar at Charleston Air Force Base. BUTLER HEAVY STRUCTURES PHOTO

runway and any other plane-related goods and services. The two entities are fairly similar, but hangar development moves at a different pace in each.

For instance, municipal airports can be slow to realize the untapped potential on their land, and slow to meet local demand, but once they decide to build, they build in bunches.

"Hangars are weird," says Scott Walters of Walters Buildings, who estimates his office sells five or six hangars per year. "An airport will open up a new wing with 12 or 14 spots to stick a whole bunch of new buildings. In little airports, they'll figure out a way to make a taxiway, make a deal with the landowner adjacent to the airport, open up a little subdivision of hangars."

These subdivisions fill up quickly. Phil Hall of Aircraft Structures in Paulden, Ariz., who is also a pilot, considers himself fortunate to have hangar space, given the 10-year waiting lists at airports across the country. "I had to sneak my way back in, otherwise I'd be out on the street," he says. "I could sell a whole bunch of hangars to people that want them, but when you're dealing with a city or county, if they won't lease you a piece of land, you're out of luck."

But will the demand be there in 20 years? That seems to be a sticking point in some cases. "It boils down to insecurity: if we build them now, are we going to be able to keep them full?" says Karubas. "If you've got a list that's two years long, that should be an indication you can keep them filled."

Filling new residential airstrip communities can be more difficult — in addition to hangars, expensive lots and homes are part of the sale — but also more lucrative than municipal facilities. Whereas the challenge in municipal airports is simply freeing up the land for hangars, the challenge in residential airparks is matching hangars aesthetically with million-dollar homes. "In an airstrip community, some of the people like the hangars to look a little nicer, with overhangs, vented soffit, fascia, wainscoting, maybe some cupolas," says Bob Henry, a Wick builder.

Bob Henry has been a pilot for 28 years, and has been flying around the country building airplane hangars for the last decade. BOB HENRY PHOTOS

Hall, who lived in an airstrip community for more than 20 years, points to Agua Dulce Airpark Ranch in California as a community where small touches have gone a long way toward improving the overall aesthetics. Among the touches: 4:12 roof pitches, rather than the standard metal building 1:12; 2-foot overhangs all the way around; and cupolas, to help the hangars avoid looking too boxy.

Karubas says his company has encountered code issues where a hangar's proximity to residential development has necessitated the use of higher-end exterior materials like EIFS, synthetic stucco, or split-faced block. Schmidt has dressed up hangars with windows in the top half of bi-fold doors, epoxy floors, and side curtain doors for cars. Walters will focus on door trim, wainscoting options, acrylic floors, and varying depths of overhang. "A lot of guys spend $500,000 on a plane and put the cheapest building up to store it in, which is fine," he says. "I look for the little specialty hangar, make it a little nicer."

THE DOORS

Aesthetic enhancements aside, building hangars is not a complicated endeavor — except for the doors, the importance of which can not be overstated. "The size of the door determines the size of the building," says Roberts. "Most people are used to working the other way around, doors are an ancillary thing. On hangars, the only thing of importance is the door. There's a lot to know about getting it right, and it takes a lot more time, designing and engineering."

Yet as crucial as doors are to a hangar package, they are often purchased by a hangar customer separately from the rest of the building package. Illinois builder Jim Peters recently landed a large hangar project in which the customer preferred to purchase the bi-fold doors directly from Wilson, not through the building manufacturer (see story, page 23). Peters says this is the way things have always been done on hangar projects.

The two basic door styles used in hangar construction are bi-fold and sliding. Determining which style to use is contingent on a variety of factors.

■ Size. Hall says bi-fold is the more economical choice up to 80 feet wide, although they can be manufactured up to 120 feet wide.

■ Soil type. If the building site features soil prone to extensive expansion and contraction between seasons, a sliding door might encounter track problems.

■ Electrical availability. Many bi-folds are electric, most sliding doors do not require electricity.

Bi-fold doors have seen a number of technological advances in recent years, from straps replacing cables as lifting devices in some products, to remote control systems that allow pilots to open and close hangar doors without leaving their plane. "The bi-fold door is pretty darned efficient from a cost perspective, efficient in terms of installation and other costs involved," says Roberts.

With sliding doors, extra attention needs to be paid to proper bracing and placement of both the top and bottom tracks. "You can't have very much deflection in your frames," says Roberts. Sliding doors can either stretch beyond a building's sidewalls or stay inside, although the latter can add costly and unnecessary square footage.

Henry typically uses a third style of door on hangars, a one-piece hydraulically operated door from Hydroswing. The door has a ram on each side that pushes the door up and out like a big awning, and is easier to insulate on its interior. Henry says the door offers a clean look.

INSULATION/VENTILATION

Hangars may seem like glorified machine storage sheds, but that doesn't mean they are not insulated and ventilated with care. Many airplane enthusiasts live in climates featuring wildly varying temperatures, and do not want to be shut out of their hangars during periods of extreme heat or cold.

"I think that most individuals do (insulate their hangars), especially in airparks, it's either going to get too damn hot or too damn cold," says Hall. "But when we sell a whole bunch of hangars to a city, they usually don't insulate them. It's a way to keep costs down."

For metal hangars, even if the roof is insulated, it is important to remember to take into account the potential for interior condensation, which has the potential to damage aircraft. Karubas says this is more likely to happen in areas with heavy annual snowfalls. To account for the metal building "sweats," Schmidt recommends a condensation barrier in the roof structure, as well as insulation.

AVOIDING HANGAR RASH

Hangars typically come in two configurations: T- or box hangars. T-hangars are, as the name implies, shaped like a fat version of the letter T, with the bottom of the T providing the resting spot for an airplane's tail or nose. They are a popular choice where space is at a premium; in a current project, Peters fit 13 T-hangars into a 51x300 building, and five box hangars into a building of the same size.

However, Walters says T-hangars' popularity have waned. Though economical, plane owners can find themselves in crowded quarters. "They used to be popular, but I don't think I've bid on a nested T-hangar in eight years," he says. "Most guys want their own shop, to keep their own plane clean, keep their own tools in there."

Trying to fit multiple planes into a single large hangar is also taboo. Too much jostling can damage these delicate machines, a malady known as hangar rash. Individual box hangars are the top tier option for plane owners, allowing more room for maneuvering aircraft, as well as space to clean and perform maintenance on the plane.

The crème de la crème of box hangars are known as executive hangars, which contain a portion of the floor plan dedicated to offices or living areas. "People who buy these units and park their fabulous planes in them, it becomes a toy house for them," says Karubas.

And that's what hangar building boils down to. Even if hangars are simply boxy buildings with larger-than-average doors, they store some of the biggest toys around. "There are so many fun things, so many exciting things you can do with a hangar," says Schmidt. **RB**

(Clockwise from top left) Agate, Inc. built 14 hangars at Ryan Field Airpark in Tucson, Ariz.; three executive hangars and 10 nested hangars with bi-fold doors at the airport in Kingman, Ariz.; and six T-hangars with 38-foot sliding doors at the Wickenburg, Ariz., airport.
AGATE, INC. PHOTOS

PROJECT OF THE MONTH

Post-Frame Barn

Legacy Building - South Dakota
www.facebook.com/parkerlumber605/

This barn in Parker, South Dakota, is a standout example of how modern steel products can deliver both durability and high-end visual appeal. The exterior walls are finished with Hickory direct print Board & Batten steel siding panels from Central States, Inc., bringing the warmth and texture of natural wood together with the long-term performance of steel. The rich Hickory finish adds depth and contrast, giving the building a classic barn aesthetic with a contemporary edge.

The structure is topped with Panel-Loc Plus steel roof panels in Burnished Slate, also from Central States. The roof color pairs cleanly with the siding while providing a subtle, refined contrast that ties the entire exterior together.

Matching trim was used throughout the project, creating crisp lines and a seamless, polished appearance from the roofline to the walls.

Constructed by Legacy Building Supply, the project incorporated approximately 4,360 square feet of material. The result is a well-balanced structure that blends visual appeal with practical performance—designed to withstand South Dakota's demanding climate while maintaining a timeless, attractive look that will endure for years to come. **RB**

THE DETAILS:

Location: Parker, South Dakota

Building: Post Frame Horse Barn

Building Size: 4360 s.f.

Materials:

Roofing - Panel Loc Plus in Burnished
Trim - Burnished Slate

Siding: Direct Print Board & Batten in Hickory

For more information:
https://centralstatesco.com/places/legacy-builders
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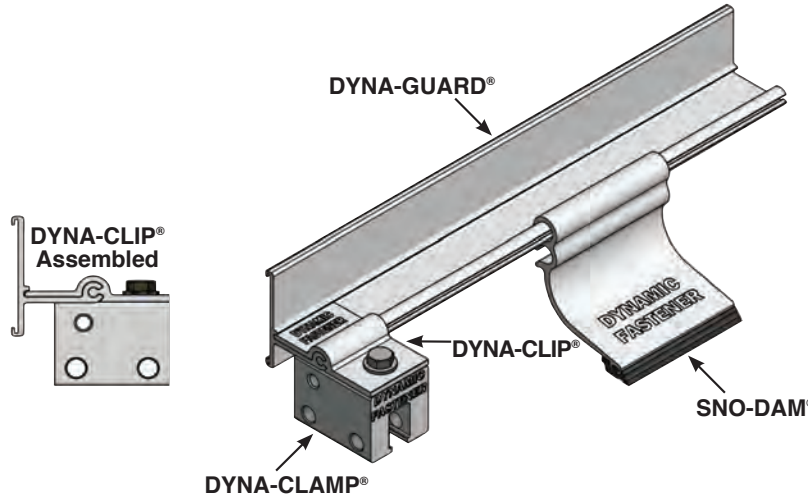

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For a CSI 3 part specification and CAD details on Dyna-Guard products see our page on Arcat

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