Metal Builder

ROLLFORMING MAGAZINE SPECIAL SECTION

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FALL 2025

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Putting the Pedal to the Metal

The recent U.S. trade deals, such as with the EU and Japan, are fueling the stock market and bringing in a lot of foreign investment. Some investments are pledged in the short term, others over the long term, up to a decade or more. Depending on how they're calculated, estimates range from $1.5 trillion to $3 to $4 trillion so far.

CFS POISED FOR INCREASED DEMAND

Considering the increased investment and rising demand for construction, it's likely that the biggest challenge will be the labor shortage. But that suggests an increased market for cold-formed steel buildings. Because CFS can be erected quickly, less labor is needed per unit. Increased construction speed and reduced labor make CFS a good option.

WHEN OPPORTUNITY KNOCKS, OPEN THE DOOR

One of our stories this issue covers the expansion of Metal Panels Inc. (MPI). In my conversation with president and founder Mitchell Hentkowski, he spoke of the growth the company experienced during the pandemic. In fact, many companies had their greatest growth during that period. That just shows that there are always ways to increase business if you look for them.

UPCOMING TRADE SHOWS

Take advantage of networking and learning opportunities at the upcoming metal trade shows.

First is Shield Wall Media's Construction Rollforming Show, to be held in Dayton, Ohio, Oct. 1-2. Visit www.constructionrollformingshow.com for more information.

Next is METALCON in Las Vegas, Oct. 21-23. Visit www.metalcon.com for additional details.

It won't be long before we're turning the calendar to 2026. It will be exciting to watch what unfolds in the coming year. Opportunities abound.

—Dan Brownell

Shield Wall Media extends its thanks to Dan Brownell for his service as editor of Metal Builder. We would like to wish him the best as he starts his new phase in life.

Karen Knapstein has taken on the role of managing editor and can be reached at karen@shieldwallmedia.com or 715-952-1633. Feel free to reach out with feedback and suggestions for future editions.

Contents

On the cover: *ASC Machine Tools Roll Up Door Panel Rollformer.* PHOTO COURTESY OF ASC MACHINE TOOLS

Metal Panels Inc. Expands

Moves to Larger Headquarters Unleashes Growth

Metal Panels Inc., a manufacturer of metal roofing and siding products for the metal roofing, metal building, self-storage, and post-frame industry, is a vibrant, growing company. In fact, it recently expanded its headquarters to a new, larger facility in Tulsa, Oklahoma, to accommodate its increasing business.

A STRATEGIC BEGINNING

The firm's president and founder, Mitchell Hentkowski, opened the company in 2001 after he saw that there weren't adequate roll-forming services in his area. As a roofer, he saw an opportunity for a small, regional roll-former that could provide more service and quicker order turnaround, so he stepped in to fill the gap.

Hentkowski made it his mission to build a company that met his customers' needs by providing its valued customers with quality products, timely delivery, and its best in personalized service. That commitment has paid off with steady growth for the last 24 years. The company has been so successful that they opened a second manufacturing facility in Kansas City, Kansas. Between the two facilities, they serve a seven-state area, offering 20 panel profiles, nearly 100 unique colors, custom trim, flat sheets, and a full line of accessories.

A NEW, EXPANDED HEADQUARTERS

In April, MPI opened a new, much larger headquarters in Tulsa, just north of their original site. Now operating out of nearly four acres under one roof, the new location at 14921 East Pine Street allows the company to significantly expand its inventory and improve operational efficiency. The upgraded facility features faster service through expanded truck bays and a broader product selection, including a comprehensive range of storage facility components.

This modern building now serves as both MPI's headquarters and primary manufacturing center. A key feature of the new facility is a two-lane interior loading area, capable of accommodating up to six flatbed trucks simultaneously, streamlining logistics and operations.

Throughout the design, many of MPI's own panel profiles are prominently displayed on the building's siding, louvers, and exterior accents. This design approach continues indoors, where ceiling features, the lobby's custom reception desk, and integrated lighting units function as creative showcases for MPI's extensive range of panels and color options.

The move to a bigger facility comes out of their need for more space. Their previous building didn't have the room they needed to support their business properly. "We were landlocked where we were," said Hentkowski. "We couldn't buy property around us, and we couldn't build on anymore. Then we found a piece of property only a mile north of where we were. It was a large property that gave us enough room for our current needs and for future growth with additional land. The way we've positioned the building, we can build on in two different directions, so there's a lot of potential for growth. And being centrally located in the country geographically gives us a lot of hope for the future."

Metal Panels, Inc.'s new headquarters is more than double the size of its previous facility. PHOTO COURTESY OF METAL PANELS, INC.

The old building was under 70,000 square feet, while the new one is 180,000 square feet, so it more than doubled space. "We're now taking advantage of not only the additional physical space," said Hentkowski, "but we also added equipment, so we were able to increase our product line.

INCREASED CAPACITY AND EFFICIENCY

"We're really being able to take advantage of the space. We have a decent amount of customers picking up their own orders. We have two lines of traffic, and the way our production lines work, we are able to move through a huge amount of traffic compared

The new building layout was carefully planned for efficiency. PHOTO COURTESY OF METAL PANELS, INC.

to the previous building. It's much more efficient.

"We had a record month in July in Tulsa, but it didn't feel like it. It didn't seem all that difficult, but in the old building, physically, we definitely would have felt it because there would have been so much going on in a smaller space. Here, we're able to move materials through the building so much more efficiently and it makes things easier. Production wise, we're not having to move this to get to that to fill an order. We run the material, fill the order, stage it, and load it.

"When we decided on this property, I went through about 10 versions of the plant layout to determine the most efficient operation. I spent a lot of time working on production flow, customer flow, traffic flow, all of those things in the space I had available starting from a blank slate and having a lot of space to do it in. Having spent that time, it's really paid off in how we're able to function now," Hentkowski said.

Besides the production part of the building, MPI has a display area, where customers can come in and touch, feel, and see products. "We also have a training area that we're working on," Hentkowski said. "We'll be able to do any kind of training in there. Eventually we want to do AIA training classes in there but first we want to have training aids and bring young people in and teach them how to do things the correct way. We've allocated quite a bit of space for that. We're in the process of building that out over the next few months."

Having two lines of traffic speeds movement of material through the new facility. PHOTO COURTESY OF METAL PANELS, INC.

CONCLUSION

Metal Panels Inc. has come a long way from its beginnings in 2001, and its headquarters expansion is just the next step in its ongoing mission. "This move reflects our continued commitment to meeting the growing needs of our customers," said Doug Myer, Marketing Manager at Metal Panels Inc. "With an efficient manufacturing center, greater inventory, and enhanced service capabilities, we're better positioned than ever to be our customers' trusted metal solutions partner." The future is indeed bright for MPI. **MB**

10 Critical Steps in CFS Single-Family Construction

Preventing Bottlenecks in the Process

The design-build model has increasingly become the preferred method for residential single-family construction in the cold-formed steel (CFS) building sector. Combining design and construction services under a single contract streamlines communication, reduces project timeframes, and often leads to fewer cost overruns. Yet, despite its efficiencies, the process is not immune to common bottlenecks that can stall momentum or inflate budgets. The following are 10 critical steps in the design build process highlighting best practices and warning signs that CFS builders should recognize to keep projects running smoothly.

1. INITIAL CONSULTATION AND FEASIBILITY ASSESSMENT

The process begins with a conversation. Builders meet with the homeowner or developer to understand their vision, goals, and budget constraints. At this stage, builders assess the feasibility of the project — both structurally and financially.

Bottleneck: Misaligned Expectations

According to Johnny Lordi, Business Development and Partnerships Specialist at WellDone1KitHomes, with CFS, customers sometimes have a fear of the unknown and make incorrect assumptions, and that can cause a bit of roadblock. They're familiar with wood, but "as soon as they think steel, they think welding," Lordi said. Simply explaining to them that CFS uses screws can clear up that misconception quickly. Clients also may have also been told that steel retains heat and cold, so they're leery of thermal bridging. They just need to know that there are effective thermal breaks to overcome the bridging. With those misunderstandings out of the way, it's easier to move forward with the planning.

Also, If the customer's vision exceeds their budget or site conditions limit build options, issues can surface later. It's crucial to be honest early and provide realistic parameters. For example, significant preliminary work might need to be done before any construction can begin. The cost of clearing heavily wooded areas can be far more expensive than homeowners realize.

A high water table will likely require special drainage systems or sump pumps, and power or water lines might need to be extended or well and septic systems dug. These are all potential costs that should be discussed before proceeding to the next step in case enough obvious concerns arise at the discussion stage to prevent the project from moving forward.

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2. SITE EVALUATION AND SURVEYING

Once feasibility is established, the builder, often with a civil engineer or surveyor, performs a detailed evaluation of the site. This includes soil testing, topography, access, utilities, and local zoning restrictions.

Bottleneck: Undiscovered Site Complications

Inadequate due diligence on utilities, setbacks, or soil conditions can result in costly design changes. Builders should ensure all site variables are fully understood before proceeding.

Zoning can be complicated because of vague or conflicting information. It's important to clarify any questions with local officials. There may be specific classifications, variances, or exceptions that apply to tracts within a general area. Certain environmental or historic restrictions could apply to the property that aren't obvious without researching them in detail. It may be worthwhile to hire a land-use attorney to ensure compliance.

Also, clients don't always understand how zoning can impact their plans. For example, customers living within city limits don't realize that they can't always build a home as big as they want. Frank Padilla of Callahan Steel Buildings said, "Sometimes people have a half-acre and they want to build a 5,000 square foot home, but they can't because of city codes. Outside the city limits, an unrealistic budget can be an issue. A lot of folks haven't put much planning into their project. For example, they haven't considered the cost of their septic system."

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3. PRELIMINARY DESIGN AND BUDGET PROPOSAL

With the client's goals and site data in hand, the design team creates a preliminary plan. At this point, floor plans, elevations, and schematic drawings are created along with a ballpark budget estimate.

Bottleneck: Scope Creep

As homeowners review preliminary designs, they may request features outside the original budget, such as adding more square feet. It's crucial for builders to document these changes and update budgets in real-time to prevent margin erosion. This involves creating a formal, written cost estimate for each proposed change as well as any changes that need to be made to the overall project schedule.

Change orders should follow a well-defined and documented process for submitting, reviewing, and approving changes. All stakeholders must be kept up to date with the changes as well as their impact on the project schedule.

4. ENGINEERING AND DETAILED DESIGN

Once preliminary plans are approved, full construction drawings are developed, including structural engineering, mechanical systems, electrical plans, and specifications for finishes. This step also involves collaboration with metal building manufacturers if pre-engineered systems are being used.

Bottleneck: Engineering Delays

Especially with engineered metal building systems, waiting for

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stamped drawings or design revisions can delay permit submission and fabrication. Builders should coordinate closely with suppliers and ensure timelines for engineered components are clear. This requires regular communication with designated contacts on each side. Material specs should be defined in detail and status updates shared promptly.

5. PERMITTING AND APPROVALS

Builders must now secure building permits and ensure all plans meet state, local, and sometimes HOA requirements. Depending on jurisdiction, this may include stormwater, erosion control, septic, or energy code documentation.

Bottleneck: Permit Office Delays or Rejections

Incomplete or non-compliant plans can lead to rejection or months-long delays. Having a team member familiar with local permitting processes is essential to keep this stage on track. Developing a good working relationship with local officials early in the project will help streamline the steps.

6. FINAL PRICING AND CONTRACT EXECUTION

With engineered plans and permit approvals in hand, a final price is calculated. This price should include materials, labor, equipment rentals, and contingency funds. The contract is signed at this stage, locking in terms and payment schedules.

Bottleneck: Pricing Volatility in Metal Components

Given the market fluctuations in steel, some builders hesitate to lock in pricing. Builders may consider clauses for material surcharges or work with suppliers offering guaranteed pricing windows.

7. PROCUREMENT AND SCHEDULING

Once under contract, materials are ordered, subcontractors scheduled, and a project timeline is finalized. For CFS builders, this step includes ordering building kits, trusses, metal roofing, and custom components.

Bottleneck: Long Lead Times on Key Materials

Metal panels, windows, or truss packages often carry longer

lead times than dimensional lumber. Accurate forecasting and buffer periods are essential to avoid job site standstills.

According to Padilla, Callahan Steel Buildings hasn't seen much of a problem with manufacturer lead times. However, they have experienced occasional delays with transportation because of equipment breakdowns and driver shortages.

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8. SITE PREPARATION AND FOUNDATION WORK

Construction officially begins with grading, excavation, and foundation work — whether that's a slab, pier system, or basement. Utility stub-ins may also occur at this stage.

Bottleneck: Foundation Misalignment with Building Package

Metal buildings require precise anchor bolt placement. Errors in foundation layout can result in expensive delays or field fabrication. Using anchor bolt templates and double-checking dimensions against the building supplier's drawings is critical.

9. SHELL CONSTRUCTION AND BUILDING ASSEMBLY

Once the foundation is complete and materials have arrived, builders begin erecting the structure — framing, roofing, siding, and structural components. This phase is often the most visible to the customer and moves quickly when well-coordinated.

Bottleneck: Weather and Crew Scheduling

Rain, snow, or extreme temperatures can halt work and disrupt coordination among crews. Builders should build contingency days into their schedules and maintain communication with subcontractors to adjust efficiently.

In some areas, weather can be a bigger issue than in others. For example, there are areas with heavy clay soil, which can become saturated and unstable when wet. A heavy rain can prevent truck access to a job site, which can delay the job and cause a cascading series of delays down the line.

CFS framing can help reduce vulnerability to weather significantly, however, because it can go up much quicker than wood framing, Lordi explained. "With CFS, you can get up to 1,000 square feet framed up in a day, whereas it could take four or five days with wood." That means the building can be dried in faster. Once that's done, work can progress inside with no concerns about the weather.

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10. INTERIOR BUILDOUT AND FINAL INSPECTIONS

With the shell up, interior work begins: insulation, HVAC, electrical, plumbing, drywall, finishes, and fixtures. Upon completion, the builder schedules final inspections and obtains the certificate of occupancy (CO).

Bottleneck: Lack of Familiarity with CFS, Subcontractor Overlap, and Inspection Failures

When finish subcontractors haven't worked with CFS before, that will slow down the job because of the learning curve. They need to learn how to work with steel framing. The tools they use will be different.

Another bottleneck can occur if work is done out of order. When trades overlap without coordination — such as drywallers starting before electricians finish — rework and delays result.

Similarly, failing inspections due to missed details (like smoke detector placement or stair rail height) can delay occupancy.

CONCLUSION

The design-build process offers a streamlined approach for residential CFS builders, allowing for better communication, accountability, and customer satisfaction. But the efficiencies it promises rely on disciplined planning and proactive mitigation of common bottlenecks.

By breaking the process into these 10 structured steps and understanding the hurdles at each stage, builders can deliver quality homes on time and on budget — even in a challenging construction environment. **MB**

BY METAL BUILDER STAFF

One advantage of the bifold door is the way it opens, lifting straight up and folding in half, instead of swinging in a wide arc out and up in front of the building. This allows for more space in front of the hangar where vehicles and planes can be parked safely, even if the hangar door starts to open. PHOTOS COURTESY OF SCHWEISS DOORS

Pilot Builds Dream Hangar Home

Washington State Airpark Fulfills Ultimate Aviation Lifestyle

Flight always enthralled Lawrence Pavlinovic. His grandfather was a merchant mariner, and his father worked for Pan American Airways (Pan Am), passing along a love of adventure.

"Flying clipper jets around the world is kind of that seafaring adventure transferred over to aviation," Pavlinovic said.

The Schweiss bifold door is 55 feet wide by 21 feet high. The door features the Schweiss automatic strap latch system and an emergency backup hand crank. The metal crank can be attached to the top of the electric door motor, which allows the door to be manually opened or closed if there is a power outage.

Today, Pavlinovic is a captain with Alaska Airlines, flying 737s across the United States, Canada, and to sunny ports of call in Central America. Even in his off hours, Pavlinovic lives and breathes aviation. He owns a Republic Seabee and a Globe Swift. For the last few years, he's called an airpark in northwest Washington State his home. In this unique residential development, homes share space with a small airport. Residents and their guests can taxi planes directly to the runway from their homes.

"It was always a dream, to live in an airpark," Pavlinovic said. "It is a wonderful community."

Pavlinovic and his wife fell in love with the airpark lifestyle. They eventually purchased a parcel at Frontier Airpark, but the property was missing one very important feature — a hangar. Pavlinovic started the process of rectifying that issue, walking the length and the breadth of the park, talking to residents about their hangars, gathering advice and ideas.

"I wanted the biggest possible hangar I could build and afford," he said.

THE PROJECT TEAM

To design the hangar, Pavlinovic hired Thomas Bormann, Principal of Bormann International Inc. in Seattle. An architect with over 35 years of experience in both Germany and the United States, Bormann has done a variety of projects, designing all sorts of buildings, including high-end residences, multi-family homes, and commercial buildings, as well as several specialty projects like retail, equestrian, and security. Pavlinovic offered a new opportunity.

"This was my first hangar," Bormann said. "Number one."

Pavlinovic and Bormann worked together closely to design the hangar, using the feedback Pavlinovic gathered during his conversations with fellow aviators in the airpark.

The project team included general contractor HBHansen; Kingworks Structural Engineers; Omega Engineering; and Nelson Geotechnical Associates.

Living in an airpark is the utmost in convenience for pilots. It allows them to taxi to and from the runway right from the hangar in their home.

THE STRUCTURE

The hangar is a pre-engineered metal building (PEMB), also known as red iron, or structural steel. The sturdy structure is designed to handle the climate and weather conditions, protecting not only his family but his aircraft. Both the red iron frame and the steel siding were supplied by HCI Steel Buildings.

The insulation used to regulate the temperature in the hangar and home is the Simple Saver System by Thermal Design

The hangar home features a red iron frame. Owner Lawrence Pavlinovic worked closely with architect Thomas Bormann, Principal of Bormann International Inc. in Seattle to create a custom design, incorporating feedback Pavlinovic gathered during his conversations with fellow aviators in the airpark.

incorporating Johns Manville insulation. Hangar wall windows were supplied by Milgard.

THE HANGAR DOOR

Since the home also functions as a hangar, choosing a hangar door was an important decision, as the door protects the home and provides an essential structural component.

Pavlinovic and Bormann selected a lift-strap bifold door from Schweiss Doors. The door measures 55 feet wide by 21 feet tall, clad in dark gray metal siding with seven windows. The door features the Schweiss automatic strap latch system and an emergency backup hand crank. The metal crank can be attached to the top of the electric door motor, which allows the door to be manually opened or closed if there is a power outage. A disconnect device prevents the motor from operating when the hand crank is being used.

Another benefit of the bifold door is the way it opens, lifting straight up and folding in half, instead of swinging out to the front of the building when it opens. This allows for more space in front of the hangar where vehicles and planes can be parked safely, even if the hangar door starts to open.

"You don't need this huge space in front of the bifold door," Pavlinovic said. "You're not accidentally lifting cars or especially planes. That would be bad."

THE BEST OF BOTH WORLDS

With the structure complete, the Pavlinovic family can enjoy their airpark hangar home — the best of both worlds — a peaceful retreat in a beautiful setting literally just steps from their aircraft and home airport. That's any pilot's dream come true. **MB**

Lawrence Pavlinovic's Republic Seabee is an amphibious plane, which means it can take off and land on both water and land. With Washington State's abundant lakes, he can leave from his hangar home, visit a lake, and fly back to his hangar home.

Both this Globe Swift and the Republic Seabee fit in Pavlinovic's hangar. In fact, he said it could fit five or six planes, depending on their size.

Today, Pavlinovic is a captain with Alaska Airlines, flying 737s across the United States, Canada, and to sunny ports of call in Central America. Even in his off hours, Pavlinovic lives and breathes aviation and his hangar home embodies that love.

BY DAN BROWNELL

Cutting Metal

Using the Right Tools

Building a high-quality metal building starts with careful planning and coordination with the client, construction crew, and subcontractors. Once the foundation and frame are in place, the metal wall panels and trim will need some field cutting and installation performed with the same level of care. That requires using the right tools and techniques for professional results.

"Installing metal wall panels and related trim requires attention to detail to deliver a weather-resistant and aesthetically pleasing result for the end customer," said Shane Norman, senior product manager at Malco Tools. "Trade pros should master the use of various hand snips, specifically the right cutting and left cutting snips," he added. "Knowing how and when to use which snip will produce the best-looking trim installation and will contribute to the longevity of the building by keeping it as weather tight as possible."

A number of hand and power tools are available to cut metal panels. The best tool to use in each case will vary depending on the application and situation. "Manual hand tools will create a superior finish when it comes to the most detailed work required on the job, specifically all the trim that needs to be installed prior to installing the actual wall panels," Norman said. "Power tools are also an important part of the job to make sure the crew is efficiently cutting the wall panels to the proper lengths and widths (when coming to an end condition like internal or external corners, protrusions on the building, etc.)."

This pair of offset aviation snips made by Malco Tools has handles that are angled up from the cutting surface, allowing more hand clearance and control for more accurate, precise cuts with less hand strain. PHOTO COURTESY OF MALCO TOOLS

HAND TOOLS

Aviation Snips

Aviation snips are manufactured in several common styles, including standard, in which handles are arranged in a straight line with the blades. The straight alignment makes it easier to visually align the scissors with the cutting line, especially for long cuts.

Offset snips feature handles set at an angle to the blades to allow more space between the worker's hand and the metal.

Long-cut snips have longer blades that create longer — and therefore fewer — cuts to reduce hand fatigue.

Most snips are designed for right-handed users, but some companies manufacture snips for left-handers.

Aviation snips are manufactured with industry-standard, color-coded handles to designate left, right, and straight cutting blades. Left-cutting snips have red handles, straight-cutting snips have yellow, and right-cutting blades have green.

The left, right, and straight designation indicates the direction in which they're intended to cut and that the main piece of metal to be cut is on that side and that the waste piece will fall on the opposite side. This is important to understand because if a worker tries to use a red (left-cutting) pair of snips to cut a curved section from a metal piece in a counterclockwise direction (with the main part of the metal on the right of the snips), the blades will bind because the blades are trying to move the main piece as though it's the waste strip.

Guillotine Shears (Bench Shears or Lever Shears)

A guillotine shear is a long, curved blade mounted to a portable bench that resembles an office or school paper cutter. The advantage of the guillotine shear is that it creates long, fast, smooth cuts. Some guillotine blades can be ordered with grooves that match the panel's profile to prevent the blade from deforming the panel as it cuts.

The guillotine shear is either used in-shop for cutting a quantity of metal panels before they're taken on-site for installation, or used to cut panels as they're needed on the jobsite.

POWER TOOLS

Single-Cut Shears

Single-cut shears have a scissors-type mechanism, with a single upper moving blade that slices the metal panel on a stationary lower blade, or anvil. The shears apply pressure unequally to the sides of the cut, creating a slight bending on one side.

Double-Cut Shears

Double-cut shears use two scissors-type blades that each cut a line with equal pressure and remove the thin strip of metal between them. This creates a smoother cut than single-cut shears.

Rotary Cutters

Rotary cutters use a circular blade to slice through the metal for a fast, smooth cut.

Nibblers

Nibblers cut long straight lines quickly but — as their name suggests — they nibble the metal, leaving small crescent-shaped waste pieces. The chips are sharp and can injure workers, scratch metal panels, and find their way into machinery. Although nibblers typically come equipped with chip collection bags, stray metal chips can end up outside the bag.

TOOL APPLICATIONS AND TIPS

"The right tools for the job make all the difference for end results and an efficient workforce," Norman said. "You would not want to use a power shear for intricate trim cuts, and likewise, there are more efficient ways to rip down a 10+-foot panel cut than using a standard hand snip.

"Aviation snips are primarily used for installing all the various trim pieces that go in before putting up the metal wall panels. Internal and external corners require trim pieces to be cut in ways that nest the mating pieces together and prevent water intrusion. The same goes for J-channel around doors and windows, which requires snips for cutting the pieces in a way that gives the best aesthetic and water-resistant install. Left- or right-cutting hand snips are used for detailed cuts, while a faster, more efficient power tool like Malco's TurboShear™ Rotary Panel Cutter, is used to trim the larger wall panels to the proper height or width."

Dyna-Cut's HRB-36 shear is built for speed, precision, and durability. With a single smooth stroke, it cuts full sheets of metal to length. Designed for versatility, it can also make angled cuts (from 3/12 to 5/12 pitch) when equipped with the optional angle blade set. Whether in a shop or on-site, the HRB-36 delivers clean, accurate cuts that save time and boost efficiency. PHOTO COURTESY OF INTEGRITY SALES/DYNA-CUT.

Cutting to Protect Metal from Corrosion

Metal panels are galvanized or coated with Galvalume, which protect the carbon steel core from corrosion. The coating is designed as a sacrificial layer that's consumed rather than the steel. As galvanic action wears down the coating, it covers and seals the edges of the cut steel to halt corrosion. It's a form of self-healing, but it only works when the panel is cleanly sliced so the coating is smeared over the edge. Cutting techniques that diminish the coating or its self-healing properties may void manufacturer panel and paint warranties. The coating can be damaged in a number of ways, such as through abrasion that can cause rough spots or burrs, by creating high temperatures that melt the coating, and by blowing fine metal dust or particles over the panel that can stick and rust. The tools previously described are recommended because they won't cause these problems. "They produce clean cuts that not only protect the metal but also help avoid warranty issues or costly rework," said Nolan Woody, operating partner at Curbed Construction in Chattanooga, Tennessee.

Cutting Tools That Should Not Be Used

There are other cutting tools that should not be used. They include torches, circular saws, cutoff saws, reciprocating saws, grinders, and hacksaws. While they may be faster and save time in the short term, they can create intense heat from friction, generate metal dust, and produce rough edges, all of which can cause permanent damage and lead to high repair costs. "Some, like grinders and cutoff saws, which produce heat and airborne particles, can raise OSHA concerns," Woody added. Builders should read and follow manufacturers' instructions carefully so as not to void any warranties from using the wrong tools.

CONCLUSION

Installing metal trim and panels correctly requires using the right tools. It's critical to follow the metal manufacturer's instructions and rely on the recommended tools to avoid damage to the metal and warranty and callback issues later. MB