

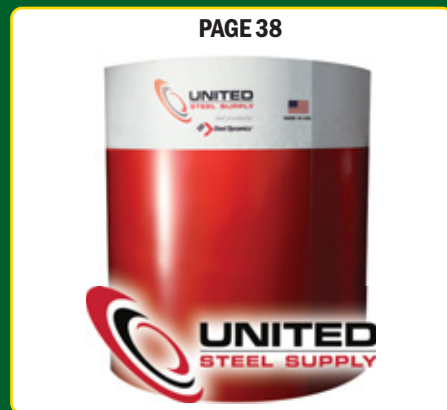
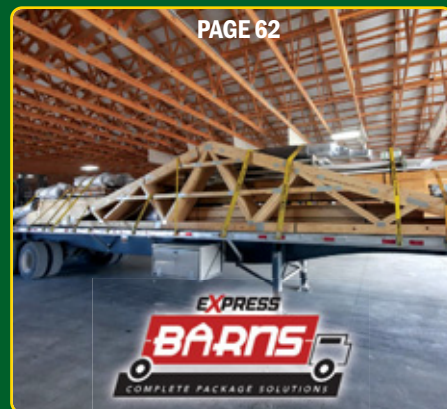
Rural Builder

Serving The Construction Trade Since 1967
www.ruralbuildermagazine.com

JULY 2023
Vol. 57, Issue 4



2023 GOLD KEY AWARD WINNERS



SHOWTIME

Punch Your TicketS to our next EVENTS!

FROM THE PUBLISHER OF ROLLFORMING MAGAZINE



2023
Rollforming Construction Show

SEPTEMBER 27-28, 2023
Duke Energy Center, Cincinnati, OH
constructionrollformingshow.com

ADMIT 1

FROM THE PUBLISHER OF GARAGE, SHED & CARPORT MAGAZINE



2024
GARAGE • SHED • CARPORT
BUILDER SHOW

JANUARY 24-25, 2024
Knoxville Convention Center, Knoxville, TN
garageshedcarportshow.com

ADMIT 1

FROM THE PUBLISHER OF FRAME BUILDING NEWS



2024
POST-FRAME BUILDER SHOW

JUNE 19-20, 2024
Branson Convention Center, Branson, MO
postframebuildershow.com

ADMIT 1

For More Information Contact Missy Beyer:
missy@shieldwallmedia.com • PH 920-216-3007

EDITOR'S NOTE

BY ROCKY LANDSVERK



A Great Opportunity for Our Children

MY WIFE AND I HAVE two children in their late 20s, and like so many parents, we monitor their careers while trying not to give advice, which would be the fastest way to ensure they don't do what we're suggesting. Meanwhile, especially as a magazine editor of a construction magazine and not just as a parent, I see the opportunity for younger people to work in the trades. Younger people who work in the trades are generally happy and successful because a worker with leverage and job security is usually well-paid and satisfied in their work.

It's gratifying to see, then, the young woman working in HVAC (page 6). In coming months and years, her friends in other professions (I won't name any professions lest I insult somebody) are going to be asking her, "umm, you make *how much*?"

I'm currently researching for a future story all the courses and resources available to young people who want to get involved in construction. I'm particularly curious what is going to happen in metal building and its construction, because (opinion only) I believe there must be a solution to the labor shortage and the

affordable-housing challenge, and it might be in fast-rising (low labor cost) metal buildings. The problem will be, of course, that our current workforce will need to learn how to erect metal buildings. Imagine what a young person who becomes familiar with metal buildings, and becomes an expert in utilizing those tools and methods, is going to be worth in the coming decades.

I guess I should stop my preaching for a moment and admit that when I was 20 years old, I didn't exactly choose the hard-work path. I'm "working" by typing on my computer in the air conditioning. But like all open markets, this labor shortage is going to increasingly mean a) increased prices and b) higher salaries. And eventually our youngsters are going to go where the money is. We just won't tell them we think it's a good idea.

Rocky Landsverk,
managing editor
rocky@shieldwallmedia.com

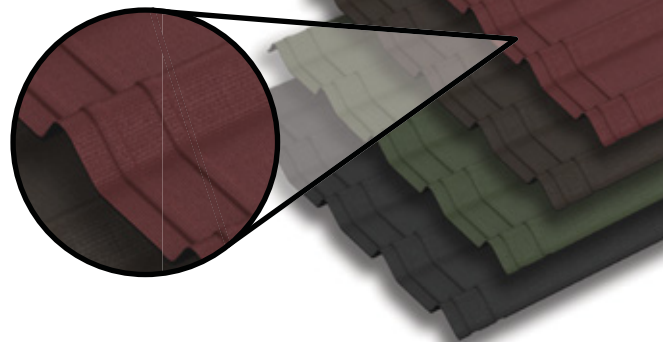
Simplify Your Roofing Project with Onduline!

EASIER INSTALLATION

The embossments featured in the Ondura Premium Series Edge roofing panels act as an installation guide making your projects even quicker and easier than before.



Scan to learn more



ONDURA[®] EDGE
PREMIUM SERIES

For distribution opportunities, orders, and customer service call 540-898-7000 or email us at info@onduline-usa.com



84

CONTENTS

features

- 6 MIKE ROWE FOUNDATION**
Scholarship Winner Loves Her Job in HVAC
- 8 HUGE DECISION**
How to Help a Customer Plan for a Grain Bin
- 12 FROM THE GROUND UP**
How Soil Compaction Affects Foundations
- 16 2021 IBC ANALYSIS**
Changes for Cold-Formed Steel Design
- 19 2023 GOLD KEY WINNERS**
Annual Program Honors Top Suppliers
- 76 DEVELOPING A NEW PRODUCT LINE**
What it Took Plyco to Create the New Victory Vinyl Windows

- 82 FLASHBACK**
A Dream Barn from 1975
- 84 PROJECT OF THE MONTH**
Historic Farmhouse Made Modern



DEPARTMENTS

Editor's Note.....	3
Supplier News.....	72
New Products.....	74
Business Connections.....	78
Construction Survey Insights.....	86

AUGUST PREVIEW

- The 2023 Source Guide will feature more than 40 of the best projects of the past year. To get your project featured, visit ruralbuildermagazine.com.

**GO TO PAGE 15 TO
SUBSCRIBE
TO MORE
FREE MAGAZINES**

YOUR PRIVACY IS IMPORTANT TO US

Unrelated third parties often attempt to sell mailing lists for what they say are our publications. You can be assured that WE DO NOT, HAVE NOT, AND WILL NOT EVER SELL OUR SUBSCRIBER LISTS. We will also NOT sell the attendee or exhibitor lists from our shows. We do provide attendee lists to the exhibitors free of charge and as a courtesy for their support, but we NEVER provide this or any other information to independent vendors.

Gary Reichert,
Publisher, Shield Wall Media

INDEX OF ADVERTISERS

Company	Page #
Acu-Form.....	40, 78
AJ Manufacturing, Inc.....	41
ASC Machine Tools Inc.....	42, 78
Atlas Building Products.....	43
Aztec Washer Company.....	78
BECK America Inc.....	44
Bradbury Group.....	45, 78
Chief Buildings.....	46
Deliverance Powered Safety Hammers LLC.....	78
Direct Metals Inc.....	FC, 47, 78
Dripstop.....	20, 21
Dynamic Fastener.....	22, 23
East Coast Fasteners.....	48
Everlast Roofing, Inc.....	24, 25, 78
Express Barns.....	FC, 62
Golden Rule Fasteners.....	49, 78
Graber Post Buildings, Inc.....	50
GSSI Sealants.....	51
Hershey's Metal Meister.....	FC, 52, 79
Hixwood.....	53
I Beam Sliding Doors.....	79
Janus International Group.....	26, 27
Keymar Manufacturing.....	79
Leland Industries Inc.....	79
Levi's Building Components.....	80
Malco Products.....	28, 29
Marco Industries.....	54
Marion Manufacturing.....	80
Maze Nails.....	30, 31
McElroy Metal.....	55
Metal Exteriors.....	80
Metal Rollforming Systems.....	56
METALCON.....	11
MFM Building Products.....	57
Mill Steel Company.....	58
MWI Components.....	32, 33
Onduline / Tuflex.....	3
Palram Americas.....	59
Perma-Column LLC.....	FC, 60
Pine Hill Trailers.....	80
Planet Saver Industries.....	80
Plyco Corporation.....	34, 35, 80
Post Protector.....	61
RetroFitClip.....	80
rFOIL Reflective Insulation.....	FC, 63
Richland Laminated Columns.....	64
Rigidply Rafters.....	17
Roll Former LLC.....	17
S-5!.....	65
Safe-Way Garage Doors.....	80
SmartBuild LLC.....	79, Flip 2
Snow Stoppers LLC.....	79
Starwood Rafters.....	66
Steel Dynamics.....	36, 37
Stockade Buildings.....	81
Trac-Rite Doors.....	67
Triangle Fastener.....	68
United Steel Supply.....	FC, 38, 39, 79
Universal Tube & Rollform Equipment Company.....	79
Wick Buildings.....	69

Managing Editor

Rocky Landsverk
rocky@shieldwallmedia.com

Editorial Staff

Karen Knapstein, Linda Schmid

Circulation/Subscriptions

Barb Prill
barb@shieldwallmedia.com
920-471-4846

Publisher/CEO

Gary Reichert
gary@shieldwallmedia.com
715-252-6360

Director of Events

Missy Beyer
missy@shieldwallmedia.com
920-216-3007

Executive/Advertising Assistant

Kathy Budsberg
kathy@shieldwallmedia.com

Graphic Designers

Tom Nelsen
Kevin Ulrich

Rural Builder (ISSN: 0888-3025) (Volume 57, Issue 4) is published nine times per year (February, March, May, July, August, September, Annual, October and December) by Shield Wall Media LLC, 150 Depot St., Iola, WI 54945. Periodical postage paid at Iola, WI, and at additional mailing offices. Canadian Agreement Number: 40665675. POSTMASTER: Send address changes to Rural Builder, Barb Prill, PO BOX 255, Iola, WI 54945. Copyright 2023 Shield Wall Media LLC. Rural Builder and its logo are registered trademarks. Other names and logos referred to or displayed in editorial or advertising content may be trademarked or copyright. Rural Builder assumes no responsibility for unsolicited materials sent to it. Publisher and advertisers are not liable for typographical errors that may appear in prices or descriptions in advertisements. Mailed free to rural contractors and their suppliers throughout North America. Others may subscribe: \$29.98 for 1 year, \$55.98 for 2 years, and \$79.98 for 3 years in the U.S.; \$39.98 for 1 year, \$74.98 for 2 years in Canada.



INDUSTRY PARTNERS



e-mail the editor at
rocky@shieldwallmedia.com

Visit our website:

www.ruralbuildermagazine.com



Be Yourself... and Go For It!

This Scholarship Winner Loves Her Job in HVAC and Encourages Women To Join Her

BY LINDA SCHMID

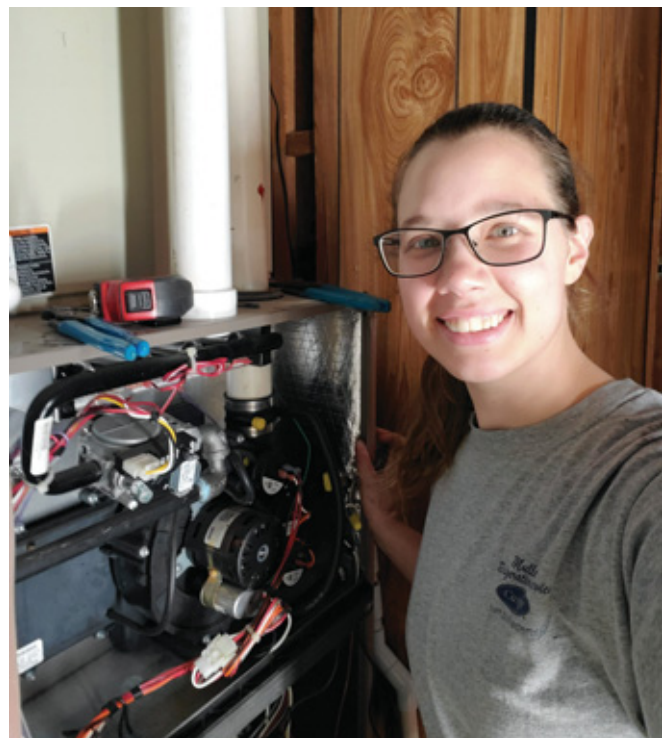
WHEN KRISTEN SUHAN APPLIED FOR the mikeroweWORKS scholarship, she was required to sign the S.W.E.A.T. Pledge. This is a series of statements that promotes the ideals of work ethic, personal responsibility, delayed gratification, and a positive attitude. She was also asked to create a statement of her own to tack onto the pledge. This is what she wrote: “Be original. Be yourself. Most of the population wants to fit in and be like others. That’s not necessarily a problem, however being original, and being yourself, is what makes a person unique. Everyone has their own unique strength or skill that they are really good at ... that is one of the best things someone can do is just be themselves.”

That’s good advice. It’s hard to excel in a career if it is not a fit for who you are.

Suhan didn’t always know exactly who she was or what she wanted. As a kid she was a good student, but she would rather be outside playing softball with her sister, or helping her dad with the yard work. At one point she thought she might work in meteorology; she loved watching the clouds move across the sky, the excitement of a summer storm, and she always wanted to see a tornado. However, chemistry class persuaded her that meteorology wasn’t for her.

She says that her high school teachers kept pushing the idea that all students should have a plan, should know what they wanted to do when they graduated. For the most part, an acceptable plan seemed to require a four-year degree. Suhan said that the option of going into the trades was never even mentioned.

When she graduated, she started working for her grandfather’s and mother’s online store but Suhan didn’t want to make it her career. Luckily her dad, who worked in commercial plumbing, suggested that she check out a trade school. She followed his



advice and found the HVAC program.

At first, Suhan found classes a bit intimidating because practically all of her fellow students were male; she felt everyone was watching everything she did. Eventually, the students got to know each other a bit and they began working together. For the most part, she says, they worked well together, pushing each



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 1,500 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.”

other to do better.

Suhan's mother and her friend found out about the mikeroweWORKS scholarship on Facebook and encouraged her to apply. She hesitated; she didn't think she was good enough to be awarded something like that, but she applied and received it. While she is unsure to this day why she got it, she says it did give her some courage. When others supported her and took her seriously, it made her want it even more; it made her work even harder.

She graduated with an associates degree with a 4.0 grade point average in 2020 and immediately found a job at Mullen Refrigeration Services in Latrobe, Pennsylvania. Best of all, she loves it! New challenges, new equipment, new problems to solve, not to mention contortionists' positions to reach the equipment she is working on ... what's not to love?

Suhan says that there are few women in her chosen field and she encourages other women to try it. She says that there is teasing but it is usually good hearted, and if you don't take it personally and you challenge yourself, you could have a great career! In fact, she believes that there is plenty of opportunity for women in

“Some people think this work is low on the totem pole, but we are providing warm homes; everyone needs a warm home. It's very rewarding work.”

the field because women think differently than men and they complement each other on the job. For instance, she says that the guys are very focused on one thing at a time and she reminds them of other things that need to be attended to, resulting in great teamwork.

“Some people think this work is low on the totem pole, but we are providing warm homes; everyone needs a warm home,” Suhan said. “It's very rewarding work,” she added, “so more girls should go for it!” **RB**





HUGE DECISION

How to Help a Customer Plan for a Grain Bin

THE AMERICAN LANDSCAPE HAS ALWAYS been highlighted by our biggest structures, and typically they've been from our farms. Big red barns, tall concrete silos, and silver cylindrical grain bins made our drives across the country just a little less boring, all the while helping us create affordable food.

Advancements and trends through the years have led to more, and bigger, grain bins. They have been in favor versus silos for decades and just keep getting larger; Sukup has now set the standard twice, building two record-sized bins for Golden Grain Energy. Their diameter is 165 feet (55 yards) and they hold 2.25 million bushels.

As a contractor or developer, you might need to help a client plan for a grain bin. We asked a group of experts on the matter — people who work for grain bin manufacturers — for their advice.

WHAT IS A GRAIN BIN?

A silo is the taller, narrower structure that we all know. They are typically made of concrete and are almost always round. A grain bin is the huge, round metal structure you'll see on modern farms. Silos traditionally hold silage, which is grass or other green and wet fodder, usually for dairy cattle. Grain bins store dry

corn and soybeans, sometimes for domestic use but often for the export market.

About half of all grain is now stored “off farm,” sometimes meaning at a coop or shared structure, and sometimes simply meaning at a massive mega-farm's storage property. “On farm” means it's stored near the place where the animals and people live.

THE BASICS OF A GRAIN BIN

There are a lot of decisions to be made when planning or purchasing a grain bin. There is a lot of machinery involved to move this grain around, both inside and outside the bin, and many companies sell the pieces and parts that will move the grain around. Meanwhile, other companies sell the bin itself, and this article will focus on the decisions involved with planning for the bin.

Keith Timmermeyer works for GMLS Industries from Peabody, Kansas, which makes Golden Grain bins. He said in general, in the southern United States people are looking for storage bins, while drying bins are often built in northern areas. Storage bins will have an aeration floor and a fan. A drying bin will have a heater and a recirculating device, like a “stir-ator.”

He will use criteria like this when deciding how to help a

customer plan for their bin:

- Is this for storage or drying or both?
- Are you feeding out of it? If so, you need an unload auger.
- What crops might go into this? That impacts things like the type of floor.
- Do you want or need modern electronics like Wi-Fi and apps?
- Are you a small farm (by today's standards) or is this a commercial operation?

The type of crop impacts the floor and the equipment you'll put into the bin. Some crops and situations might utilize a 6-inch auger, and others would use 8-inch or 10-inch. Corn, wheat, beans, and similar products would use one type of floor; other grains require a different floor. One expert told us millet "is like pepper and would fall right through" the typical floor.

CHOOSING THE RIGHT BIN

The basic decisions to be made when choosing the right grain bin include what it will be used for. Is it long-term storage or is it a wet tank? A wet tank is a working bin that is constantly being turned. "Wet grain can start a fire," said Shad Singleton, North American Sales Manager for Chief Agri.

Beyond the bin-buying process, there are a lot of equipment options. "You can batch-dry, you can continuously load-dry. You might need an air permit, because you are emitting dust," Singleton said. This article is meant to focus on the first decision — planning for and purchasing the bin.

CHOOSING THE RIGHT SIZE

Grain bins are enormous, of course. That's kind of the point. But how big is too big?

"Larger is not always better but can be more cost-effective," said Randy Coffee, VP of sales & marketing for Superior Grain Equipment. "As a bin gets larger in bushel holding capacity, the cost per bushel to purchase/erect goes down. Planning for expansion is always good practice. Peak heights and centers of bins should be considered as well as uniformity in bin sizing for simplification."

CHOOSING THE LOCATION PART 1: GROUND/FOUNDATION

Choosing the right location comes first, and that decision will be impacted by factors including electrical power availability, the ground's ability to hold a structure this large, and traffic concerns related to not only the size of the bin, but also the trucks and tractors that will be in the area.

The need for a solid foundation is one of the first things that will impact the location of the bin. For large commercial projects, you might be drilling pilings. "Have you done any borings?" Singleton said. "A lot of projects get put on hold because the soil was bad (and couldn't support a huge grain bin)."

For a lot of builders, that means contacting a company like Teracon and sending core samples of the soil. "Based on that core sample, you can get an engineer involved," Singleton said. "You might need something like an over-excavation, or compacted fill, or it might require piling. You hope that a simple soil correction will solve the problem, vs. having to do piling."

CHOOSING THE LOCATION PART 2: TRAFFIC

Most often, the farmer or company involved knows their usage and traffic situation and they simply need to be reminded to consider it. "What is your traffic flow through the farm and



through the commercial elevator?” Singleton said. He said it’s more common than you might think to wind up needing to call the highway department. “You might even have to put a turn lane in off the highway,” he said.

Coffee said to also remember the intra-farm traffic. “You want a site that is easy to get in and out of to maximize efficiency and lessen accidents and bottlenecks,” Coffee said. “You also want the grain flow between receiving and loading out to take the easiest and shortest path.”

“There are towns in North Dakota where the grain elevator requires more power than the entire rest of the town combined.”

Shad Singleton
Chief Agri

CHOOSING THE LOCATION PART 3: POWER

Both Coffee and Singleton strongly suggested that your client figure out how to get three-phase power.

“If a site is limited on power, such as a single-phase application, considerations can be given to a generator setup or talking to the power company about bringing in additional service or possibly a new three-phase service,” Coffee said. “If a site is completely limited, sometimes that may not be the correct site choice.

“Fan sizing is determined by power available but also by proper airflow, which may push you into the dilemma of not having enough power. Some of these decisions are a back-and-forth between what is available and what is the proper way to do it and one selection may hold more weight over another.”

Your equipment is going to include unloaders, fans, exhausters, etc. “Do you have three-phase power? Some farms



don’t have it, and then you’re limited in horsepower,” Singleton said.

So, like the fact that you might be getting the highway department involved because these are so huge that they might require a road to move, you might also wind up calling the power company.

“I’ve seen new substations put in,” Singleton said. “There are towns in North Dakota where the grain elevator requires more power than the entire rest of the town combined. We can tell you the horsepower required.”

OTHER OPTIONS TO CONSIDER

Refurbish or Buy New?

If your customer has purchased a large facility and the bin manufacturer is long gone, do you need to start from scratch, or can you add new rings to make it stronger again?

“Even if a bin has stood with no issues for, say, 40 years and is still sound, you may want to save some money by trying to make it larger,” Coffee said. “Or even when talking about a newer bin, the sheets are usually designed with a weight load based on structural engineering criteria that are not designed to handle just simply adding rings, especially on older bins where you cannot get exact replacement sheets because the manufacturer is out

of business or whatever the case may be. Sometimes the cost factor may just need to be looked at as ‘this bin cost X amount per year for the last X amount of years and it was a great value, but it has reached its end of life.’ The cost of replacing new versus trying to retro the old is, long term, a better strategy.”

Do You Need Wi-Fi?

Timmermeyer is “old school” and serves more traditional farmers — you might call them farmers of the ’70s and ’80s. He readily admits that megafarms and commercial operations will want upgrades like continual-flow dryers, and Wi-Fi that runs apps that can turn on fans and remotely monitor moisture. But he believes those options are often unnecessary.

“If you go to western Kansas, with 8,000 acres, they’re not going to listen to me,” Timmermeyer said, only somewhat jokingly. “They want a continuous flow dryer, so they can keep fewer hands. There are even companies that promote Wi-Fi with apps, to turn off fans, and etc.”

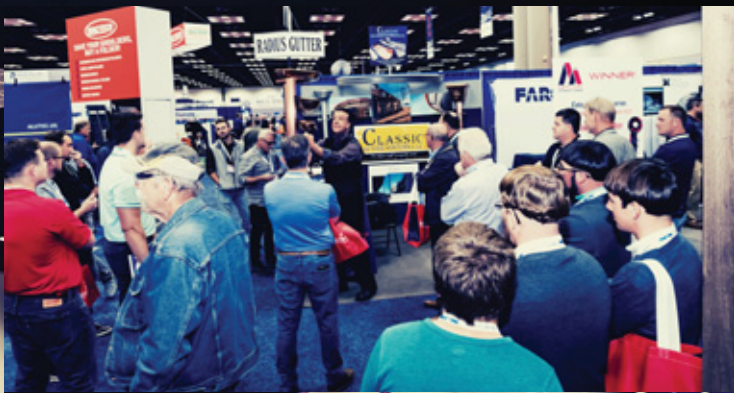
Timmerman is not a big fan of Wi-Fi in part because lightning so often hits grain bins. “A grain bin is the tallest metal structure in an area,” he said. “Through my years, I couldn’t count how many I’ve known that have been hit by lightning.”

RB

REGISTER TODAY!
OCTOBER 18-20, 2023

METALCON

LAS VEGAS CONVENTION CENTER



THE ONLY GLOBAL EVENT DEDICATED TO THE APPLICATION OF METAL IN CONSTRUCTION AND DESIGN
LEARN MORE AT [METALCON.COM](https://www.metalcon.com)

From the Ground Up

How Soil Composition and Compaction Affects Foundations

FOUNDATIONS ARE PROBABLY THE MOST important part of our buildings. We certainly don't want them to shift, settle, or move in any way as this could lead to issues elsewhere in the building. Knowing a bit about your soil and its properties can go a long way to ensuring a strong foundation even when a site investigation isn't required.

Obviously if the building is large enough or the construction type warrants it, you may need someone to come in and take some physical measurements to determine what needs to be done on the site and what type of foundation is required. Outside of that, a little savvy can help make things work better and avoid future problems.

TEXTURE AND MINERALOGY

Soil composition involves a few different factors. First there is the soil's texture, a property related to the distribution of particle sizes, and then there is the mineralogy of the soil clays. Both of these things together can give you a really good idea how that soil will behave. In addition to this, you want to avoid having much if any organic matter in the soil for construction purposes.

The USDA defines soil texture as the proportion of sand, silt, and clay by mass. In an effort to simplify, they further characterize the soil by textural class based on texture as it affects performance and various other properties. There are a few different textural classification schemes that differ slightly on where the boundaries between particle sizes are as well as potentially subdividing sand into subcategories.

LEARNING FROM THE TEXTURE

A few things about a soil's behavior can be determined or at least estimated just from that soil's texture. And, what's more, a trained hand can give you textural class in just a couple of minutes based on how well a moistened soil forms a ball, a ribbon, and the grittiness and smoothness of that same soil when excessively wetted (see the flow chart).

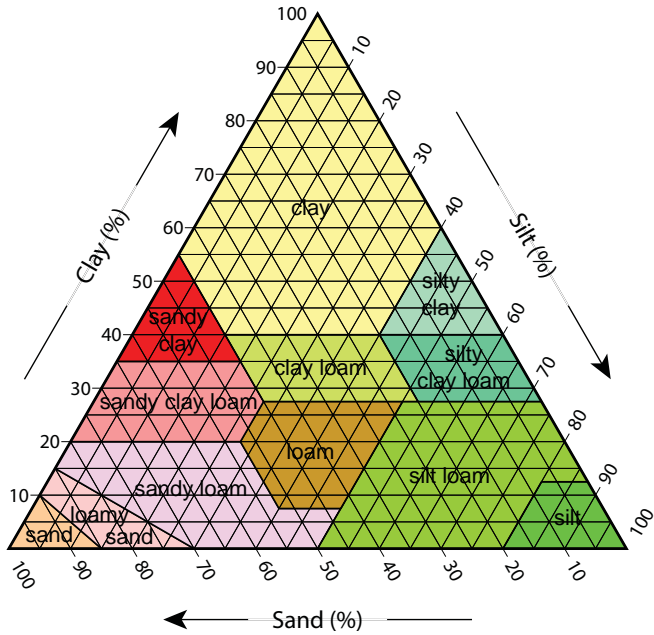
A soil's texture by itself can give you a pretty good idea of how that soil will behave under load. Sand by itself is not very stable under load and can shift. It is an exaggeration, but sand particles are roughly spherical and sort of like glass (they are mostly quartz), so it's a bit like a stack of marbles and you don't really want to build on that.

Silt is similar although much smaller in size and strangely can be quite stable even with steep exposed edges, though it doesn't



compact well. Clay is very sticky and extremely small in size but tends to be easily moldable when wet. The story here is that each of these by themselves are substandard when it comes to creating a stable foundation, but a combination is an entirely different story.

From a physical standpoint, the arrangement of particles within and around each other can approach a tighter packing arrangement with a mixture of sand, silt, and clay. Basically, the smaller particles can fill the spaces between the larger particles, creating more load-bearing points and greater friction within the material. Simultaneously, the clay acts to stick all the other particles together into a bigger unit when compacted. As a result, the loams (sandy loam, silt loam, and loam) and clay loams (sandy clay loam, silty clay loam, and clay loam) are the ideal textural classes for creating strong compacted foundations. To get an idea



USDA Soil Texture Triangle.

of where these textural classes fall in terms of sand silt and clay percentages, take a look at the textural triangle.

CLAY AND ITS PROPERTIES

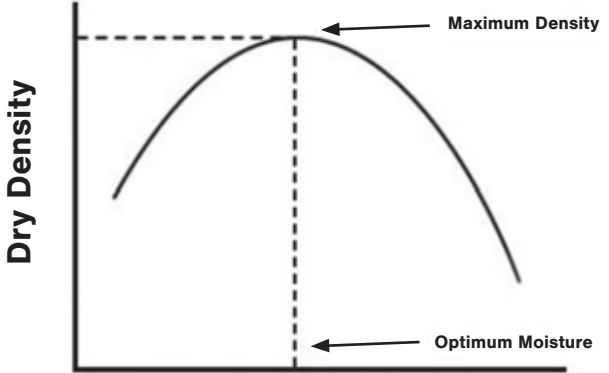
Another consideration is the clay mineral type in your soil. Different clay minerals respond differently to wetting and drying. Some minerals will expand and contract to a large degree and others are quite stable. Obviously the more stable the clay the better, and if there is some shrinking and swelling clay in your soil, then less of it is going to make the soil more stable. The common measurement for shrinking and swelling is called the Coefficient of Linear Extensibility and the measurement is a comparison of the difference between the wetted expanded length and the dry shrunken length to the wetted expanded length of a soil column. Some places in the U.S. do not have much to worry about with this issue and a quick look at a map can help.

Soil texture and clay mineralogy along with many different interpretations are publicly available at the USDA's website "Web Soil Survey" (websoilsurvey.nrcs.usda.gov/app/). This site can help you with some initial investigations about all things soil. It works especially well in rural environments where there hasn't been much previous disturbance or construction.

BULK DENSITY

Beyond the basic and rather unchanging properties of soil texture and clay mineralogy, a soil's bulk density is likely the next most important soil property when it comes to foundations. And it is something that you can change. The numerous types of foundations that can be constructed to support buildings all rely on

Proctor Curve (Moisture Density Curve)



Proctor Compaction Test graphic courtesy of Gilson Co. (globalgilson.com).

the soil being firm enough to bear the applied pressure or load of the building. The key to a soil being able to handle the load is its bulk density.

In short, the soil bulk density is the mass per unit volume of soil, and as this property gets larger in value, the soil is becoming more compact with fewer pore spaces to contain water or air. The higher the bulk density the stronger the soil will be, all other things considered.



Figure 7-18. Estimated location of swelling soils (from Witezak, 1972).

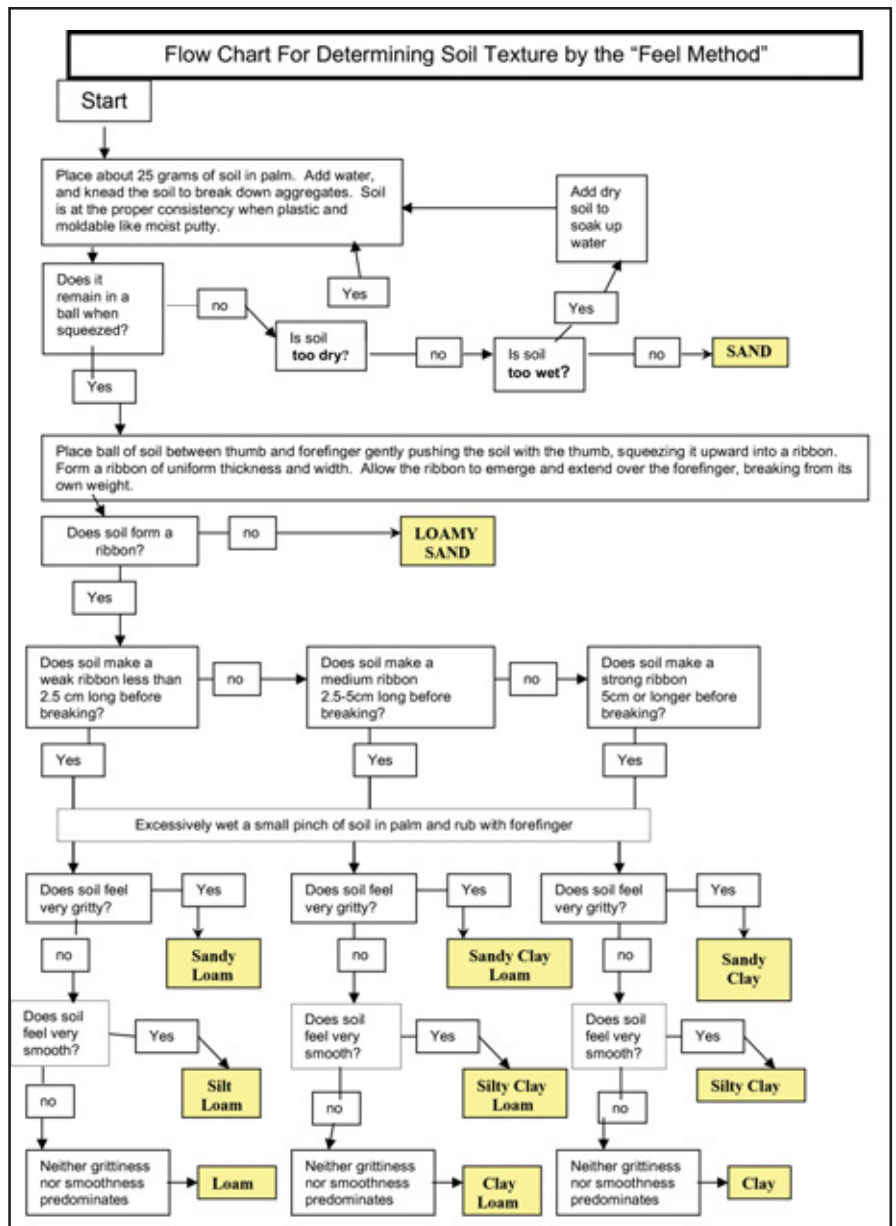
The DOT has charts and graphs to help narrow down your soil types. Search online for "Geotechnical Aspects of Pavements Reference Manual." This diagram is still used today but is from 1972.

COMPACTING FILL

If you need to use fill, then compacting it in place is definitely going to be in order. To do this you will need some water, a load of some kind (dozer or other heavy equipment), and patience. Soil doesn't compact well when dry, but too much water will be a problem as well. A little bit of water will allow soil particles to slip and slide a bit more, thus lubricating their movement as you compress the soil. Too much water and you will squish out the air only to find the water incompressible and supporting some of the load you apply. This will mean that when that soil dries out, it won't be as compact and will potentially shift on you.

A common measurement performed to determine the right amount of water to use for a particular soil is the Proctor Density (or Modified Proctor) measurement. This measurement uses a load approximating that which you will apply with your equipment with different starting moisture contents to determine the optimal soil moisture for your soil to achieve the highest possible bulk density and level of compaction. The patience part comes in to play because soil does not compact well when it is in a thick layer, so you are going to be spreading, most likely, 6-inch layers of soil and compacting them one on top of another to achieve a nice firm fill layer to build on.

All in all, a quick investigation and a little knowledge can help you improve the function of the foundations that you install. And it might even open your eyes to more than you might consider with expanding your soil knowledge. A quick primer on soil color could help you identify the depth of seasonal water tables to help you avoid seasonal flooding issues in basements or partially below grade structures. **RB**



For more titles, check out
Shield Wall Media online:
www.shieldwallmedia.com



SUBSCRIBE NOW!

Shield Wall Media brands are dedicated to serving the information needs of construction professionals.



SUBSCRIBE ONLINE: shieldwallmedia.com/subscribe or fill out & mail form below.



FREE 3-YEAR SUBSCRIPTIONS!

1. Please check one or more boxes, sign & date:

I wish to receive: Metal Roofing Garage, Shed & Carport Builder Metal Builder
 Rural Builder Frame Building News Rollforming Roofing Elements

Signature (REQUIRED): _____ Date: _____

Print Name: _____

Company: _____

Address: _____

City/State/Zip: _____

Phone or Email (REQUIRED): _____

Check this box if you wish to receive the email newsletter associated with the magazine subscription(s) above.

2. Choose which title applies:

- President/Vice President
- Principle/Shareholder
- Sales Manager or Rep
- Foreman/Crew Manager
- Engineer/Architect
- Other: _____

3. Describe your business:

- Builder/Contractor
- Dealer/Distributor
- Manufacturer
- Engineer/Architect
- Other: _____

I would like to receive my subscription:
 By Mail
 Digitally

SWM2023

4. Please check all of the types of building or manufacturing you are involved with:

- | | | | |
|---------------------------------------|--------------------------------------|---|---|
| <input type="checkbox"/> Post Frame | <input type="checkbox"/> Residential | <input type="checkbox"/> Metal Roofing | <input type="checkbox"/> Rollforming |
| <input type="checkbox"/> Metal Frame | <input type="checkbox"/> Commercial | <input type="checkbox"/> Trusses/Columns | <input type="checkbox"/> Trim & Flashings |
| <input type="checkbox"/> Fabric | <input type="checkbox"/> Equine | <input type="checkbox"/> Foundations | <input type="checkbox"/> Insulation/ |
| <input type="checkbox"/> Agricultural | <input type="checkbox"/> Roofing | <input type="checkbox"/> Gutters/Snow Retention | <input type="checkbox"/> Moisture Control |



MAIL TO:
 Shield Wall Media
 ATTN: Barb Prill
 PO Box 255, Iola, WI 54945

BY JEFF ELLIS
 SIMPSON STRONG-TIE
 DIRECTOR OF CODES & COMPLIANCE

2021 IBC Analysis

Changes for Cold-Formed Steel Light-Frame Design



“CHANGE IS THE ONLY CONSTANT in life” and “When you are finished changing, you are finished” are quotes from the ancient Greek philosopher Heraclitus and Benjamin Franklin, respectively. I’m reminded of them as I review the numerous changes to codes and standards during the typical three- to five-year development cycles. While code and standard changes can be challenging to incorporate into our work, they typically offer an improvement or expansion of design and construction solutions.

This article will discuss some of the changes from the 2018 to the 2021 IBC related to cold-formed steel (CFS) light-frame design. Long story short, there are no *major* changes to CFS design provisions from the 2018 to 2021 IBC.

Therefore, in addition to quickly discussing some of the 2015 to 2020 changes,

I’ll discuss a few major changes that occurred from the 2012 editions to the 2015 and 2016 editions of the IBC referenced specifications and standards. Note that the AISI specifications and standards provide a helpful reference in the front portion of the document that summarizes all the changes and additions from the previous edition.

Let’s start by noting the AISI specification and standard editions referenced by the building code. The 2021 IBC references the 2020 editions of the North American Specification for the Design of CFS Structural Members (S100), Standards for CFS Framing (S202, S220, S230, and S240), and Seismic Design of CFS Structural Systems (S400). IBC Section 2210 states that cold-formed steel design is to be per S100 unless it’s for CFS stainless-steel and CFS light-frame construction, which should comply with ASCE 8 and

IBC Section 2211, respectively.

For seismic design, CFS structures are to comply with S100 except when CFS stainless-steel and CFS special-bolted moment frames are used, which should comply with ASCE 8 and AISI S400, respectively. Section 2211 requires CFS light-frame construction to be per AISI S240 and seismic design to be per AISI S400, unless the R-factor is 3 for “Steel systems not specifically designed for seismic resistance,” for which S240 may be used. Note that S240 permits one to use S100 for the design of light-frame construction in lieu of S240. Finally, for prescriptive framing, the 2021 IBC permits the use of AISI S230, Prescriptive Method for One- and Two-Family Dwellings, or the IRC.

Some beneficial changes made to AISI S240 and S400 standards include provisions addressing overdriven screws in wood structural panel (WSP) sheathed shearwalls and diaphragms (S240 C4.1.4); providing a more precise method of determining the expected strength factor to help reduce the demand (S400 E1.3.3,

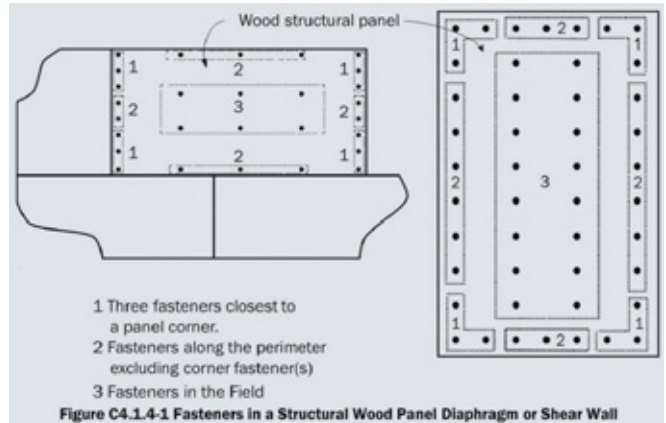
AISI		American Iron and Steel Institute 25 Massachusetts Avenue, NW Suite 800 Washington, DC 20001
AISI S100—16(2020) w/S2—20	North American Specification for the Design of Cold-Formed Steel Structural Members, 2016 Edition (Reaffirmed 2020), with Supplement 2, 2020 Edition	1604.3.3.3, 1905.1.8, 2202.1, 2203.1, 2210.1, 2210.2
AISI S202—20	Code of Standard Practice for Cold-formed Steel Framing, 2020	2211.1.3.1
AISI S220—20	North American Standard for Cold-Formed Steel Nonstructural Framing	2202.1, 2203.1, 2211.2, Table 2506.2, Table 2507.2
AISI S230—2019	Standard for Cold-formed Steel Framing—Prescriptive Method for One- and Two-family Dwellings, 2019	1609.1.1, 1609.1.1.1, 2211.1.2
AISI S240—20	North American Standard for Cold-Formed Steel Structural Framing, 2020	2202.1, 2203.1, 2211.1, 2211.1.1.1, 2211.1.3.3, Table 2506.2, Table 2507.2, Table 2603.12.1, Table 2603.12.2
AISI S400—20	North American Standard for Seismic Design of Cold-formed Steel Structural Systems, 2020	2210.2, 2211.1.1.1, 2211.1.1.2

E2.3.3, and E3.3.3); and adding bare steel deck diaphragm seismic provisions (S400 F3).

OVERDRIVEN SCREWS

The provisions addressing overdriven screws state that screws are overdriven when the head is driven 1/8" below WSP [wood structural panel] 7/16" or greater in thickness, and 1/16" below WSP less than 7/16" in thickness. The provisions state that no strength reduction is necessary when there are no overdriven fasteners in the four corners of the WSP, no more than 10% of perimeter fasteners are overdriven, and no more than 20% of field fasteners are overdriven. A 25% reduction is necessary when there are no overdriven fasteners in the four corners of the WSP, no more than 25% of perimeter fasteners are overdriven, and no more than 50% of field fasteners are overdriven.

The provisions state that an overdriven screw may be removed and replaced with a larger head screw. The S240 and S400 bare steel deck diaphragm provisions reference AISI S100 and S310, Standard for the Design of Profiled Steel Diaphragm Panels. In addition, S400 Section F3.5 provides prescriptive as well as performance-based special seismic detailing criteria for bare steel



The new provisions discuss when to consider a screw overdriven.

deck diaphragms. The prescriptive detailing criteria specify deck dimensions, deck material, deck-to-support connections, structural connections perpendicular and parallel to the steel deck ribs, deck side lap connections, and structural and side lap connection qualification. The performance-based criteria include a

CONTRACTORS...
 now you can perforate your
AG Panels AND FLAT STOCK
 with the **AG PANEL PERFORATOR!**

2023 METAL OF HONOR

- HD Electric - Gearbox Drive
- Four (4) Sets of Perf Dies
- 29 - 26 ga. Steel for AG Panels
- 29 - 24 ga. Steel, .032" Aluminum - Flat Stock

ROLLFORMER.
 CHANGING THE SHAPE OF METAL

Call us today at 215-997-2511
www.rollformerllc.com

TURN YOUR DREAMS INTO REALITY WITH THE NATURAL BEAUTY OF WOOD!

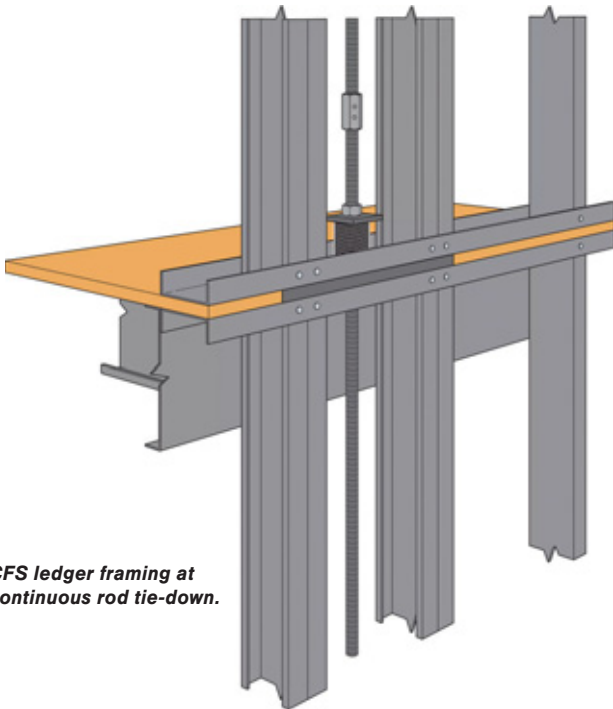
RIGIDPLY RAFTERS INC.

PAVILIONS › ARCHES
 HEAVY TIMBER TRUSSES
 BRIDGES › POSTS › BEAMS

2023 RB

717.866.6581

WWW.RIGIDPLY.COM
 701 E. Linden Street, Richland PA 17087



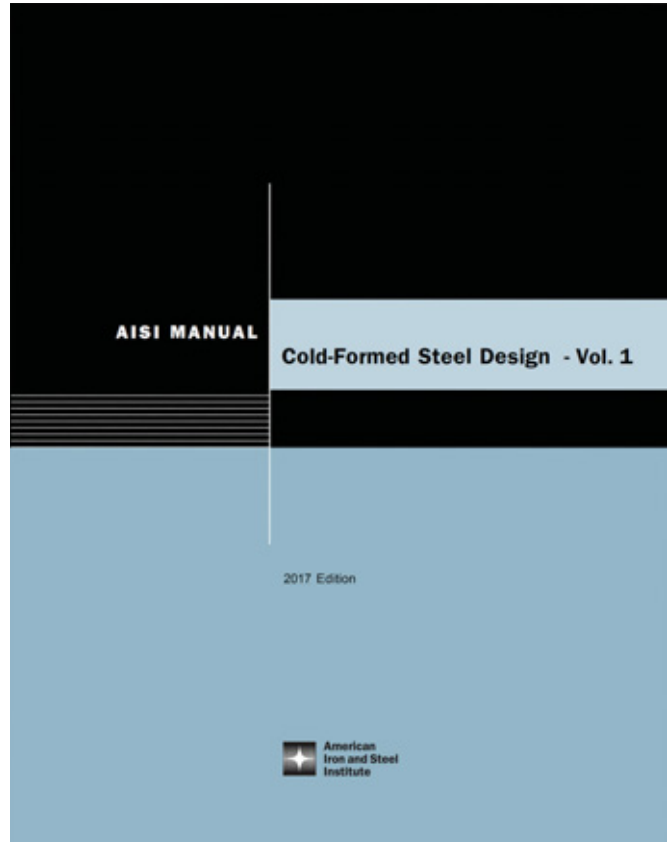
CFS ledger framing at continuous rod tie-down.

qualification by the cantilever diaphragm test method as well as by the principles of mechanics method.

S100 CHANGES FOR CFS

If you haven't performed CFS design since the 2015 IBC, you may be unaware that the S100 standard underwent major reformatting from the 2012 to the 2016 edition, the S240 framing standard consolidated many of the S200-series framing standards, and the S400 seismic standard consolidated the framing lateral design (S213) and special moment frame standards (S110). The new S100-16 format is similar to that used by AISC 360, such as placing connection and joint provisions in chapter J, and most of the specification provisions remained the same as in S100-12. There are no major provision changes from S100-16 to S100-16/S2-20. When major section moves occur in the AISI specification or standards, AISI includes a handy section reference table at the front of the document mapping the changes.

As mentioned above, there were major changes from the 2012 to 2015 editions of the CFS framing and seismic standards, which were adopted by the 2018 IBC. One of them includes requiring that the available strength of capacity-protected components (collectors, chord studs, holdowns, shear and tension anchorage, etc.) be greater than or equal to the required strength, which is the lesser of the expected strength of the seismic-force resisting system or the load determined using the ASCE 7 seismic load combinations with the overstrength factor. Previously, the nominal strength of capacity-protected components was to be greater than or equal to the required strength, which was the lesser of the



maximum the system could deliver or the load determined using the ASCE 7 seismic load combinations with the overstrength factor. Therefore, the seismic demand increased and the capacity of the member considered to resist the demand went down.

There are many great CFS design and construction resources for the structural engineer that include AISI D100-17 CFS Design Manual, D110-16 CFS Framing Design Guide (for S100 and S240), D113-19 Shear Wall Design Guide (for S240 and S400), and the 2021 IBC SEAOC Structural/Seismic Design Manual Vol. 2 Example 3 CFS building design. Helpful industry organization websites for CFS include www.cfsei.org (free electronic specification and standard downloads), www.steel.org (AISI), www.steel framing.org, and www.buildsteel.org.

In addition, Simpson Strong-Tie offers products and software as solutions for CFS design and construction, as well as online training and in-person workshops to facilitate the process and help people create safer and stronger structures. **RB**

Jeff Ellis is a licensed Civil and Structural Engineer who has been with Simpson Strong-Tie since 2000. He is the Director of Codes & Compliance and manages SST's evaluation (code) reports. He has served on several boards and was the primary author of the CFSEI "Cold-Formed Steel Framed Wood Panel or Steel Sheet Sheathed Shear Wall Assemblies Design Guide."

WINNERS OF THE 2023 GOLD KEY OF EXCELLENCE AWARDS

YOUR COMPANY'S SUCCESS DEPENDS ON YOUR TIMELY PROJECT COMPLETION... YOU NEED SUPPLIERS WITH QUALITY SERVICE AND PRODUCTS!

Knowing who you can turn to is the motive behind Rural Builders annual Gold Key program. From the very beginning, in 1983, we were going directly to users to ask for their feedback regarding which companies were doing the best job of providing the best products, the best services, and at the best prices.

Originally, we could only rely on feedback through the U.S. Postal Service. Now, in addition to "snail mail," we also use online voting and email voting to get our results.

This year, four companies join the "Gold Key Club" with their first-ever award: AceClamp, Golden Rule Fasteners, Malco Products,

and Mid South Aluminum. PLUS, this year's honorary Gold Key of Service is awarded to the Mike Rowe Works organization, which is a scholarship program for young people looking to work in construction.

See yet another example of their great work earlier in this magazine.

Learn more on the pages ahead as many of the companies share additional information about their products and services. In each case, the number of gold keys won correspond to the number of years the company has received the award.



CONGRATULATIONS to this year's winners!

41 GOLD KEYS

Plyco Corporation

40 GOLD KEYS

Maze Nails

39 GOLD KEYS

McElroy Metal
Wick Buildings

37 GOLD KEYS

A.J. Manufacturing

35 GOLD KEYS

Dynamic Fastener

32 GOLD KEYS

Rigidply Rafters

22 GOLD KEYS

Leland Industries
Stockade Buildings

21 GOLD KEYS

Everlast Roofing Inc.
Graber Post Buildings, Inc.
MWI Components

20 GOLD KEYS

Palram Americas

17 GOLD KEYS

Atlas Building Products
Marco Industries
ST Fastening Systems
Triangle Fastener Corporation

15 GOLD KEYS

Starwood Rafters

14 GOLD KEYS

Chief Buildings
Levi's Building Components
Sherwin-Williams Coil Coatings

13 GOLD KEYS

Richland Laminated Columns

12 GOLD KEYS

AkzoNobel Coatings
Perma-Column, LLC

11 GOLD KEYS

Mill Steel Company

10 GOLD KEYS

Bradbury Group
S-5!
Steel Dynamics
Varco Pruden Buildings

9 GOLD KEYS

Direct Metals Inc.
Fasteners Direct
MFM Building Products
Post Protector

8 GOLD KEYS

Hershey's the Metal Meister
rFoil Insulation Products

6 GOLD KEYS

Metal Rollforming Systems
Trac-Rite Doors

5 GOLD KEYS

ASC Machine Tools
Dripstop®
East Coast Fasteners
United Steel Supply

4 GOLD KEYS

Acu-Form

3 GOLD KEYS

FootingPad
Petersen (PAC-CLAD)
Reed's Metals
Union Corrugating Co.

2 GOLD KEYS

Beck America
Express Barns
GSSI Sealants
Hixwood
Janus International

1 GOLD KEY

AceClamp
Golden Rule Fasteners
Malco Products
Mid South Aluminum



DRIPSTOP®

WEBSITE: www.dripstop.com

PHONE: 937-660-6646



Condensation control

Efficient solution, protects belongings and structures



Corrosion-resistant

Ensures longevity and durability



Maintenance free

No need for constant upkeep



Saves time and money

Cost-effective, no paying to install insulation

We want to thank the builders, the contractors, and their customers for the continued trust and support they have shown in **DRIPSTOP®**.

As a builder or building owner, have you thought or received a call stating, **“It’s raining inside my building!”**

It is probably condensation. Once the building is up, the remedies are fewer, less effective, and more expensive. **THE KEY IS** to install panels with a condensation control membrane like **DRIPSTOP®** during construction.

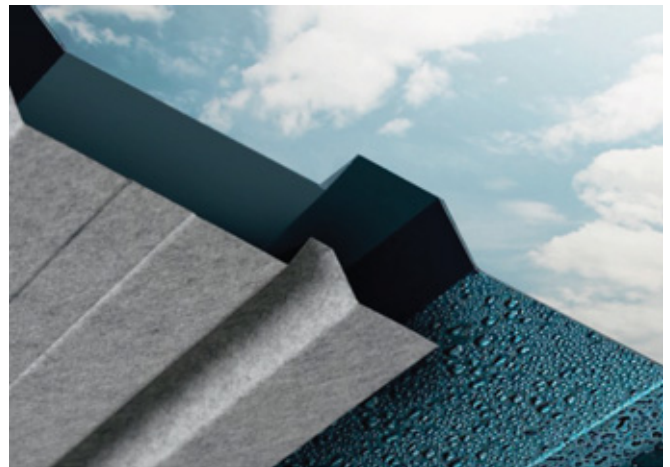
The reason your customers might not think about condensation until it’s too late is ... *They cannot see it, touch it, or feel it, until it is already a problem.* Understanding what causes condensation and the solution for it can be confusing. However, builders who educate their customers about condensation at the beginning of the construction process can avoid those angry phone calls or concerns.

What is Condensation and where does it come from?

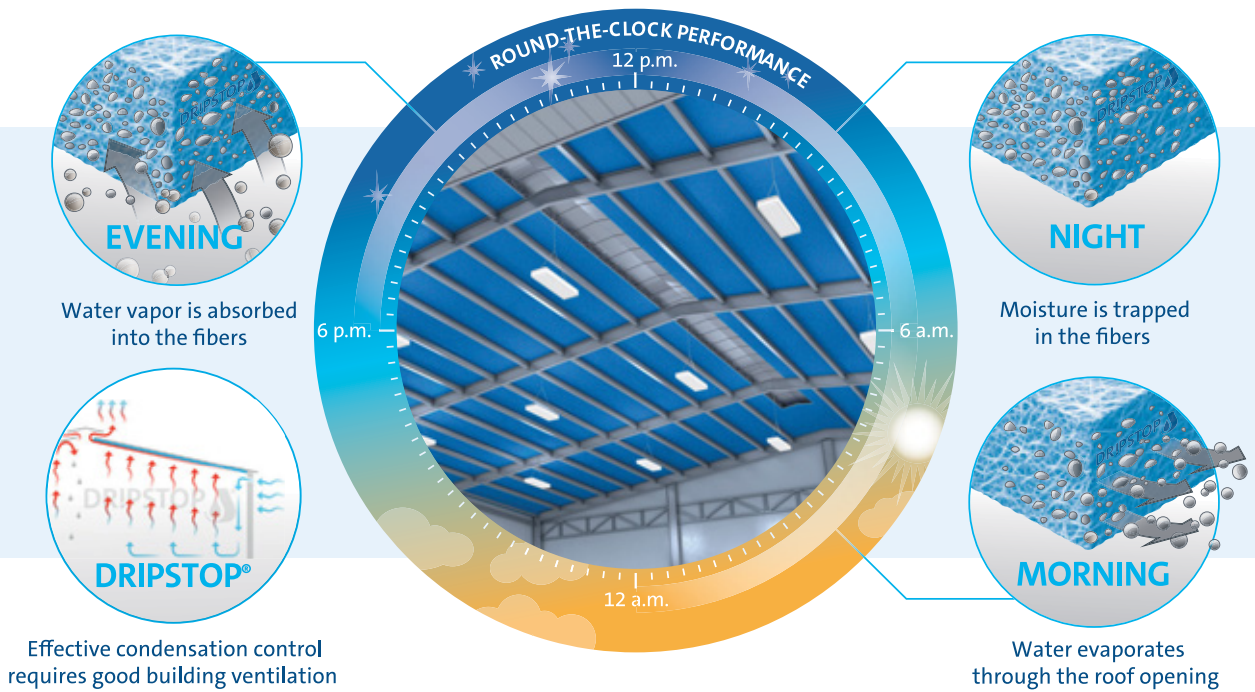
Moisture is in the air all around us almost always. Under the right conditions, that moist air can change its physical form from a gas to a liquid. Just like a glass of ice water sweats and leaves a ring on the table in the summer, bare Metal Roofing sweats under similar conditions. This is a simple fact of science, and it happens when warm, wet air meets a cold solid surface, then water droplets form, or condensate appears. It is almost unavoidable in most parts of the country due to seasonal climate and temperature changes.

Can it be stopped or prevented?

Traditionally a layer of insulation has been used to prevent the warm moist air from reaching the cold metal panels. More recently builders have found a new and different way to “control” the condensation; using a felt membrane to “catch” the moisture as it forms overnight, and then “release it” as the sun and air moves across the metal roofing panels during the day.

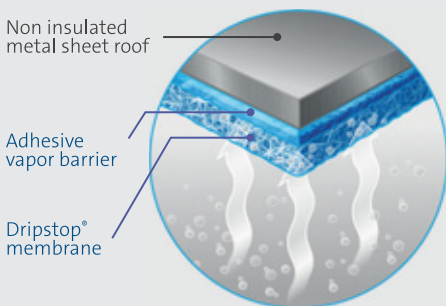


While insulation can be an effective solution, especially when installed to specifications; a condensation control membrane, like **DRIPSTOP®**, offers numerous advantages for both the builders and building owners. As the building is erected, **DRIPSTOP®** arrives already installed on the metal panels, there is no time spent installing insulation. This increases job-site safety for the builder by eliminating blind steps to purlins covered with insulation. It also saves the time typically spent tacking that insulation down to the purlins. Since no insulation is being used, windy days become much less of a challenge. Once the building is complete and properly vented, birds will not peck holes, the **DRIPSTOP®** will not sag or come down, and it will not require cleaning or maintenance; it is virtually worry-free. **DRIPSTOP®** can help protect the steel from corrosion with its specially designed adhesive barrier. There is no reason why a properly installed and vented metal roof with **DRIPSTOP®** will not look and act the same 20+ years down the road! **RB**



A Necessity for Any Metal Roofed Building That is Not Climate Controlled.

- Post Frame/agricultural buildings
- Steel buildings
- Self-storage
- Workshops/unattached garages
- Open-walled structures
- Carports, truck ports & RV storage



Better Science Equals Drier Buildings

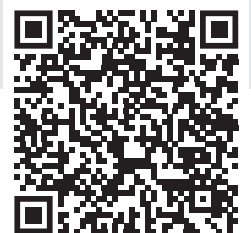
When condensation occurs, moisture gets stored in the specially designed pockets of the Dripstop® membrane.

- Helps fight corrosion in livestock confinement
- Arrives on-site already on roof panels
- Cuts construction time in half
- Saves money

Fight Condensation Without Insulation

Ask for it from your preferred steel panel supplier

Write to us info@dripstop.com or call us at: 1-(937) 660-6646



Get more information

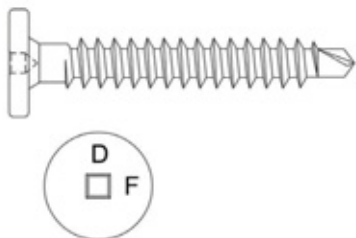
DYNAMIC FASTENER

DYNAMIC FASTENER

WEBSITE: www.DynamicFastener.com **PHONE:** 800-821-5448

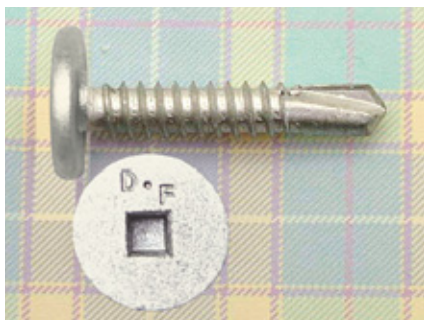
Dynamic Fastener has the most complete line of #14 diameter clip screws/purlin fasteners. They feature a low-profile square drive head and come standard with the exclusive Dyna-Coat® 1,000-hour salt spray premium coating.

Dynamic Fastener is proud to offer the following.



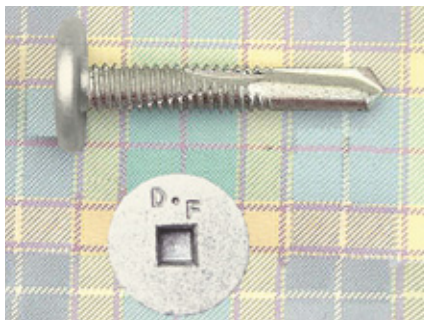
CST1: To fasten into wood, concrete, or metal .024" to .095" thickness. T-1. #14 diameter. 13 TPI. Features asymmetric buttress threads. #2 square drive. Low clearance, 1/2" O.D. head.

Choose: 3/4", 1 1/4", 2", 3", 4", 5", 6", 8" or 10".



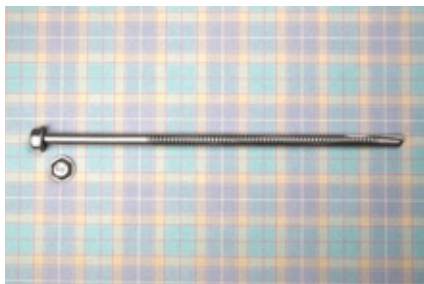
CST3: To fasten into metal .036" to .250" thickness. T-3. #14 diameter. 14 TPI. #3 square drive. Low clearance, extra wide 5/8" O.D. head provides greater bearing area that is useful when attaching standing seam clips or structural insulated panels (SIPs) or insulated metal panels (IMPs).

Choose: 3/4", 1 1/4", 2", 3", 4", 5", 6", 8", or 10".



CST5: To fasten into metal .250" to .625" thickness. T-5. #14 diameter. 20 TPI. #3 square drive. Low clearance, extra wide 5/8" O.D. head provides greater bearing area that is useful when attaching standing seam clips or structural insulated panels (SIPs) or insulated metal panels (IMPs).

Choose: 1 1/4", 2", 3", 4", 5", 6", 8" or 10".



The #14 diameter **Purlin Fasteners** have a 3/8" HWH for most efficient installation of the screws. Install thru insulated panels or for retro-fit roofing. #14 diameter 14 TPI fastens to .036" to .375" total steel thickness at connection. **Dyna-Coat®** 1,000 hour salt spray premium coating. Choose 7" or 10" length.

CATALOG

Dynamic Fastener's free 140-page

2023 TOOL & FASTENER HAND GUIDE

Over 99% of standard orders received by 4:00 p.m. CST will ship that same day!

KANSAS CITY 901 E. 13th St. Kansas, MO 64106 816-252-8888 816-864-1188 816-821-5448	CHICAGO 2075 W. LaGrange St. Chicago, IL 60648 708-515-1401 708-515-1401	HOUSTON 1414 Bloomington St. Houston, TX 77004 713-647-8888 713-647-8888 800-821-5448	LAS VEGAS 6022 Dean Martin Dr. Ste 1 Las Vegas, NV 89118 702-588-0000 702-588-0015 800-821-5448	MEMPHIS 3750 Cherry Rd. Memphis, TN 38118 901-368-8888 901-368-0015 800-821-5448	ST. LOUIS 12880 Partridge Rd. St. Louis, MO 63141 314-728-9111 314-728-8888 816-444-1124 816-444-0015	ST. PAUL 2116 Franklin Rd. St. Paul, MN 55114 651-444-1124 651-444-0015 800-821-5448
---	---	---	---	--	--	--

Includes: **Dyna-Guard®** Snow Retention for Metal Roofs, **Dyna-Clamps®**, **D•F®** ultra-precision hex screws, **D•F®** DYNACLAMPS®, **D•F®** DYNACLAMPS® SH, **D•F®** DYNACLAMPS® SH, **D•F®** DYNACLAMPS® SH, **D•F®** DYNACLAMPS® SH.

PRICES GUARANTEED UNTIL MARCH 31, 2024 OR WHILE SUPPLY LASTS. SUBJECT TO CHANGE WITHOUT NOTICE.
(800) 821-5448 Order online @ www.dynamicfastener.com
 © Copyright 2022 D.F.F.

full-color Tool and Fastener Hand Guide covers fastener applications, engineering data, availability of types, size ranges and fastener materials.

The Hand Guide also features Dynamic Fastener's flagship products: **D•F®** screws, **Dyna-Guard®** snow retention system for metal roofs, **Dyna-Clamps®** to accommodate many different profiles of standing seam roofs and 145 million **D•F®** rivets in stock, of which over 100 million are pre-painted and stocked in bags of 250 pieces.

In addition to discussing screws and anchors, the guide provides prices and other information relating to flashings, sealants, insulation tapes, safety equipment, hand tools, power tools and more. **RB**

LOCATIONS:

- Kansas City, MO
- Chicago, IL
- Houston, TX
- Las Vegas, NV
- Memphis, TN
- St. Louis, MO
- St. Paul, MN

DYNAMIC FASTENER

Everything for the Metal Builder & Roofer®

2023 TOOL & FASTENER HAND GUIDE

Over 99% of standard orders received by 4:00 p.m. CST will ship that *same day!*

MAIN OFFICE	KANSAS CITY	CHICAGO	HOUSTON	LAS VEGAS	MEMPHIS	ST. LOUIS	ST. PAUL
9911 E. 53rd St. Raytown, MO 64133 816-358-9898 Local 800-844-1199 Fax 800-821-5448 Ntl	2575 W. LeMoyné St. Melrose Park, IL 60160 708-615-1450 Local 708-615-1451 Fax 800-573-7787 Ntl	1414 Brittmoore Rd. Houston, TX 77043 713-647-8665 Local 713-647-8635 Fax 800-988-5490 Ntl	6455 Dean Martin Dr. Ste J Las Vegas, NV 89118 702-566-1555 Local 702-566-0175 Fax 866-936-8665 Ntl	3700 Cherry Rd. Memphis, TN 38118 901-369-8000 Local 901-369-0105 Fax 800-727-0288 Ntl	12800 Pennridge Dr. Bridgeton, MO 63044 314-739-8771 Local 314-739-8691 Fax 800-444-0515 Ntl	2316 Territorial Rd. St. Paul, MN 55114 651-644-1212 Local 651-644-1124 Fax 800-755-2426 Ntl	



DEWALT

ALMOST FREE TOOL

DCF887P1 **\$219.95** PG. 22



Milwaukee

18V 1/4" hex impacting screwdriver kit with **FREE** 40-pcs bit set

2850-21P **Call** PG. 28



D•F® DYNA-FLASH®

#3 10+ **\$6.63** PG. 61-63



DYNA-GUARD®

D•F® SNOW RETENTION FOR METAL ROOFS

PG. 66-69



leaky metal roof?

D•F® DROP-STOP®

PG. 56, 57



D•F® DYNA-CLAMPS®

DC-U 600+ **\$5.95** PG. 68



With **Dyna-Coat®**

D•F® SELFDRILLERS PG. 74-83



D•F® ultra-premium impact-tested™ nut runners

With Mag 10 **\$3.25**
5/16 x 2-9/16" 100 **\$2.30** PG. 52



D•F® RIVET BOSS®

PG. 92, 93

PRICES GUARANTEED UNTIL MARCH 31, **2024** OR WHILE SUPPLY LASTS - SUBJECT TO CHANGE WITHOUT NOTICE

(800) 821-5448 Order online @ www.dynamicfastener.com

© Copyright 2023 D.F.S.



Call 800-821-5448 for your **FREE** 140 pg 2023 Hand Guide



EVERLAST ROOFING SYSTEMS

WEBSITE: www.everlastroofing.com **PHONE:** 888-339-0059



When choosing a metal roofing supplier, it's essential to consider all the details and a manufacturer that values them, from the quality of the metal to the packaging of products.

Start with the Everlast II® OMNI panel, a perfect option for roofing and siding. With superior thickness (.017) and AZM™ technology, the OMNI panel provides excellent resistance against corrosion. Coated with their proprietary paint system tested in some of the world's harshest regions, Synergy™ gives resistance against weather and UV exposure. Roll formed using the state-of-the-art Evercure® process, the heat-forming virtually eliminates crazing and micro-fracturing, which is a leading cause of premature rust. In addition, the tooling incorporating the deep antisiphon groove promotes better water drainage protecting against leaks, while the application of CECI™ quietly protects the cut edge, effectively decreasing the corrosion rate.

W-LOC, a double 6" V-groove soffit, will enhance any builder's appearance and add value while offering freedom from maintenance and painting. Providing 12" coverage and 11% net-free area, this soffit in a .019 aluminum is available in all Synergy™ colors to match your panel.

Are you having difficulty finding a fastener that will perform at the same quality level as an Everlast Roofing product? Developed to offer a long-life solution over standard fasteners, Everlast Roofing provides the TA® "The Answer" RDP woodscrew. It is manufactured with #10 Hi-Lo threads and a long-life cross alloy with additional layers of a ceramic anti-corrosion coating, reducing drill time. Combining this with an extra UV-resistant pigment makes the fastener the highest quality on the market.

Continuing to eliminate the many challenges of finding quality building products, Everlast Roofing produces a Universal Ridge Vent Foam, an easy-to-install, UV-stable, reliable fire-retardant product.

Need gutter coil or accessories to match your project? Everlast Roofing will soon offer 15" and 11.75" gutter coils in aluminum and steel substrates with a full line of accessories.

Dedicated to ensuring the highest quality metal roofing products and accessories, Everlast Roofing performs a range of tests to evaluate the quality and performance of its products. Conducting these rigorous tests ensures the products will deliver long-lasting, excellent performance.

Developing customer relationships based on trust and dedication, Everlast Roofing knows that quality packaging is as crucial for your project as the products inside. Your high-quality roofing products will deliver with the highest packaging standards.

When the Everlast Roofing truck delivers, you can rest assured that no detail has been overlooked. **RB**

IT'S ALL IN THE DETAILS...

ALSO AVAILABLE

Polycarbonate Panels
Polycarbonate Ridge Caps
Polycarbonate Flat Sheets
Steel Flat Sheets

LONG LASTING FASTENER



- Cross alloy mechanical plating
- #10 Hi-Lo threads
- Extra UV resistant pigment
- Highest quality on the market

UNIVERSAL RIDGE VENT FOAM



- Fire retardant / UV stable
- Attached glue strip

EVERLAST II™ OMNI PANEL



- 27 Gauge
- AZM™ Substrate
- Deep Antisiphon Groove
- Synergy® Paint System
- Heat Forming
- CEC™

W-LOC SOFFIT



- .019 Aluminum
- 12" Coverage
- Synergy® Paint System
- 11% Net Free Area

GUTTER COIL & ACCESSORIES



- 15" & 11.75"
- 300# - No Core
- Downspouts, Elbows & Gutter Accessories
- Synergy® Paint System



Everlast Roofing, Inc. takes pride in developing and manufacturing the highest quality roofing products. We value the customer relationships earned on trust and dedication to deliver long-lasting, excellent performance. When choosing your metal roofing supplier, choose Everlast Roofing, Inc., where every detail counts.

EVERLASTROOFING.COM | 888.339.0059



JANUS INTERNATIONAL

WEBSITE: www.janusintl.com **PHONE:** 770-562-2850 **FAX:** 770-562-1991

Janus International, a leader in the self-storage, industrial, and commercial door industries, has grown significantly over the past two decades. Founder David Curtis started Janus International in 2002 with just 18 employees and his 3rd Generation steel roll-up door. He engineered this door as a maintenance-free dead axle design that eventually would set the bar for superior manufacturing.

Fast forward 21 years, Janus International is now a global company recognized for more than roll-up doors. Their products and services include facility maintenance and improvement services, relocatable storage units, door replacement and self-storage restoration services, and facility automation solutions.

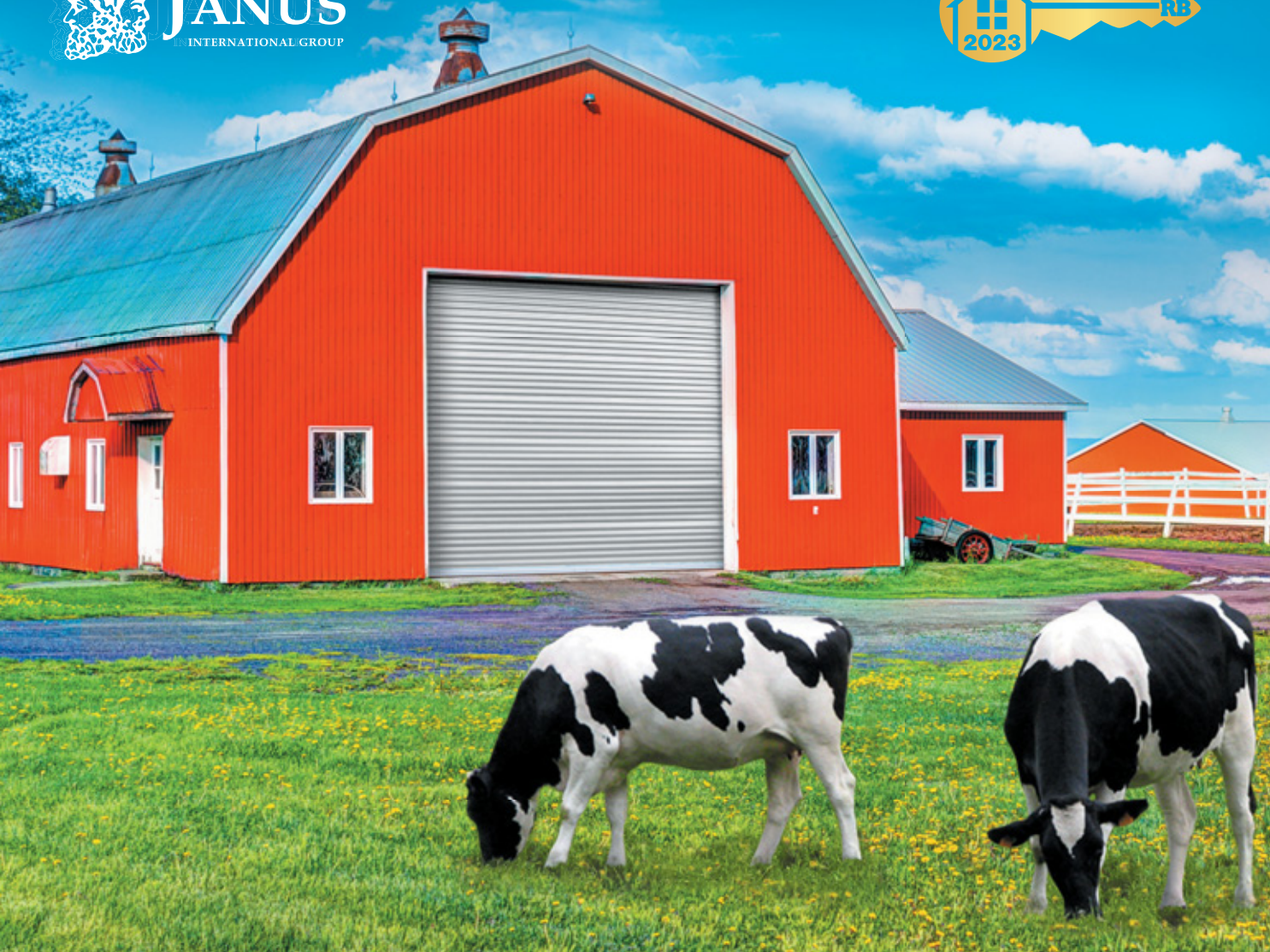
Today, Janus has 1,658 full-time employees, more than 10,000 active customers, and has a presence in the UK, France, Australia, and Singapore. Janus has been listed multiple times in Inc. 5000's annual ranking, "Fastest Growing Companies." Inside Self-Storage (ISS) has recognized Janus with the ISS Best Self-Storage Door 13 times, and as a 10-Time winner for ISS Best Retrofitting/Refurbishing. Innovation and technology fuel advancements with products like their award-winning line from Nokē Smart Entry. This year Janus introduced the addition of Nokē Contact, an on-door, contact-charged, hardwired smart lock. Nokē Contact fits directly onto the unit door with the industry's most innovative, yet simplified design.

When it comes to self-storage doors, Janus offers a full line of roll-up and swing storage unit doors in varying sizes for all types of self-storage facilities. Janus offers every model and size for commercial doors with over 30 colors options to customize your roll-up door selection.

When you partner with Janus International, you partner with a company that takes your business seriously. Roll with Janus because quality and expert customer service are what we do best.

RB





KEEPIN' IT RURAL

WITH DOORS THAT WON'T STEER YOU WRONG

You don't need to live high on the hog to afford the best barn doors. Janus International's American-made roll-up doors outlast the competition, saving farmers money on costly repairs and maintenance. With spiral barrels providing superior strength, tension holding devices, and factory lubricated springs for protection and smooth operation, Janus doors are built to last.

Janus doors are so tough, they'll be working until the cows come home.

JanusIntl.com



To learn more about **JANUS DOORS**,
scan here or call **770-629-9313**.





MALCO PRODUCTS

WEBSITE: www.malcotools.com

PHONE: 320-274-7387

Malco Products is a 70+ year leading developer and manufacturer of high-quality, innovative tools for the building trades that sets the standard for efficiency, quality, and safety.

Malco offers a variety of versatile and built-tough tools for rural builders, including its new line of premium metal-bending products for roofing and flashing. The line is designed with trade professionals in mind and with one goal — making jobs faster and easier.



METAL BENDERS

Metal Benders by Malco are the first product available in the company's new line of metal roofing tools. With the ability to form 0°-100° bends on straight or curved panels of any length on the jobsite, this tool allows trade pros to get the job done more efficiently, eliminating the need to wait on wholesale rollformers. Metal Benders by Malco are designed for bends on flashing, roofing details, standing seam and exposed fastener metal roofing.

Narrow bearing stance models follow curved panels easily or form straight bends when needed, and wide bearing stance models provide more control for straighter bends. Both variations may be paired with a connector for a modular experience, allowing trade pros to “freestyle” their set-up, in a one or two station configuration.

Additionally, the benders allow for flexibility on the jobsite by allowing the user to adjust the rollers for different thicknesses and materials. The rollers can be customized by replacing the angled roller with the optional 2mm radius roller to allow for “softer” bends for materials like copper, zinc, and aluminum which can have problems with tighter bends.

Metal Benders by Malco also include exclusive features like the angled roller to avoid scratching the material on a 90° bend — something most current benders on the market don't have.

Malco's Metal Benders are made with premium components,

offer quick setup, and are lightweight and highly portable, with a removable handle for compact storage.

With the growth of rural building, trade pros need quality tools that get jobs done efficiently, without sacrificing quality or safety. That's why Malco is focused on providing innovative, specialized solutions for the industry. **RB**

For more information, visit www.malcotools.com.





Gold Key of Excellence
Award Winner

A BETTER BRAND OF BENDER.

Introducing Malco's Metal Benders. The latest in a long line of Damn Good Tools.

Metal Benders by Malco® will quickly become your jobsite go-to. Durable, precise and versatile, Malco's modular metal benders are built tough for bending brilliance on metal roofing and details, as well as flashing. These modular bending tools can be customized on the jobsite, allowing you to "freestyle" your set-up in a one or two station configurations to get the job done efficiently.

- Form 0-100° bends on straight or curved panels of any length.
- Choose from narrow stance for tighter, more detailed bends, or wide stance for making long straight bends.
- Easily reconfigured on the job, adjusts for different thicknesses and materials.
- Angled roller eliminates scratches on 90° bends
- Made with premium CNC aluminum and stainless-steel components.

 **Damn Good Tools.**
bendersbymalco.com



MAZE NAILS

WEBSITE: www.mazenails.com

PHONE: 800-435-5949

FAX: 815-223-7585

A-Maze-ing Longevity: Company Nails a 175-year Milestone

Just 30 years after Illinois became a state, Samuel Maze started his lumber company along the Illinois River. It eventually grew to include making the nation's largest selection of Specialty Nails.

To this day, Maze's company is still going strong. Maze Lumber is the state's oldest lumberyard, Samuel's great-great-grandson, Roelif Loveland, is president of Maze Nails, and Maze Company proudly

celebrates its 175th anniversary this year. "We have been blessed with many generations of great associates — both non-family and family employees," Loveland said. "A huge part of longevity is having

W. H. Maze Company



Illinois-Michigan Canal completed - dug primarily by Irish immigrants



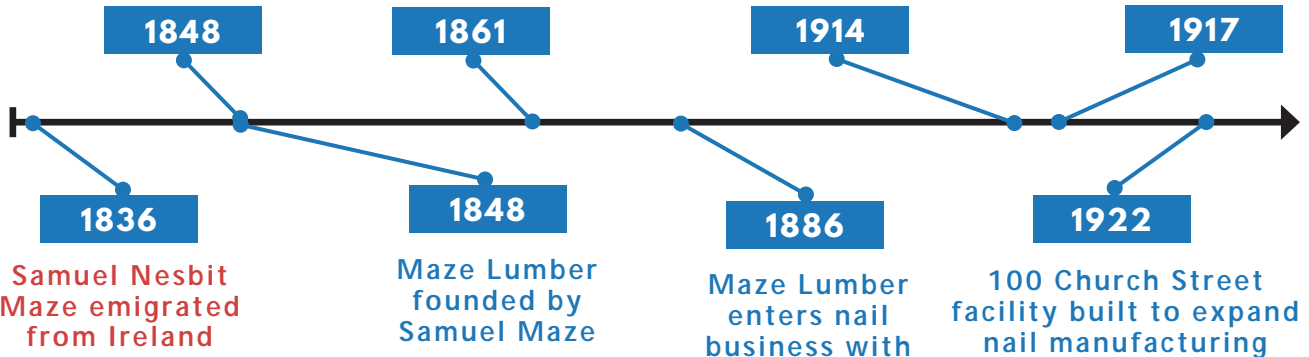
American Civil War begins



Maze begins making hand-dipped Zinclud™ hot-dip galvanized steel nails



US enters WWI



quality people ... and the other part is having quality products that are continually demanded in the marketplace.

“As my brother, Jim, said on the anniversary of his 150-year-old home in Spring Valley, Illinois, we are all simply caretakers of old businesses and old houses. It is our job to nurture them and make certain that they survive for the next generation. I am very proud to be spending my years doing exactly that.”

He also said he is impressed by his ancestors’ ingenuity, which set up Maze Nails for longevity.

“It seems like entrepreneurship was the

rule rather than the exception back in those days,” Loveland said. “Family owned and operated store fronts and small businesses sprang up everywhere. The Maze boys were pretty clever fellows and built a very strong business for future generations.”

Over the years, Loveland said there have been steady changes to the family business. For example, Loveland said nails were once made entirely of zinc purchased from Illinois Zinc and M & H Zinc, but in 1916 nails started to be made of steel and dipped in zinc.

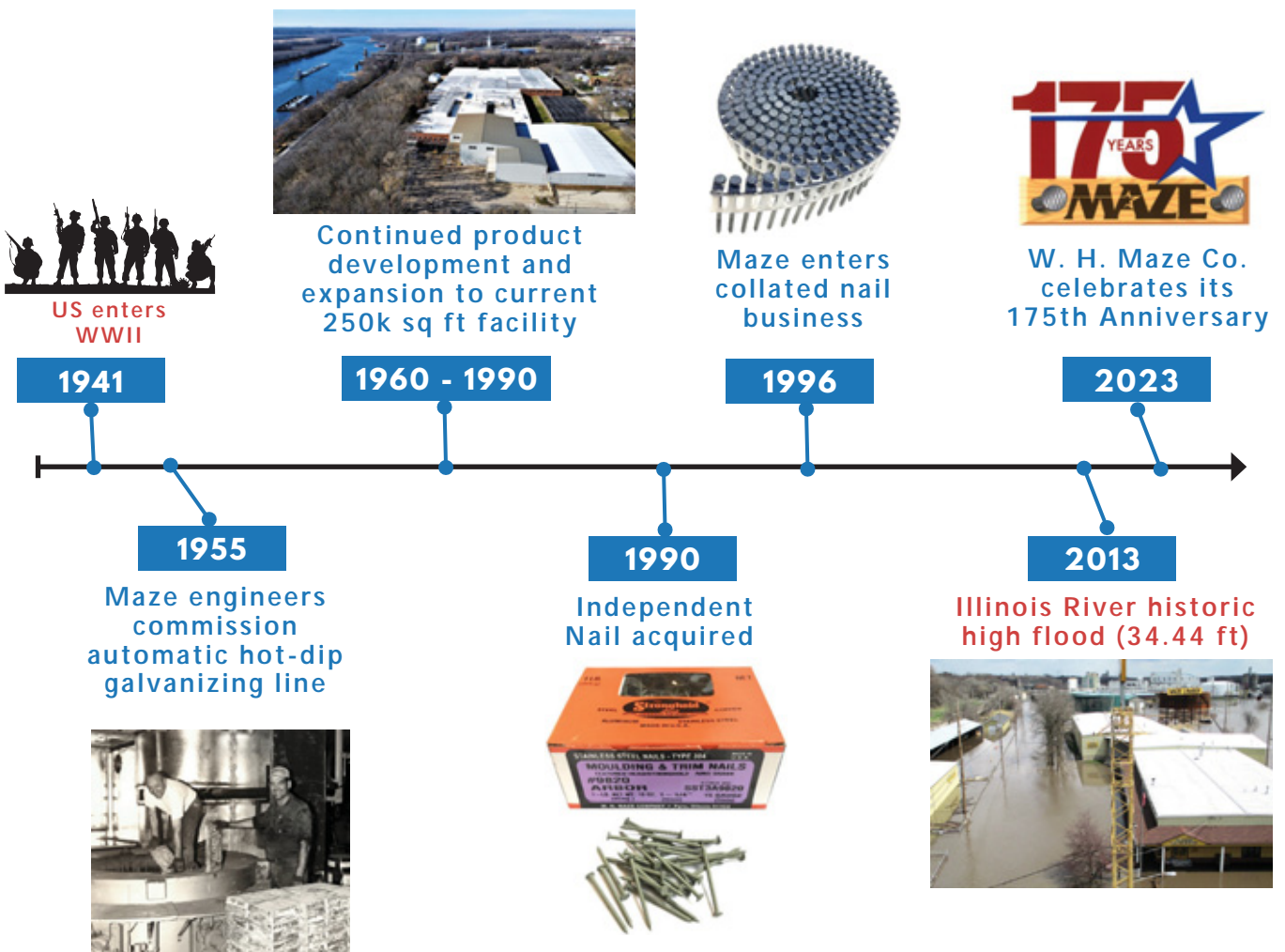
That was done by hand at first, but in 1955, Loveland said brothers, James and

Hamilton Maze, designed a dipping machine to do the work.

“The only thing that has stayed the same is that both types of nails were highly dependable and became demanded by contractors nationwide,” Loveland said.

And with 175 years in the rearview, Loveland said things will continue to evolve. “We continue to change with the times, including updating the products we handle at Maze Lumber and developing new nails that we manufacture and sell at the Maze Nail factory,” he said. “We’re now looking forward to our bicentennial year!” **RB**

Through the Years





800.360.6467

www.mwicomponents.com



“
We
are
PROUD
to
serve
”

- MWI Components



PC: LESTER BUILDING systems, LLC

At MWI Components we offer specialized metal products for customers in the rural building and post-frame building industry. We are honored to receive our 21st consecutive Gold Key of Excellence, because it affirms we have upheld our values – quick delivery, excellent service, and providing innovative products that make building on the job-site easier.

Since 1985, we have manufactured cupolas. We offer a variety of sizes including: 24x24, 36x36, 48x48, 66x66-inch square cupolas, as well as 48 and 84-inch octagon cupolas. Another one of our original products, the Ridg-Vent®, comes in six different styles, with wider flange options available. Soffit is also available at MWI in either steel or aluminum with four different trim profiles. We provide pre-painted steel products in over 100 colors, and we can match almost any metal building color available. This variety of rooftop products are designed to help our customers deliver the exact buildings their clients envision.

We take pride as a leading manufacturer of equine accessories. With horse stalls, Dutch

MWI COMPONENTS

Doors and Sliding Doors, we help builders achieve the perfect balance between aesthetic and functionality. With an in-house powder coat paint line offering over 50 unique colors, customers no longer have to settle for white doors or black stalls. Instead, they can find the exact color combination to fit their needs. We have also recently added the Vault Latch® horse stall latch to our product line. With a simple grill bar pull system, this latch is sleeker than ever. Plus, the talon-like latch is located at the top of the stall, so horse play is minimized!

We also manufacture a complete line of American-made round and square track hardware for all industrial, post frame, farm

& commercial buildings. We are proud to offer the Sabre Latch®, an exterior lockable, polished, stainless steel handle latch for 3.5" split or sliding doors; the Sabre Slim, an exterior-lockable, polished, chrome-plated handle latch for 1.5" split or sliding doors; and the Arcadian Slim – similar to the Sabre Slim; however, this latch is custom-made to fit MWI's Arcadian Sliding Doors. For those seeking a heavy-duty, jamb latch for 3.5" sliding doors, the Raptor Latch® is perfect. This is the strongest latch available at MWI Components, and it comes fully assembled with a locating feature for quick installation. The two adjustable rods wrap around the girt bracket assembly for the ultimate, tight-holding grip!

We appreciate our customers' support, and we are proud to serve the rural building and post frame industry.



“We also manufacture a complete line of American-made round and square track hardware for all industrial, post frame, farm & commercial buildings.”

- mwi components

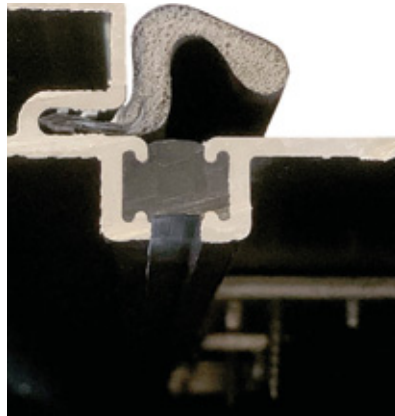
Analytics of Door Thermal Performance

When discussing the energy efficiencies of walk doors in post frame or “red iron” metal buildings, many people assume there is not much of a differentiation between door types and therefore little thought is done for the entry doors. In other words, the thinking is that most doors are very similar in construction, gauges, and door cores, so there is no need to look at performance or tested data results.

Plyco has historically been very aggressive for third party testing and registration for many of its doors. In more recent times, due to energy costs and clean climate objectives, a greater emphasis is now on thermal performance. This makes sense — every building owner or homeowner should be concerned about the insulating properties of the building envelope.

Those that do look at each category in more detail find ways to provide higher performing products and walk doors are no different. The starting point for door would be the door panel itself. Common exterior doors use a styrene core which has an R value of 4 to 6. Better or “best” doors will have a poured in place polyurethane core, which because of it being liquid at the time of application fills all the door cavities and ultimately typically more than doubles the R value to about 12. But that is only a portion of the story. The weather seal, threshold/sweep, and “fit” will also play a big role in the amount of air or water infiltration. All of this is captured in much greater way with the NFRC 100 testing for the entire door system, which also provides a much better indication of real-world results.

Why is this more comprehensive U value important? Well, you can quantify the impact of higher U values when using high performance windows and doors.



The U value of the NFRC 100 testing is the value that can be used in RESCHECK and COMCHECK for the building envelope. For example, using ASHRAE 90.1-2016 for climate zone 5, the prescriptive U value for walls is 0.050 and for doors it’s 0.68. There are several variables to input that will adjust results but in general, using a 0.24 U value for the Plyco 92 Series thermal break door system, the benefit of just (2) doors in a 15’ x 100’ wall could generate the reduced need for wall insulation by 34%. So there could be significant cost savings on the front end, but maybe more importantly leaving the initial R value insulation in place, the energy efficiency of the building is substantially increased.

How does the Plyco 92 door achieve such high tested U values? The 92 door has an “Everlast” G60 galvanized, pre-painted steel door panel with a poured-in-place polyurethane core, along with a heavy ex-

truded full aluminum “storefront” type of frame. The door, frame, and threshold all have a “true” polyurethane thermal break barrier which provides the basis for the tremendous U values.

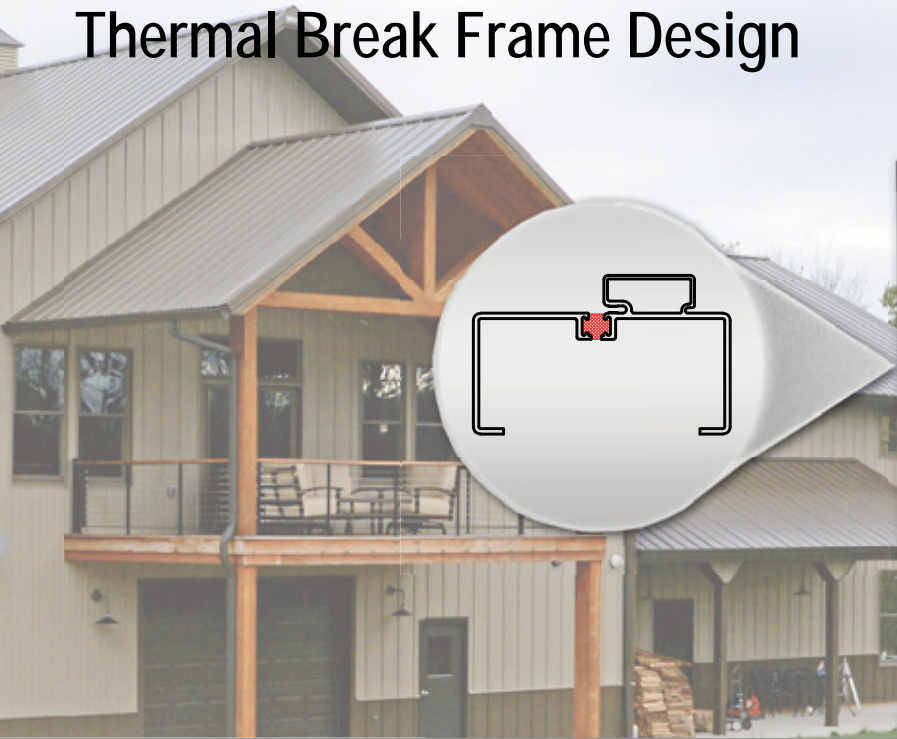
(The Plyco 92 series thermal door system is now available in Black utilizing “Cool Solar Reflective Technology” to further enhance the door quality and building performance.)

In summary: the world of energy efficiency of doors can be a bit complicated. Testing and performance level minimums are a good starting point to ensure basic structural requirements are met. Then the energy efficiencies gained through highly engineered products — especially those with a thermal break door and frame — that provide strong U values are becoming more and more necessary. More information can be provided by contacting Tom Granitz at tgranitz@plyco.com. **RB**

NEW

**HIGH-PERFORMANCE
ENERGY-EFFICIENT**

**NEW! One-Piece Aluminum Full
Thermal Break Frame Design**



**92 Series
Thermal Break Door**

- Extreme Corrosion Resistance
- Improved Structural Integrity - Stronger & Lighter!
- High Performance Air and Water Infiltration Prevention
- Unsurpassed Total Opening U-Value
NFRC 100 = .24

**NOW IN
BLACK**



PLYCOTM
CORPORATION



800.558.5895 • plyco.com

HIGH LEVEL PERFORMANCE PRODUCTS WITH INDUSTRY LEADING TESTING STANDARDS



STEEL DYNAMICS

WEBSITE: www.steeldynamics.com **PHONE:** 800-799-8942

Steel Dynamics Offers Full Array of Finished Steel for Rural Projects

Steel Dynamics' Flat Roll Group has proudly accepted its 10th *Rural Builder* Gold Key award and is more committed than ever to rural, farm & ranch construction markets.

Steel Dynamics offers a full array of finished steel products, making the supplier a one-stop shop for the construction market. The company offers painted coil products in a range of widths from 36 to 72 inches, including Galvanized steel, Galvalume®, and Galfan®. The Flat Roll Group also offers an acrylic overcoat option and boasts a yearly capacity of 1,000,000 tons of engineered, painted steel. Answering market demand while exceeding customer expectations is a tall order ... one that Steel Dynamics has been getting done on painted steel since 2003.

Brian Smallwood, SDI Market Manager – Construction, stresses that the company is interested in more than selling. Steel Dynamics is literally building a future within the industry. “We are driven now more than ever to serve rural markets. This Gold Key comes at a time when long-term demand for residential and commercial construction is growing and we’re investing heavily into the industry. Replacement roofing is a huge part of that, as is the market share growth of metal roofing.”

The Flat Roll Group boasts the four most modern coil-coating paint lines in North America, but that number will increase to six after the company completes startup of its next major coil painting investments in Sinton, TX and Terre Haute, IN.

Smallwood thanks all who voted for Steel Dynamics this year, “We are grateful to our customers for trusting us with your projects. We have some exciting expansion and product development initiatives coming to fruition, that will further enhance our value in the rural construction marketplace. We appreciate your business and look forward to growing together!” **RB**



AS GOOD AS GOLD

Steel Dynamics Flat Roll Group is thrilled to announce *Rural Builder Magazine* has given us the coveted **Gold Key of Excellence Award for the tenth time**. We want to thank our customers for voting for us. Being recognized for excellent service, reliable delivery, and high-quality products is truly an honor.

As North America's largest and most trusted supplier of GALVALUME® and painted GALVALUME® coated steel sheet, we take great pride in providing painted and metallic-coated steel sheet products in every color, and in widths up to 72 inches. Call us today to discover how our superior steel products and committed customer service can turn your next project into a winner.

For more information, contact your Steel Dynamics representative.



BUTLER DIVISION
Butler, Indiana

COLUMBUS DIVISION
Columbus, Mississippi

HEARTLAND DIVISION
Terre Haute, Indiana

THE TECHS DIVISION
Pittsburgh, Pennsylvania

SOUTHWEST-SINTON DIVISION
Sinton, Texas



UNITED STEEL SUPPLY

WEBSITE: unitedsteelsupply.com

PHONE: 512-263-0954



America's largest distributor of painted steel and Galvalume®, United Steel Supply is a company built on solid, dependable relationships combined with superior service. Conrad Farley, United Steel Supply Sales Manager, said those relationships are what makes this award so meaningful.

"The fact that this award came from our customers means a lot to us," he said. "We believe in long-term partnerships and in building value into every step of the process. We are so incredibly fortunate to be a part of our customers' business and thankful they allow us to help them."

Helping them means listening, supplying them with high quality products, and putting their needs first, whether they are looking for steel coil products for agricultural, residential, or commercial construction.

"Our dedicated employees are knowledgeable and friendly and combined with our JIT inventory, our service is second to none," Farley said. "We can usually supply you with coil within 24 hours. Our customers are our friends and partners in business, and we feel very blessed they trust us. Thank you to the customers who nominated us and to all who voted for United Steel Supply. We are truly humbled by your confidence."

Farley said the last few years have been challenging for



everyone, making it even more important to have great partners.

"We appreciate that our customers recognized the difficulties and chose to travel the road with us," he said. "To the readers of Rural Builder who haven't partnered with us yet, we hope you will give us the opportunity to be part of your company's future and have a chance to understand our commitment to quality and service." **RB**



BUILDING FOR TOMORROW.

At United Steel Supply, our commitment to the metal roofing industry is second to none because it's the only segment we serve. We're dedicated to championing our industry's recovery — offering nationwide distribution, full slitting capabilities, just-in-time delivery and the highest quality Galvalume[®], galvanized and prepainted steel coils in the nation.

The future is bright in our industry and we will be here to grow with you.

To learn more, contact your USS sales representative.



UnitedSteelSupply.com | 512-263-0954





ACU-FORM

WEBSITE: www.acuformequipment.com

PHONE: 330-674-4003

FAX: 330-674-4035

Established in 2010, Acu-Form has provided nothing less than the highest quality roll forming machines. We use tried and true manufacturing processes that prioritize proven design and strict quality control checks that allow us to offer the Acu-Form promise.

Acu-Form Thru-Hardened D2 Steel: Machines are manufactured with high-quality materials to ensure durability and performance at costs enabling profitability.

Power Options: We offer hydraulic, mechanical, and electrical power sources depending on your needs. Including options for full automation.

Pre-Tested Machines: All Acu-Form machines are tested using customer supplied material. This enables turnkey operation upon installation.

Versatile Growth Options: Beyond the initial investment, Acu-Form provides guidance and design of additional machinery



that will provide enhancement and expansion of current product offerings.

Shipping & Installation: Upon machine completion, full service shipping and installation is available including the arrangement of technical support to connect to your power supply.

Acu-Form is here to support you beyond just delivery and installation. The purchase of any machine always includes access to technical support, as well as a full line of replacement parts that are available for immediate delivery. **RB**



Manufacturer Of Metal Roll Forming Equipment





Acu-Form Products

- Panel Lines
- Trim Machines
- Uncoilers
- Shears
- Slitters
- Corners
- Wrappers
- J Channel
- Ridge Caps
- Custom Profiles

Contact Us



(330) 674-4003
Fax: (330) 674-4035



wayne@acu-form.com



acuformequipment.com



10550 Township Road 262
Millersburg, OH 44654



A.J. MANUFACTURING

WEBSITE: www.ajdoor.com

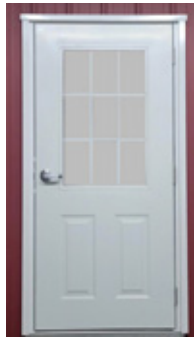
PHONE: 800-328-9448 x49

FAX: 715-568-3099

Quality Doors and Windows for the Post-Frame Market

A.J. Manufacturing is honored to be recognized by our customers with another Gold Key Award. Our employees are thankful for the collaborative customer relationships and the trust that those customers have in AJ's products and services. Our entire team appreciates the opportunity to be an innovative partner to the post-frame industry and looks forward to meeting the continuously expanding needs of the industry.

A.J. Manufacturing's goal is to be easy to work with, deliver on-time, respond quickly to issues, and to be trusted as a supplier. If we do these things consistently, our customers can focus on their business



EZ FIT trim on a series 7100 door.



EZ-v trim on a Harmony window.

and customers. In addition to the basics, we are constantly looking to improve the quality and performance of our products while holding costs in-line. We expanded our door and window operations in response to increased customer demand for walk doors and Harmony™ windows with patented EZ-v™ trim and flashing — thank you for the support!

Quality materials, exceptional customer service, innovative designs, and a dedication to excellence are the principles that make up A.J.'s promise to continue to deliver value beyond customer's expectations. For more information about any of A.J.'s products call 1-800-328-9448 or visit ajdoor.com. **RB**



Designed for the Post Frame Industry

A.J. Manufacturing has been your partner in Products, Service and Innovation for over 50 years. Our dynamic and creative team is dedicated to service and quality. Even though we've brought many solutions to the post frame market, we're not stopping. We're always striving for a better solution to accommodate your business needs.

Doors:

- 5100/7100 – Steel Frame
- R51SST – Stainless Steel
- R41/R51 – Responder Door
- 3100/3700 – Aluminum Frame
- 21A/21S – Partner Door
- Ceiling Access Door – CAD
- Attic Access Door – AAD

Windows:

- Harmony Vinyl Windows
- Main Street Vinyl Windows
- EZ-v™ Trim and Flashing System



Harmony™ vinyl windows and series 7100 walk doors installed in a M.P.B. Builders, Inc. project near Berlin, WI



Building Ideas

800.328.9448 @ www.ajdoor.com



ASC MACHINE TOOLS

WEBSITE: www.ascmt.com **PHONE:** 509-534-6600

WHICH PANEL ROLLFORMING LINE FITS MY NEEDS?

The decision to purchase the right Panel Rollforming Line for your current and future needs is not easy! Each configuration has advantages and disadvantages depending on the application and existing setup in your plant.

ASC is proud to offer three Panel Rollforming Lines, which all feature High Quality Cast Rollformer Stands and multiple Pre- and Post-Cut Options. All Lines come with a Touchscreen Controller with optional Upload/Download of Orders, and Remote Support.

1. The **ALPHA SERIES™** is a feed-to-stop Rollforming Line and the lower-cost option for customers with reduced production volumes. The Line features a close-coupled front end or a hydraulic Post-Cut Shear,



both keeping the line footprint under 40'!

2. The **SELECT SERIES™** is designed for customers with increased production needs and offers a variety of additional features to improve throughput and efficiency. Depending on the product and Cut-Off System, the Line offers production speeds between 150 and 250 FPM!



3. The **CLASSIC SERIES™** has been the strongest workhorse in the industry for decades! Paired with ASC's Mechanical Press, the line offers the highest Net Throughput speed in the Industry with up to 400 FPM on 10' panel lengths!



All of these lines are proudly designed and manufactured in the U.S. in Spokane, Washington, since 1949. **RB**



ASC MACHINE TOOLS, INC.



PREMIUM QUALITY ROLLFORMING MACHINERY - MADE IN THE USA SINCE 1949

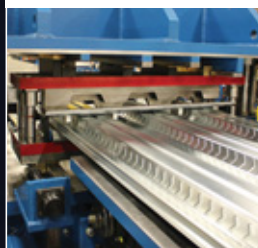
PANEL LINES



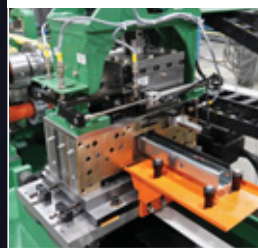
TRIM LINES



DECKING LINES



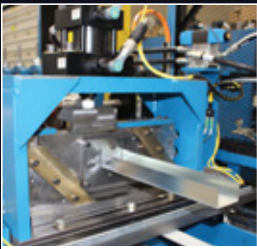
TRACK LINES



ROLL UP DOOR LINES



CHANNEL LINES



CZ PURLIN LINES



PURLIN STACKER



SEAMING STATIONS



ROLL-UP STATIONS



VISIT US AT OUR
UPCOMING TRADESHOWS





ATLAS BUILDING PRODUCTS

WEBSITE: www.atlasfasteners.com **PHONE:** 800-321-6977

The Atlas value proposition is simple: they manage the complexity of their customers' businesses and allow them to focus on growth. From inventory planning, through order entry and shipping, they manage and take care of their customers' business requirements.

"Our mission and company foundation are driven by providing industry leading service and quality to our valued customer partners," remarked company president Don Bratcher. "Simply put, when our customers win, Atlas wins."

This mission has allowed Atlas to become the industry leader in fasteners that serve the PEMB, Post Frame and Component industries in the USA. They offer a full line of building products including fasteners, venting, closure, pipe flashings, rivets, sealants, tape, and caulk.

Their three locations are strategically located to allow for reduced lead time delivery, anywhere in the U.S. Each Atlas location has the capability to paint, pack, and ship fasteners, as well



as cut closure to meet special needs in a timely manner. Ashland, Ohio, is the U.S. manufacturing base for all domestic fasteners in addition to a branch location.

When asked what makes Atlas stand out in the marketplace, Bratcher said, "We have the capabilities, experience, knowledge and logistical footprint to successfully support your business needs nationwide; and the desire to service your company better than any other source or brand available." **RB**

FLAT TOP®

- HIGHER HEX PROVIDES POSITIVE SOCKET ENGAGEMENT
- SPECIAL UNDERCUT DESIGN ENTRAPS SEALING WASHER

#10 ULTIMATE®

- ZINC CAST HEAD WARRANTED AGAINST RED RUST FOR THE LIFE OF THE BUILDING
- SPECIAL UNDERCUT DESIGN CONCEALS WASHER
- DEKFAST® MULTI-SEAL™ WASHER: PROVIDES 4 SEALING POINTS TO ENSURE POSITIVE SEAL EVEN WHEN DRIVEN AT EXTREME ANGLES

ULTRA-Z®

- INNOVATIVE TAPERED COMPRESSION POINT TECHNOLOGY PROVIDES AN ULTRA-SHARP CUTTING EDGE

[LOW PRO]2® sd

- COSMETICALLY APPEALING, LOW HEAD HEIGHT BLENDS IN WITH PANEL
- HEAD CONCEALS SEALING WASHER
- WOBBLE FREE INSTALLATION
- #3 DRIVER INSTALLS ALL SIZES

#10 WOODTITE® HLX

- TYPE-17 POINT HELPS TO QUICKLY PENETRATE MULTIPLE LAYERS OF METAL PANELS
- HIGH MAJOR THREADS WITH LOW MINOR THREADS FOR ENHANCED PULLOUT VALUES

ATLASFASTENERS.COM

VISIT OUR WEBSITE TO VIEW OUR COMPLETE FASTENER OFFERING AND ACCESSORIES

ASHLAND

OHIO

FLAT ROCK

NORTH CAROLINA

HOUSTON

TEXAS

(800) 321-6977 (828) 629-2603 (800) 503-2105

INDUSTRY LEADING NATIONAL DISTRIBUTION





BECK AMERICA INC.

WEBSITE: www.beck-america.com

PHONE: 800-239-8665

Thank you to everyone who voted for us to win the Gold Key of Excellence Award! We are honored to receive this recognition. BECK America is proud to be the North American distribution arm for BECK. A company with over 115 years of fastening solutions, we have a strong focus on the needs of our customers. From our new robotic fastening technology to the world's first collated wooden nail, LIGNOLOC®, and more, we thrive on helping others with common — and not so common — needs. Everything is done with an unyielding passion for challenges in fastening technology, innovative ideas, and the highest standards in materials while listening to our customers. We call our aspiration: BEYOND FASTENING. By the way in which we think and act, we offer our customers so much more than just fastening systems. **RB**



From sustainable materials to wholly new ways of fastening, there's always something new in store for the visionary builder at BECK. We might bring over a century of industry experience to the table, but even that's just history at the start of each day. Innovation never stands still, nor does it wait. To capture it, you've got to show up with your heart filled with passion for tomorrow. And that's where it all begins. Visit www.beck-fastening.com



INSPIRING
PASSION

BECK-FASTENING.COM



THE BRADBURY GROUP

WEBSITE: www.bradburygroup.com **PHONE:** 620-345-6394

Whether you are a company with entry-level production requirements or an established manufacturer, The Bradbury Group designs and builds roll forming and coil processing equipment that will grow your business. Bradbury Group provides quality metal panel and standing seam roll formers, purlin roll formers, trim roll formers, trim folders, recoiling lines, insulated panel lines, coil processing lines, levelers, metal shingle and tile lines, automated production lines, and related equipment for numerous industries.

For companies who want to start manufacturing panels, Bradbury Group entry-level pre- and post-cut roll forming lines produce the highest quality panel in the industry. The Bradbury

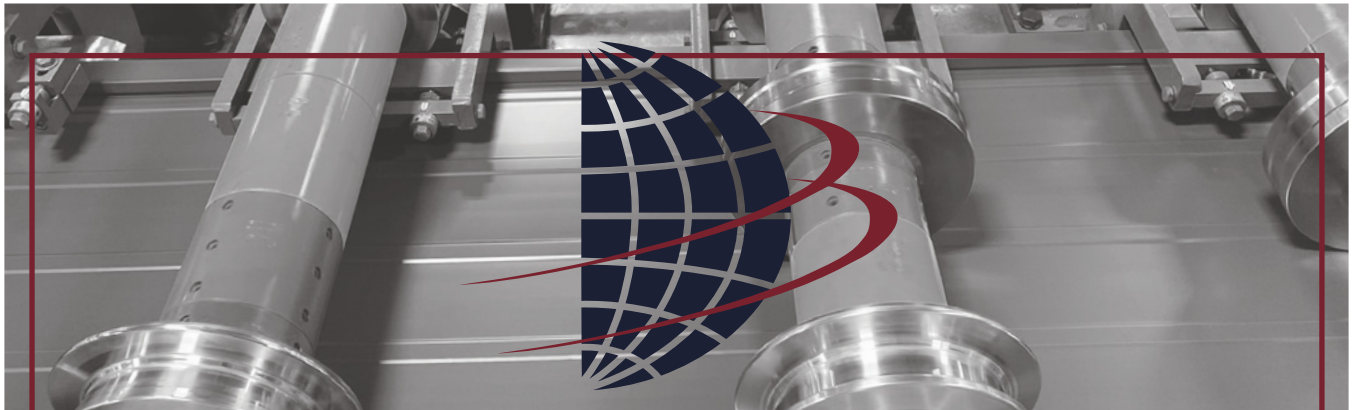


B.O.S.S.™ shear panel line has production speeds up to 300 FPM with an accuracy of 1/16" and is a reliable option for established manufacturers with high volume demand.

Purlin line models from The Bradbury Group include the Hayes QC300™, the Hayes FC350™, the Bradbury VTR™+plus, and the Bradbury QTR™ that range from a semi-manual changeover system to a fully automatic changeover system with

8-gauge material capacity, 24" web width capability, auto nesting, and purlin stacking.

For over 63 years, Bradbury has been a trusted industry leader for manufacturers around the world. Contact us to talk about your manufacturing process wants and needs. **RB**



THE BRADBURY GROUP

Metal Panel & Standing Seam Roll Formers

Purlin Roll Formers

Trim Folders

Trim Roll Formers

Recoiling Lines

Levelers

Insulated Panel Lines

Metal Shingle & Tile Lines

Coil Processing Lines

**From entry level to high-production equipment,
The Bradbury Group will help grow your business.**



WE BUILD MACHINES. WE SELL SOLUTIONS.

+1.620.345.6394

bradbury@bradburygroup.com

bradburygroup.com



CHIEF BUILDINGS

WEBSITE: www.chiefbuildings.com

PHONE: 800-845-1767



Metal buildings outperform wood framed structures when big buildings are needed; whether that be to house large agricultural equipment, to fill commodities warehousing needs, or simply to provide room to ride that prized cutting horse. Steel framed structures can span farther while avoiding unnecessary interior columns. Because metal buildings can span farther, the number of framing members needed is greatly reduced and that alone can speed up construction. Wide bay spacings means exterior doors can be bigger and high ceiling heights equate to more usable interior space. The benefits of steel abound.

Steel buildings by Chief are some of the highest quality metal building systems on the market. Buy with confidence. Metal Building erectors that have constructed “other” name brands prefer the erectibility of a Chief building. Not only does a smooth install save them time, but fewer missing parts / mis-fabs saves them headache at your jobsite... and all of that saves you money. You can also expect a Chief steel building to last for generations. Finish warranties on our pre-coated steel reach 40 years so that your building will always look good. Choose our standing seam roof and you could bank on never

having to replace the roof in your lifetime. Is your barn ready for the next generation of farmers?

Chief Buildings began manufacturing metal buildings in 1966 in response to a decade long post-war boom that meant new opportunity for anyone willing to pursue it. In 2022, Chief once again expanded our operations to meet new demands and position our company for con-



tinued success in the future. Even today, as global supply chain disruptions persist, there is an even greater demand for more infrastructure here in America. Businesses are looking for ways to stay ahead of the curve and to minimize their reliance on international resources, and ultimately that means bringing manufacturing, industry, and food production back to the US. What steps are you taking? Check us out at chiefbuildings.com. **RB**



QUALITY

VALUE

TRUST



If your livelihood is tied to working the land, putting in a hard day's work for a honest day's pay, and want your building manufacturer to share that same set of values then look at Chief.



*Trusted.
Tested.
True.®*

chiefbuildings.com



DIRECT METALS, INC.

WEBSITE: www.directmetalsinc.com

PHONE: 855-800-8878

FAX: 239-599-8545

DIRECT METALS INC. (DMI) is a supplier of fasteners, closure strips, and other building accessories for the steel-frame, post-frame, industrial and residential building industries. A core tenet of the DMI philosophy is to market products that enhance the value of any building project. Key products include the PANCLIP Pancake and Wafer head fasteners along with panel clips for standing seam metal roof systems. These fasteners pass rigid Dade County specifications for use in high-corrosion areas.

Building owners and homeowners today demand more quality in the fasteners and accessories that have become a more

important part of their commercial or residential metal roof project. Corrosion resistance is a key concern. DMI Carbon steel screws are standard with a 1000-hour rated corrosion resistant coating. The DMI exclusive 304 SS cap SCAMP, as well as zinc-aluminum alloy molded head ZXL DIRECT SEAL and popular WOODZAC screws are essential to keep intact a 40-year metal panel warranty. The SCAMP is Dade County listed. Powder coated color matching is available for many standard industry panel colors.

DMI is a supplier to the nation's largest roofing supply companies. The BULLET BOOT roof vent pipe and GOOSENECK

stove and dryer vent flashings carry a 35-year warranty, color match a shingle roof and are Florida Building Code approved.

Other building accessories include 304 and 316 SS rivets, BUTYL*ROLL tape mastic and tube sealants, EPDM pipe flashings, foil insulation, solid and vented closure strips and rolls and the most extensive polycarbonate panel line available for sidelight and skylight applications.

In 2023, DMI has introduced its DEKZIP line of commercial roofing fasteners, plates & termination bar for low-slope single-ply & built-up roofing applications. Thank you to the readers for this 9th GOLD KEY award. **RB**

SINGLE SOURCE

PANCLIP



SCAMP



Whether a metal roof is standing seam or exposed fastener, DMI has the high quality products for a successful roof project.

- PANCLIP low-profile Pancake & Wafer Head standing seam roof screws & panel clips for SNAP-LOCK & MECHANICAL LOCK profiles.
- SCAMP 304 SS Cap Type 17 & SD Points for Post-Frame & Steel-Frame metal building applications have a 40 year warranty.
- PANCLIP & SCAMP Fasteners meet Dade County, FL specifications for coastal, high-corrosion applications.
- Accessories such as Pipe Flashings, Butyl Mastic & tube sealants, 304 SS Rivets, solid & vented foam closure strips round out the product line.



WITH EVERYTHING BUT THE COIL, DMI IS THE COMPLETE SOURCE FOR THE METAL ROOFING MANUFACTURER.

• All DMI products are sold through an authorized distributor network •

CALL 855-800-8878 • www.directmetalsinc.com



EAST COAST FASTENERS

WEBSITE: www.eastcoastfast.com

PHONE: 800-558-5895

East Coast Fasteners is proud to be recognized by the readers of Rural Builder as one of the top suppliers in the industry once again. East Coast Fasteners continues to be dedicated to producing durable, long-lasting fasteners for all types of construction.

“It’s reassuring to know we’re keeping our customers happy,” said Don Benson, Sales and Marketing Manager at East Coast Fasteners. “We’re committed to providing the highest quality products and service to the commercial construction and post-frame industries

with a growing variety of fasteners designed to deliver the best product for each specific project.”

East Coast Fasteners received a patent for the Ply-Lo Driller which is intended to be more forgiving than other fasteners when installing at a slight angle. The Ply-Lo Driller is available in colors to match virtually any panel and the #10 is available in lengths of 1", 1½", 2", 2½" and 3".

East Coast Fasteners constantly tests and improves its products to ensure they are delivering the best products available

in the market. This attention to detail provides the strongest and most effective fastening components.

The Ply-Lo EXTREME is designed for the most extreme environments. It has all of the features and benefits of the original Ply-Lo and has a 40-year warranty. The original Ply-Lo fastener... the Ply-Lo EXTENDED is the fastener built for the post-frame industry and has a 12-year warranty.

To find the best fastener or closure for your project, contact a territory manager or visit www.eastcoastfast.com. **RB**

BUILDING CONNECTIONS

East Coast Fasteners produces durable, long lasting fasteners for all combinations of building materials.

- Quick Ship Program
- Extended Warranties
- Colors to match any rollformed steel
- High quality products for any application

East Coast Fasteners...**Building Connections** for the construction industry.



800.558.5895 • www.plyco.com

The **FASTEST, SHARPEST, CLEANEST** Drilling Fasteners Available!!

Ply-Lo Extended • Ply-Lo Extreme • Ply-Lo Driller • Ply-Fast • Metalfast
Stainless Steel • Ply-Lo Low Profile • Flashers • Closures • Wood Deck



GOLDEN RULE FASTENERS

WEBSITE: www.goldenrulefastenersinc.com **PHONE:** 334-283-4030

Thank you for selecting Golden Rule Fasteners as a 2023 Gold Key of Excellence award winner. At Golden Rule, we work with suppliers from the U.S. and Taiwan to provide the best products available. We develop innovative new designs that move the industry forward, make the job easier, and provide a more aesthetically pleasing finished product.

We have over 20,000 square feet of warehouse space stocked full of inventory. Our extensive inventory and exceptional service allow our customers to stock less and free up hard-earned money for other areas of their business. Most orders ship the same day that they are

placed. We are truly honored to receive this award and will continue to work

hard to remain one of the top suppliers in the industry. **RB**



- ◆Roofing Screws
- ◆Deck Screws
- ◆Metal Building Screws
- ◆Rivets
- ◆Butyl Tape
- ◆Caulk
- ◆Pipe Flashings
- ◆Solid Foam Closure Strips
- ◆Vented Closure
- ◆Ridge Vent Material
- ◆Nutsetters & Bits
- ◆Peel & Seal



Ph: (334) 283-4030

Fax: (334) 283-4032

WEB: www.goldenrulefastenersinc.com

Email: info@goldenrulefastenersinc.com



GRABER POST BUILDINGS, INC.

WEBSITE: www.graberpost.com **PHONE:** 800-264-5013

Neatly tucked away down an old country road just outside Montgomery, Indiana, sets the impressive Graber Post Buildings (GPB) sales office and manufacturing complex. Forged from humble and modest beginnings, in 1973 Glen Graber started GPB with the help of three other Amish carpenters. His purpose was to start a business to provide for his entire family.

As a skilled carpenter, Graber knew that providing the best quality materials and craftsmanship while erecting post-frame buildings would be a key factor to his success. Graber stated: "One thing that really helps us is the people here know how to

work. We are in an Amish-Mennonite community where kids begin using hand and power tools at very early ages."

In 1987, the supply chain issues helped him make one of his biggest business decisions ever. He invested in a computerized roll-former to produce his own steel roofing and siding panels. This was a major risk in the early stages of his business, but it yielded great opportunity for future growth. And it came.

During the '90s, Graber Post added a retail hardware segment, allowing Graber to serve walk-in customers and local community. They were purchasing and producing more products than required, al-

lowing them to use inventory to distribute to other builders and contractors, setting up a future wholesaler network.

Today, Graber Post Buildings services over 25 states and a long list of great customers who understand the quality, craftsmanship and customer service that the Graber name offers. Graber has passed some duties to his son-in-law Chad Wilson. Wilson and his management team work to keep up the same quality and customer service that Graber is known for.

GPB is your source for quality post-frame building and metal roofing materials, providing everything needed for building or roofing projects. **RB**

50 YEARS OF EXCELLENCE

#1 NAME IN POST-FRAME

Metal Panels **Trims & Accs.** **Wood Trusses** **Nail-Lam Columns**

Graber Post Buildings is a leading supplier and manufacturer of post-frame or metal roofing supplies. Contact us today to see how we can help grow your business.

Job-Site Delivery **Coil Sales**

Contact Us
(800) 264-5013

www.graberpost.com
7716 N 900 E
Montgomery, IN 47558



GSSI SEALANTS

WEBSITE: gssisealants.com

PHONE: 832-778-6400

For over 35 years GSSI Sealants has provided premier Butyl Sealant Tapes for metal roofing and general construction. In October of 2022, GSSI took a major step in growth by joining H.B. Fuller, the leading manufacturer of sealants and adhesives. The new ownership will allow GSSI to better meet the needs of the Rural Builder community.

In 2023, GSSI will complete large-scale capital projects that will provide much-needed expanded production capacity. Also, H.B. Fuller brings a wealth of additional R&D capabilities. With the new ownership, GSSI Sealants can now offer, in addition to its MB-10A™ Tape, a broader array of products desired in the Rural Building Market.

These now include: Elastiseal® Butyl Caulks, EternaBond® Roof repair tapes and Fast2K™ Deck Post Anchor. **RB**



OUTMATCH THE ELEMENTS



With Our Newly Expanded Line of Products


MB-10A
Premier Elastomeric Butyl Sealant Tapes

ElastiSeal™
High Performance Non-Skinning
& Skinning Butyl Caulks

EternaBond®
Metal RoofSeal™ Repair Tape

GSSISEALANTS.com

800.288.9489 | gssiorders@hbfuller.com

An  H.B. Fuller company



HERSHEY'S THE METAL MEISTER

WEBSITE: www.variobendusa.com

EMAIL: info@Hersheysmm.com

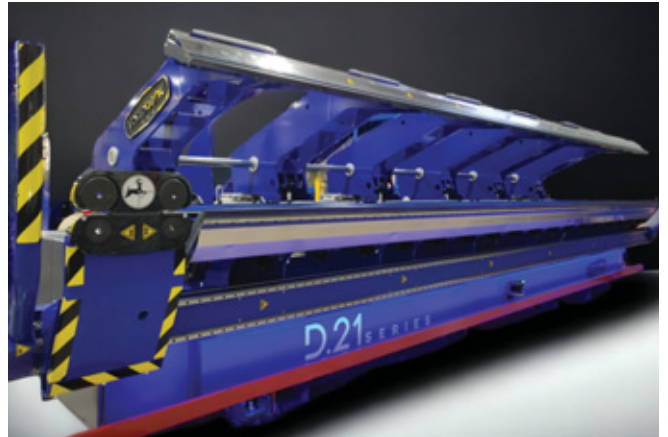
PHONE: 877-289-3030

We would like to thank our customers for their contribution to our company's success. Our passion for the industry along with our customers' peace of mind has led us to set a new standard in the metal market. We take pride in providing our customers with a line of machines that not only meet their needs but exceeds them and allows them to succeed in such a competitive market.

We are always looking for ways to improve our product and simplify the process on our customer's end. We are excited to offer a new line of slitters along with our V-link software seamlessly integrating your trim shop machines.

We are truly grateful for your partnership and look forward to continuing our collaboration in the constant improvements of all aspects of this field.

Once again, "Thank You!" **RB**



Variobendusa.com



HIXWOOD

WEBSITE: www.hixwood.com

PHONE: 715-644-0765

FAX: 715-644-0994

From Hixwood Metal LLC's beginning 25 years ago, we have built our brand based on that all-important idea of premium quality because we know it is all-important to you.

Getting your project done right — and done on time — is important to you. It's important to us, too. See why Hixwood is the preferred partner of contractors and individual builders alike.

PREMIUM MATERIALS & SERVICE

Super Rib 100-28 ga. G-100 galvanized has been our hallmark product for decades, and our state-of-the-art machines will produce custom trims designed by our customers. We know metal, so when you call you will be talking to an expert who knows the product and can efficiently and accurately help you with your order. Often we can get your supplies to you within 2-3 days.

TESTIMONIALS

Don't ask us; ask our customers. "Hixwood Metal has continu-



ously delivered high quality products in a very timely manner, allowing me to focus on running the business."

"I have been purchasing from Hixwood for the last 10 years. The quality is superior and you can typically place a large order and get it delivered or pick it up the next day!"

Whether it's post-frame, or an agricultural building like a pole barn, or a commercial construction, trust Hixwood to be your building supplier and partner as we've been doing the past 25 years. **RB**



*Thank you
to all readers
for the nomination of the Gold Key award.*

From our grassroots heritage to our current footprint, covering the Midwest to Eastern United States, we are here to serve you! We can meet all your postframe building needs, complete packages OR if you roll your own, we stock the full spectrum of coil.



715-644-0765 — Fax: 715-644-0994





MARCO INDUSTRIES

WEBSITE: www.marcoindustries.com **PHONE:** 800-800-8590

We make the best roofing ventilation and accessories for metal roofs — period. With the most tested and certified products on the market, you can trust our solutions to perform in even the harshest conditions, protecting your roof and everything underneath.

INVESTING IN QUALITY

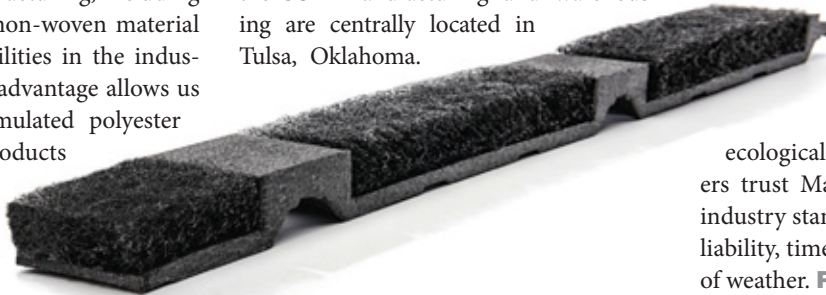
For more than 30 years, we've assembled the best people and capabilities in order to deliver superior quality and performance. But earning multiple Top 10 Product awards, *Rural Builder's* Gold Key of Excellence awards and more aren't the goal. Customer satisfaction is. That's why, in addition to industry-leading testing and certifications, we invest in innovative design and manufacturing, including the only specialized non-woven material manufacturing capabilities in the industry. This competitive advantage allows us to use specially formulated polyester — manufactured from recycled material — to prevent moisture



absorption and hold together to help keep out pests. (Polyurethane products soak up water, causing them to constantly expand and contract, eventually disintegrating.)

PERFECTLY POSITIONED TO DELIVER

Our corporate headquarters and almost 220,000 square feet of made-in-the-USA manufacturing and warehousing are centrally located in Tulsa, Oklahoma.



From here, and through five distribution facilities across North America, we deliver Marco quality coast to coast.

THE WEATHER-TITE™ SYSTEM

Only Marco offers the Weather-Tite™ System, a comprehensive line of metal roofing solutions that offers easy installation, remarkable building ventilation, lower utility costs, extreme durability and outstanding warranties. In short, quality metal roofing products that are economically and ecologically smart. That's why customers trust Marco products to deliver the industry standard in performance and reliability, time after time, through all kinds of weather. **RB**





MCELROY METAL

WEBSITE: www.mcelroymetal.com **PHONE:** (800) 562-3576 **EMAIL:** info@mcelroymetal.com

McElroy Metal Helping Customers Build Their Forever Homes: 'Barndos'

McElroy Metal, a 39-time Gold Key winner, built its reputation by offering the most durable and attractive products for projects ranging from post-frame storage buildings to horse barns and high-end homes to the quickest growing trend: “barndominiums.”

Builders who choose McElroy Metal products appreciate the company’s high level of service and quality products. Our metal panels, roll formed from Galvalume® coil and coated with durable Kynar 500® resin-based coatings from Sherwin-Williams, offer proven long-term performance. Kynar 500® coatings provide the best possible protection against fading and chalking. These coatings also offer a high level of reflectivity, resulting in energy savings during the

warmest summer months.

McElroy Metal products used for walls and roofing, deliver optimal durability and minimal maintenance while protecting interiors from damaging elements like water, wind, and heat.



People building their forever homes frequently consider barndominiums or “barndos.” They are attractive options for families looking for an affordable, easy-to-maintain home or business space.

If affordability and low maintenance aren’t enough, consider the long-term performance of Galvalume® and Kynar 500® coatings and flexibility. With living quarters in one section, barndos can also house a workshop, hobby area, gym, or warehouse in another section. **RB**



HELPING YOU KEEP THAT LONG-TERM APPEAL WITH KYNAR 500®!



**SCAN THE QR CODE OR VISIT US AT
MCELROYMETAL.COM**





METAL ROLLFORMING SYSTEMS

WEBSITE: www.mrsrollform.com **PHONE:** 888-284-6794 **FAX:** 509-467-5631

Metal Rollforming Systems (MRS) is excited and honored to receive our sixth Gold Key of Excellence award. MRS has been producing roll formers since 1993 and strives to create the best roll former for our customers. Metal Rollforming Systems aims to be your one-stop shop for all your roll forming needs, allowing you to save time and money when purchasing a roll former. Along with our complete roll former panel lines, we specialize in custom trim profiles along with all the needed accessories to complete your metal panel needs.

Our most recent roll former design is our Patriot Rollforming Line. With an

integrated shear and modular die set, any number of profiles can be run on a single machine. This offers our customers flexibility for their production while costing less than our standard lines. The Patriot Line can also be reconstructed into a slit and recoil line, which is ideal for trim and snap-loc panel manufacturing.

We pride ourselves on our technical support for our customers. Our customers' success is our success. Our business is based largely on repeat customers and referrals, and we are honored that our customers speak so highly of us. We live under the philosophy that, "Service is the lifeblood of our organization. Everything

flows from it and is nourished by it. Customer service is not a department; it's an attitude."

We strive to make the best experience for our customers and to make them confident they've purchased the right roll former from the right company.

Metal Rollforming Systems has grown from a single man building roll formers to an 100-person crew. Our complete in-house design and production allows our team to keep precision control over each aspect of the manufacturing process. This assures us that each roll former is done right and will be reliable for our customers for many years to come. **RB**



Panel Rollformers
Titan, Signature & Patriot

Trim Rollformers
Single & Multi Profiles

Slitting Lines
Stand Alone, Cut to Length, & Slit to Recoil

Decoilers, Upenders, Shears
and much more!

**The Affordable Rollforming
Equipment Manufacturer**



A 30 YEAR
HERITAGE



888.284.6794 | www.mrsrollform.com
info@mrsrollform.com
4511 N Freya St. | Spokane, WA 99217



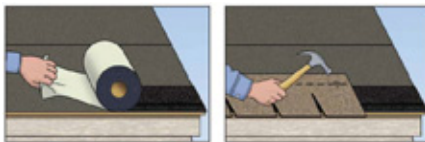
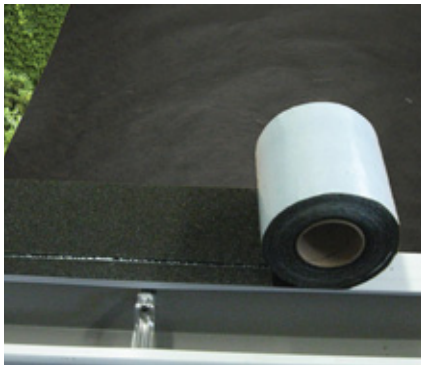


MFM BUILDING PRODUCTS CORP.

WEBSITE: www.mfmbp.com **PHONE:** 800-882-7663 **FAX:** 740-622-6161

Fast and Simple Shingle Starter Product

MFM ShingleStarter® is a self-adhering, self-sealing waterproofing membrane that eliminates the need to cut shingle tabs, saving the contractor valuable time, material, and labor costs. The membrane aggressively bonds to the roofing substrate and features a sealing strip to prevent wind uplift at the roof edge. The roll membrane self-seals around roofing fasteners and has a granulated top surface for great foot traction. ShingleStarter can be used with traditional 3-tab or architectural shingle styles.



Free product samples, technical literature, approvals, installation instructions and more are available by calling 800-882-7663 or by visiting www.mfmbp.com. **RB**



Easy-to-Install Starter Course Saves You Time and Money!

Fast Application – No Waste

Eliminate the need to cut shingle tabs to save time and money.

Easy to Apply – Quick Installation

Adheres direct to deck along roof edges.

Durable – Made to Last

Tough mineral surface with reinforced fiberglass mat.

ShingleStarter® – the Right Solution!

Call or Visit Online for a FREE Sample!



Scan the QR Code for Installation Instructions.



800-882-7663
www.mfmbp.com



MILL STEEL COMPANY

WEBSITE: www.millsteel.com

PHONE: 800-247-6455

Mill Steel Co. is one of the largest steel and aluminum distributors in North America. With an expert staff in building products and a diverse portfolio of the industry's top-of-the line coating systems, you are in good hands. Mill Steel offers strategically located inventory across the country with a network of dedicated carriers to provide quick turnaround on all your pre-painted and coated steel needs. Mill Steel supplies competitively priced, quality product backed by exceptional customer service.

You can count on Mill Steel to stock the products you need when you need them. With the Mill Steel App, customers can place orders 24/7 from our website. Mill Steel's complete line of prime, excess, and secondary painted and acrylic inventories are available online for purchase. Users can shop coils with real-time pricing, view order history, place an order for delivery or pickup, and bid on coils from the excess and secondary inventories. You can also

track shipments, save custom filters to find what you need faster, and reordering is as simple as clicking a button. See for yourself and start shopping today by visiting app.millsteel.com! **RB**



Shop Online with Mill Steel

The painted steel you need at the click of a button! Place orders and track shipments; all backed by our steadfast dedication to service



WWW.MILLSTEEL.COM | 800-247-6455





PALRAM AMERICAS

WEBSITE: www.palram.com/us **PHONE:** 800-999-9459

With 60 years of thermoplastic experience, Palram is a leading manufacturer of Polycarbonate and PVC sheets. Combining our rich history, rigorous manufacturing standards and commitment to superior service, we've become a trusted partner to markets spanning construction and architecture, agriculture, safety and security, and home and outdoor living. In collaboration with our partners, we develop solutions to specific market challenges.

In addition to our highly popular daylighting solution, SUNSKY® polycarbon-

ate panels for skylights and sidelights, Palram's new Palclad Pro PVC wall and ceiling panels are an attractive, easy-to-install, and cost-effective alternative to FRP. Panels are fiberglass-free, have a 5-year warranty, and will not fiber-bloom. These durable, low-maintenance panels are Class A fire-rated, 100% recyclable, Clean Air Gold Certified and USDA/FDA compliant.

Palram also offers DURACLAD™ Multiwall Interlocking PVC panels for interior wall and ceiling cladding. DURACLAD's tongue-and-groove edges allow for rapid installation and a smooth and

hygienic finish able to withstand aggressive chemicals and cleaning. Made in the USA, DURACLAD is the perfect alternative to painted drywall, plasterboard, plywood, and other materials that make sanitation cumbersome. For a highly reflective and chemical resistant liner panel, Palram's AG-TUF corrugated PVC panels are maintenance-free and ideal for agricultural interior cladding.

Palram Americas is proud to receive another Gold Key of Excellence award and pledges to continue to provide the highest standards of products and service. **RB**



IN STOCK NOW!

Proven Daylighting Solution.

More daylighting options. More easily.

SunSky's first-in-class durability, high performance and superior light transmission are ideal for roof, side and skylight applications. So you can expand unique design possibilities, reduce energy costs, and enhance environments with more natural light. Available in several opacities, including Soft White, SunSky is backed by a 10-year warranty.

Match virtually any metal profile with SunSky.



Simply select from the world's largest profile catalog. Need to match a custom profile? Using Palram's proprietary MetalMatch technology, we can custom-match virtually any metal profile – fast!

To learn more, contact your local distributor or call 800-999-9459.

www.palram.com/us/sunsky



SUNSKY®
PREMIUM CORRUGATED
POLYCARBONATE PANELS





PERMA-COLUMN

WEBSITE: www.permacolumn.com **PHONE:** 800-622-7190

Pro Builders know how to build better, build stronger, and build to last

Pro Builders understand what it takes to rise above the status quo in post-frame construction. Committed to their craft, they insist on permanent foundation solutions that enable their structures to endure for generations. Pro Builders embrace innovation and engineering, demonstrating their drive to deliver unrivaled customer satisfaction.

Perma-Column® stands by builders who strive to elevate their business and stands with consumers who want to protect their building investment. We pride ourselves on the quality, design, and engineering of our 100% American-made post-frame foundation solutions.

Perma-Column precast concrete columns elevate wood columns out of the ground in post-frame construction, eliminating the risk of rot. Sturdi-Wall® and Sturdi-Wall® Plus heavy-duty anchor brackets connect post-frame structures to poured concrete foundations. Perma-Column removes the potential for rot, decay, structural instability, and costly repairs.

Pro Builders and consumers trust Perma-Column foundation solutions. The patented Perma-Column family of products is certified by the International Code Council Evaluation Service (ICC-ES) to meet the International Building Code® (IBC) and the International Residential

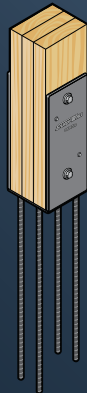
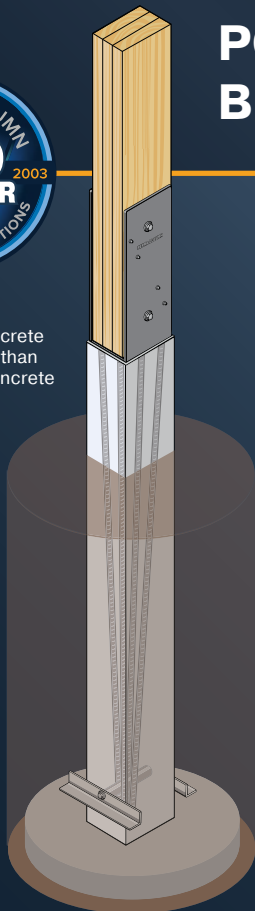
Code® (IRC). That means quicker permits and approvals — and therefore accelerated project timelines.

Permanent foundation solutions can provide consumers with elevated potential for financing. Whether you call it a pole barn or a post-frame building, you will invest a significant amount of money in its construction. A critical question remains. The life of the building — and the investment made in it — rests on your choice of foundation. Is your foundation permanent or temporary? Go with the choice Pro Builders make. Build better. Build stronger. Build to last. Build with Perma-Column. **RB**

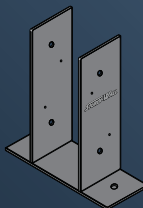
POST-FRAME PROFESSIONALS BUILD ON PERMANENT FOUNDATIONS



Precast concrete 3X stronger than standard concrete



Powder-coated steel brackets



Elevate your building projects with engineered foundation solutions that combine the economy of post-frame construction with the durability of a concrete foundation.

- Eliminate wood in the ground
- Maximize post-frame building life
- ICC-ES-certified code compliant

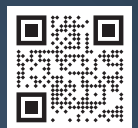
Build better. Build stronger. Build to last.
Contact your distributor today!



Certified by the International Code Council to meet residential and building codes



permacolumn.com





POST™
protector
1-877-WONT ROT

POST PROTECTOR

WEBSITE: www.postprotector.com **PHONE:** 877-966-8768

“Many thanks to ALL our customers!”



NEW CONSTRUCTION

POST™
protector

NO Ground Contact

Simple, Affordable,
Attractive, Permanent

EXISTING BUILDING

POST
proservative

“RE-TREAT”
In Service Posts





EXPRESS BARNs

WEBSITE: www.expressbarns.com

PHONE: 785-214-4655

Thank you to our customers who took the time to nominate us for the Gold Key of Excellence award! At Express Barns providing a high level of service to our customers is our number one priority. If you purchase post frame building packages, we look forward to the opportunity to partner with you. **RB**




expressbarns.com

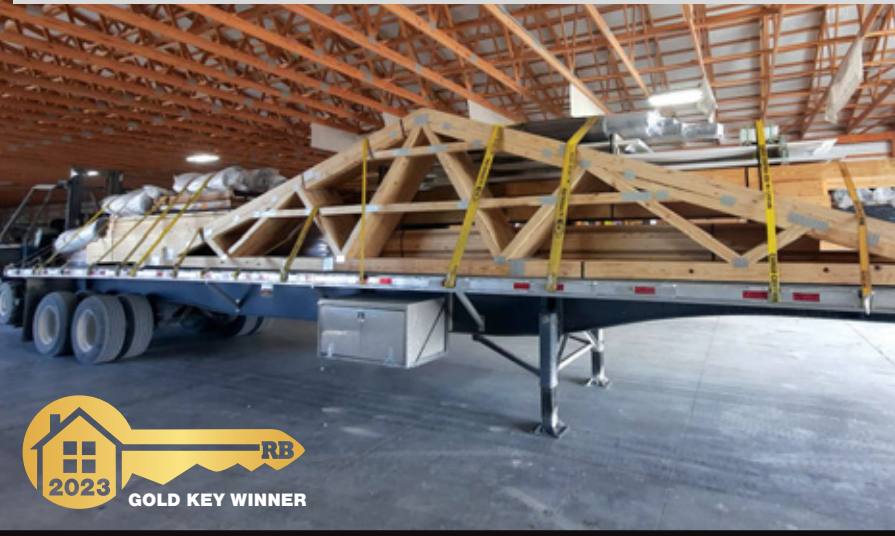
Quality Products

- » Laminated Columns
- » Premium 29 ga. Metal
- » Roll Formed Trims
- » Engineered Trusses

Our Services

- » Conceptual Drawings
- » Estimating
- » Engineering
- » Material Listing

Post Frame Packages | Delivered to your Job Site



CONTRACTORS WANTED

Let us prove to you that we can save you time and money. We want to be your Partner in Post Frame!

785-214-4655
info@expressbarns.com





RFOIL INSULATION PRODUCTS

WEBSITE: www.rfoil.com **PHONE:** 800.837.8961

rFOIL Reflective Insulation has been a leading manufacturer of thermal insulation for the metal building and metal roofing markets for nearly 35 years.

Manufactured by Covertech Inc., rFOIL has earned a reputation for quality, performance, and durability.

rFOIL Reflective insulation has grown in popularity for use in metal buildings and metal roofing systems across North America for its ability to control heat transfer and to help prevent interior condensation.

Metal building and metal roofing systems are notoriously difficult to insulate. In the summer, enormous amounts of heat radiate from the hot metal into the structure, often raising the interior temperatures well

above ambient outside air temperatures. This is the result of the sun making the metal extremely hot, much hotter than the outside air, and essentially becoming a radiator of this heat into the structure. In cold seasons, this interior heat is a challenge to contain as well.

The key to rFOIL's thermal performance is the reflective aluminum surface. Aluminum has outstanding thermal properties and reflects up to 96% of the heat that is radiating inward from the hot metal exterior. This dramatically reduces interior heat gain. Conventional mass insulations do virtually nothing to stop radiant heat gain.

In cold seasons, rFOIL also helps reduce heat loss, due to its low-emittance proper-

ties. The low emittance of rFOIL makes it more difficult for heat to radiate away from its reflective surface, thereby helping to keep heat inside.

rFOIL Reflective insulation is composed of two highly reflective aluminum surfaces, and an inner core of high-strength bubble. The bubble core provides the added benefit of reducing interior condensation, by providing a thermal break between the exterior metal and the building interior. A white interior facing is also a popular option.

rFOIL would like to thank the readers of Rural Builder for this Gold Key of Excellence Award. We are honored by your support and confidence in our insulation products. **RB**



THE BEST WAY TO INSULATE METAL & POST FRAME BUILDINGS

• Residential Metal Roofing • Garages, Sheds & Carports • Pre-Engineered Steel Buildings • Post Frame / Pole Barns • Agricultural Buildings

Benefits:

- Blocks 96% of Radiant Heat Transfer
- Prevents Interior Condensation
- Class 1/A Fire-Rated
- Unaffected by Humidity
- Will not Promote Mold and Mildew
- Easy to Install
- UV-Resistant
- Patented Product



Manufactured by:

888-887-3645 www.rfoil.com

COVERTECH
A Division of Balcan Innovations Inc.



RICHLAND
LAMINATED COLUMNS LLC

RICHLAND LAMINATED COLUMNS LLC

PHONE: 419-895-0036 **FAX:** 419-895-0062

Richland Laminated Columns was founded in 2005 by manufacturing superior laminated columns and partnering with industry leaders and innovators, therefore we have built ourselves into “Your One Stop Pole Shop.”

For over 15 years we’ve been making Nail-Lam poles, and in 2019 we added an ALL GLUE Glulam pole. Now you have the option of a Nail-Lam or Glu-Lam from Richland.

Richland also manufactures Perma-Columns and the Green Post and offers distribution on the Sturdi Wall Brackets and Post Protectors, Footing Pads and Concrete Prefab Post Pads ... Whichever way you want to build your building and whatever foundation system you want to use, Richland will provide you with what you need to build a lifetime building.

We at Richland would like to take this opportunity to say “Thank You” to all our customers for your continued loyalty and support, and we look forward to a great 2023!! God Bless you all and stay safe!! **RB**



*Call Today
for Nearest
Distributor,
Wholesale
Only*

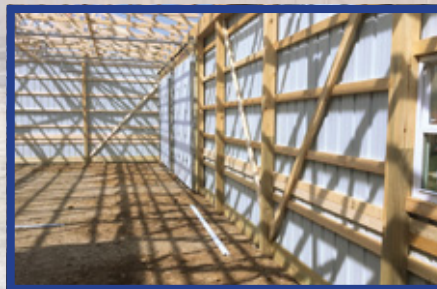
RICHLAND

LAMINATED COLUMNS LLC
“Your One Stop Pole Shop”

*Thank you
for your
business!*



- Manufacturer of Quality Glulam Poles, Nail-Lam Poles, Perma-Columns and GreenPost Polyethylene Wrapped Poles.
- Distributor of Sturdi-Wall Brackets, Post Protectors and The Footing Pad.
- 3-Ply, 4-Ply, 2+6, 2+8 • 100% Treated or Non Treated and Larger Size Poles Available
- Superior Treatment • #1SYP Lumber • 30% Stronger than 6x6 solid



We are now manufacturing the Green Post!



8252 Greenwich, Ohio 44837
Phone: 419-895-0036
Fax: 419-895-0062





S-5!

WEBSITE: www.S-5.com

PHONE: 888-825-3432

FAX: 719-495-0045

ColorGard® by S-5!

Rooftop avalanches cause hundreds of millions of dollars in property damage, personal injury and fatalities each year, creating potential liability for building owners and contractors. S-5! has mastered the art and science of mitigating this hazard since 1992 with a variety of fully engineered snow guard systems.

S-5!'s ColorGard® with VersaBracket™ 47 is the ultimate snow guard solution for trapezoidal rib, exposed-fastened metal roofs and is the only system on the market designed and engineered on a site-specific basis.

ColorGard provides the safety and ser-



viceability you need while complementing the look of your roof, with a clean appearance and perfect color and finish-matching, all designed to last the life of the roof.

Extensively tested for load-to-failure results, S-5! ColorGard includes an industry-leading lifetime product warranty. **RB**

Limited Lifetime Materials & Workmanship Warranty*

**Visit www.s-5.com for more details.*



888.825.3432

| www.S-5.com |



S-5!
The Right Way



STARWOOD RAFTERS

WEBSITE: www.starwoodrafters.com **PHONE:** 888-525-5878

Starwood Rafters was founded in 1964 as a manufacturer of laminated arch rafters and beams. Starting out in Independence, Wisconsin, it was a three-man operation, with the original owners, Joseph Wozney and his two partners, working nights after working at their regular jobs. They shipped mainly to Wisconsin, Minnesota, Iowa and the Dakotas.

In the early 1970s, they developed the Lam-Ply Truss, combining plywood, glu-lams and dimensional lumber to create a truss that is stronger than a conventional web truss. This

allows the builder to space them farther apart, reducing erection time and labor costs. This design also limits bird nesting and improves the ventilation in livestock facilities.

The Lam-Ply Truss can span up to 80' and is used in many applications, from machinery storage to livestock facilities, from horse arenas to park shelters. It also has been developed with a gambrel-style and a mono-slope design. All Starwood products are custom-designed to meet customers' specifications.

Today, Joseph's sons, Corey Wozney and Steve Wozney, operate the com-

pany. Still in Independence, Wisconsin, Starwood Rafters now ships products anywhere in the U.S. Starwood Rafters' biggest asset is its ability to be flexible to meet its customers' needs. There is no job too big or too small.

WE PRODUCE:

- Lam-Ply Truss
- Gambrel Lam-Ply Truss
- Mono Lam-Ply Truss
- I-Lam Beam
- Laminated gothic arches
- Timber and specialty trusses made to customers' designs **RB**



Independence, WI



GOthic ARCH



MONO



GAMBREL



TIMBER TRUSS

LAM-PLY-TRUSS

RIDING ARENAS • CATTLE ENCLOSURES • STORAGE • SHOPS

- Spans up to 72 ft.
- Bird nesting control
- Up to 12 ft. spacing depending on desired load
- No feed alley post obstruction
- Additional ceiling height for more usable space



starwoodrafters.com • 715-985-3117 • 888-525-5878



TRAC-RITE

WEBSITE: tracrite.com

PHONE: 800-448-8979



For over four decades, Trac-Rite Door has been synonymous with excellence in the manufacturing of quality steel roll-up doors. With an unwavering commitment to exceptional performance, value, and customer service, Trac-Rite has established itself as a trusted brand in the industry.

The product offering of Trac-Rite is truly comprehensive, catering to a wide range of applications such as self-storage, residential, agricultural, and commercial needs. These doors are not only visually appealing but also built to withstand the test of time, requiring minimal maintenance while delivering durability.

What sets Trac-Rite apart from its competitors is its position as one of the few full-service and vertically integrated providers in the market. By offering curtain doors, corridor components, and complete partition systems, Trac-Rite ensures that customers receive a holistic solution tailored to their unique requirements. This integrated approach streamlines the purchasing process and guarantees a seamless experience for clients.

The geographic reach of Trac-Rite is expansive, serving customers across the United States, Canada, as well as parts of Central America and Mexico. To meet the growing market demands, Trac-Rite has strategically expanded its operations by establishing two new distribution centers in Wisconsin and Alabama. This expansion has not only enhanced the company's ability to meet customer needs but also propelled Trac-Rite to become the second largest door manufacturer in all of North America.

This remarkable achievement is a testament to Trac-Rite's commitment to quality, customer satisfaction, and its ability to adapt to changing market dynamics. As Trac-Rite continues to excel in providing top-notch products and services, its reputation as a gold key winner and leading door manufacturer in North America is well-deserved. **RB**

YOUR ROLL-UP DOOR SUPPLIER SHOULD WORK AS HARD AS YOU DO



Trac-Rite's roll up doors deliver, day after day. Our high performance doors are low maintenance and long lasting, saving you time and money.

Trac-Rite is your employee-owned option for quality roll up doors. The doors are easy to install, and backed by the best warranty in the business.

If you are already a Trac-Rite customer, thank you for your business. If you are not, give us a try. Come for the door. Stay for the great service.

PERFORMANCE • VALUE • SERVICE



800-448-8979

tracrite.com • tr@tracrite.com



TRIANGLE FASTENER CORP.

WEBSITE: www.trianglefastener.com

PHONE: 800-486-1832

For more than 40 years, Triangle Fastener Corporation has specialized in supplying hard-to-find fasteners, sealants, tools and accessories for construction. They offer job site support, and can help you select the correct fastener for your application from any of their 24 locations.

Select from a wide array of popular commercial-grade products, including their high-performance TFC SPECIFIC™ brands that provide easy installation, assuring low in-place costs.

PRODUCTS AND SERVICES FOR METAL ROOFING, SIDING AND TRIM

PANEL-TITE® BURR BUSTER Metal-

to-Wood Screws: #9, #10, #12 and #14 diameters in lengths up to 3”.

CONCEALOR® Pancake Head Screws: For SSR clip attachment in lengths up to 9”.

BLAZER® Drill Screws: Available with the patented VRT® Back-Out Resistant Thread Technology for attaching panels to steel in lengths up to 10”.

ULTRA1000® Silicone Sealant: Provides the superior UV protection. Available in colors to match most metal panels and trim.

APS500® Advanced Polymer Sealant:

Widely specified and is available in over 24 standard colors.

TFC BUTYL™: Available in tubes and tape for exceptional performance in panel laps.

KALIDA-KOTE™ Painted Screws, Rivets and Closures: The largest selection of painted screws and rivets to match many popular colors of panels.

DeWALT® power tools and accessories.

PAK-ONE™ Inventory Management Program: Purchase only what you need for a specific job. **RB**

No ordinary post frame screws!

- Low-angle thread reduces backout and over-driving the washer
- Saw tooth thread reduces tapping torque
- Patented BURR-BUSTER® Point reduces burrs caused when piercing steel

Call for free samples!

Checkout the performance versus ordinary screws!

TRIANGLE FASTENER CORPORATION
www.trianglefastener.com
 800.486.1832

We make connections better!



WICK BUILDINGS, INC

WEBSITE: www.wickbuildings.com

PHONE: 855-438-9425

Your Dreams – Our Building Expertise.

With the sale of over 75,000 buildings to date, Wick Buildings has steadily grown to become one of the nation's largest producers of post-frame buildings, including sophisticated animal confinement systems, horse housing facilities, on-farm livestock and storage buildings, suburban structures and professionally engineered commercial and light industrial buildings.

Flexible Design. One of our biggest advantages is design flexibility, both outside and inside. With a clear-span capability of 100' in width, Wick Buildings can incorporate interior build-outs and the addition of wings and leans for additional space.

Energy Efficiency. Energy efficiency is a hallmark of Wick Buildings. Wall and roof steel "cool colors" can be selected with sun reflectivity in mind to reduce roof temperatures up to 100°F. With several ceiling insulation options and insulated flush wall configurations, interiors are cozy, draft-free and ready for interior build-out.

Customization. Wick works with independent builders to customize each design around the needs of the buyer and local building codes. Wick Buildings' Licensed Professional Engineers can provide stamped plans for code approvals.

High-Quality Materials. High tensile steel (80,000 PSI) on the exterior, G-90 zinc coating for corrosion resistance, and a finish with Ceram-a-Star 1050 Paint System for long-lasting beauty.

Technology and Support. Our state-of-the-art 3D visualization and pricing tools allow you to design it right from the start. Your support team at Wick helps reduce your time spent in nonproductive activities. Sell more and make more money with Wick Buildings. **RB**



QUALITY, VALUE & SERVICE

Your customer expects the best from you.
You should expect the same from your building partner.
Join our team!

WICKBUILDINGS.COM 800-356-9682



BY LINDA SCHMID

mikeroweWORKS Foundation

This GOLD KEY SERVICE AWARD Winner Has Helped Over 1,500 Skilled Workers and Employers Connect



The mikeroweWORKS Foundation has earned the 2023 Gold Key of Service for the wonderful things it has done for the trade industries. Carpenters, plumbers, electricians, and more have had help from the Foundation in the form of the scholarships they have provided to these professionals when they were students of their respective trades.

Considering how short the workforce is on workers, this is no small feat. We asked Mike Rowe about this shortfall of workers and he gave us the number: 10 million. That's 10 million jobs that are unfilled in America today; 3 million specifically in the skilled trades.

That number is not an improvement; it has grown.

THE MIKEROVEWORKS FOUNDATION'S MISSION

"The Foundation started in 2008 as a PR campaign for about 2½ million good jobs — jobs that didn't require four-year degrees that nobody seemed to want," Rowe said. "Back then, Dirty Jobs (a show in which Mike Rowe works in a variety of jobs as an apprentice for a day to the folks who actually do the jobs) was the #1 show on cable, the country was going into a recession, and there was a lot of talk and headlines about the number of unemployed. The surprise

on Dirty Jobs was the number of opportunities employers couldn't seem to fill while people were talking as if we could get more people working if there were more opportunities. Yet it seemed that the opportunities were there. They just weren't the opportunities people were trained for or excited about."

Rowe realized that if he could share the stories of people who had trained, entered the trades, and felt their lives were better for it, it would speak volumes to people who might not have considered entering the trades. That's when he began putting together scholarships. He started "CRAP" (Collectibles, Rare And Precious) Auctions, selling mementoes from his years on the show that he had stored in his garage.

The scholarship opportunities are still available through the Foundation. They just closed their application period, but for the first time they will be offering a second scholarship application period in one year!

THE SCHOLARSHIP APPLICATION PROCESS

Rowe says that thousands of people will start the application process, but hundreds will not finish. Some people will say that it's



Mike Rowe and Scholarship Winners

On Dirty Jobs:

An interesting side note is that Rowe started Dirty Jobs as a salute to Carl Knobel, Rowe's grandfather. Rowe says Knobel only attended school through seventh grade, but by the time he was 30, he was a plumber, an electrician, and he could build or fix just about anything.

Rowe started the show with 30 dirty jobs in mind and once they had covered them, he thought the show was over.

But not so ... viewers sent in thousands of letters, saying such things as, "You think that job was dirty, you should see what my husband does for a living. Or my cousin. Or my friend."

Rowe believes that "Dirty Jobs" is probably the most honest TV show ever produced, with the possible exception of "The Gong Show."

"There are no scripts, no actors, no second takes. Just a guy getting paid to try doing a job ... It's a talk show on a factory floor, at a pig farm, in a sewer."

And so the show continues 20 years on, a celebration of work and the satisfaction that comes from a job well done, no matter how dirty.

The Foundation that Rowe started is a further tribute to his industrious grandfather, which goes to show how inspiring hard work and determination can be.

hard, but it's really not, according to Rowe. "You have to answer some essay questions, make a short video, provide some references, and sign a S.W.E.A.T. (Skill and Work Ethic Aren't Taboo) Pledge. It just takes some effort; you have to make a case for yourself." He added, "We ask questions people aren't used to answering."

Rowe is referring to questions about work ethics. The S.W.E.A.T. Pledge requires scholarship applicants to take responsibility for their own pathway, asserting such ideas as the best way to be successful in the workplace is to volunteer for every crappy job that comes up, do it with a smile, and be grateful for every opportunity.

"We want to identify the people who have the traits that we believe are needed to be successful in the trades, which is why we offer work ethic scholarships rather than purely needs based, academic, athletic, or artistic scholarships," Rowe said.

THE LIGHT COMES ON

In the first few years that the Foundation offered the scholarship, they had a hard time finding the applicants they sought, but it has gotten easier. That's for a number of reasons according to Rowe, including realizations brought about by the COVID pandemic.

"With the lock-down, people began to realize that the plumbers, the electricians, the HVAC people were not only busy, they were making a lot of money and they were setting their own hours. Perhaps this made our Foundation more relevant to people."

Scholarship Opportunities:

If you or someone you know could use a little help in getting trained for a job in the trades, check out mikeroweWORKS Foundation work ethic scholarship. The Foundation application process opens August, 2023. Go to: www.mikeroweworks.org/scholarship

WHO MAKES THIS POSSIBLE?

Of course, the Foundation doesn't do this alone; it takes a lot of donations from a lot of organizations and a lot of individuals. The donations range from \$10 to very hefty sums. Who are these people who donate money to help people get an education and a job, you may ask.

"People who are addicted to smooth roads, indoor plumbing, and electric lighting. People who realize their own civilized life is made possible by the trades, that's who makes our scholarships possible," Rowe said.

ADVICE FOR EMPLOYERS

To employers who are struggling to find employees, he has this to say: "Are you making use of the most persuasive elements you have?"

Rowe relates that when he and his crew have conversations with people who received scholarships five years ago, they unearth stories of workers who are making six figures welding. They have no debt and they are 28 years old.

"If you have happy employees, let them tell your story," Rowe said.

Telling stories is what makes change, Rowe stated. He expressed gratitude to *Rural Builder Magazine* for telling the stories of people who prospered by learning a trade. In turn, we thank Mike Rowe, Chuck Klausmeyer (Rowe's right-hand man), and all of the Foundation members and supporters for helping to rebuild the trades. **RB**

THE S.W.E.A.T. PLEDGE
(Skill & Work Ethic Aren't Taboo)

1. I believe that I have won the greatest lottery of all time. I am alive. I walk the Earth. I live in America. Above all things, I am grateful.
2. I believe that I am entitled to life, liberty, and the pursuit of happiness. Nothing more. I also understand that "happiness" and the "pursuit of happiness" are not the same thing.
3. I believe there is no such thing as a "bad job." I believe that all jobs are opportunities, and it's up to me to make the best of them.
4. I do not "follow my passion." I bring it with me. I believe that any job can be done with passion and enthusiasm.
5. I deplore debt and do all I can to avoid it. I would rather live in a tent and eat beans than borrow money to pay for a lifestyle I can't afford.
6. I believe that my safety is my responsibility. I understand that being in "compliance" does not necessarily mean I'm out of danger.
7. I believe the best way to distinguish myself at work is to show up early, stay late, and cheerfully volunteer for every crappy task there is.
8. I believe the most annoying sounds in the world are whining and complaining. I will never make them. If I am unhappy in my work, I will either find a new job or find a way to be happy.
9. I believe that my education is my responsibility and absolutely critical to my success. I am resolved to learn as much as I can from whatever source is available to me. I will never stop learning and understand that library cards are free.
10. I believe that I am a product of my choices - not my circumstances. I will never blame anyone for my shortcomings or the challenges I face. And I will never accept the credit for something I didn't do.
11. I understand the world is not fair, and I'm OK with that. I do not resent the success of others.
12. I believe that all people are created equal. I also believe that all people make choices. Some choose to be lazy. Some choose to sleep in. I choose to work my butt off.

On my honor, I hereby affirm the above statements to be an accurate summation of my personal worldview. I promise to live by them.

Signed _____ Dated _____

Signed *Mike Rowe* Dated September 2, 2013

■ OCTOBER METALCON REGISTRATION NOW OPEN

Registration is now open for METALCON 2023, the only global event dedicated exclusively to the application of metal in design and construction. This year's conference and tradeshow takes place at the Las Vegas Convention Center from Wednesday, October 18, through Friday, October 20, with pre-show workshops beginning on Tuesday.

Industry experts will present key topics in the show's education program, and companies representing the entire spectrum of metal in construction will showcase the latest products, solutions, and technologies covering everything from A to Z: accessories; building systems; coatings; construction technology; contractor tools; doors; fasteners; fenestration; framing; in-plant accessories; insulated metal panels; interior metal products; manufacturing equipment; ornamental/custom fabrication; metal roofing; rooftop products; solar; substrate material and walls.

New for 2023 is the METALCON Training Zone centrally located on the show floor and sponsored by Sherwin-Williams. Led by John Sheridan of Sheridan Metal Resources and his team of experts, the training zone will provide hands-on training featuring demonstrations and education (both in English and in Spanish) using a variety of mock-ups and materials including painted steel, aluminum, zinc, copper and other exotic materials. Training will focus on proper detailing and utilization of the right tools to enhance skills.

Also new this year is a Mergers & Acquisitions Essentials Workshop presented by PSMJ Resources, Inc., expert Karl Wolker. Topics include: Interested in growing your business through acquisition, but aren't sure where to start? Could merging or selling your business be the perfect exit strategy for preserving your hard-won equity and legacy? Geared toward business owners and executives, this foundational workshop will cover the



core principles driving the most successful transactions.

Admission prices range from \$110 to \$440, depending on how many workshops you choose to attend. Architects have a special arrangement called The Architect's Experience. For more information, visit www.metalcon.com.

■ ICC CODE-DEVELOPMENT PROCESS CHANGING FOR 2027 VERSION

The International Code Council is revising its rigorous code development process. The changes will take effect in 2024-2026 for the development of the 2027 International Codes (I-Codes) and will move the development process to an integrated and continuous three-year cycle.

In the new timeline, year one will include two Committee Action Hearings for Group A Codes; year two will include two Committee Action Hearings for Group B Codes; and year three will be the joint Public Comment Hearings and Online Governmental Consensus Vote for both Group A and B Codes.

The addition of the second Committee Actions Hearings in year one and two will foster a more in-depth vetting of code change proposals, allowing an opportunity for the committee members to review and evaluate the original proposals and consider the submitted responses. This also provides more opportunity for proponents to build consensus for their code change proposal and ensure the best version of their intended improvement to the

existing codes.

Additionally, with combined Public Comment Hearings in the third year, voting members are able to vote on all suggested changes to the next edition of the I-Codes at one time. The updated process also provides more opportunity for proposed new referenced standards to be developed and finalized on a consistent timeline regardless of the group (Group A or B) with which they are associated.

As part of the new process, volunteers on code development committees will now preside over the two Committee Action Hearings, one in the spring and one in the fall.

■ HOOVER TREATED WOOD PRODUCTS EXPANDS

Hoover Treated Wood Products broke ground on a new \$9M, state-of-the-art wood treating facility scheduled to open in late 2023 in Fairfield, Texas.

The plant will treat fire-retardant wood products to be used in new construction buildings throughout the region. The product, which is used to construct framing, sheathing for roofs and walls, will primarily be used in new multifamily and commercial construction.

"We are thrilled to expand our operations into Texas to service the booming commercial and residential construction industries," said Dave Gillrie, CEO, HTWP, the largest manufacturer of fire-retardant wood products in the United States, with 10 plants nationwide. This will be its first plant in Texas.



The Dolly Varden T&G rating allows for installation where a Class A is required. At left is the machine used for the “Steiner Tunnel” test method.



■ SHAKERTOWN T&G EARNS CLASS A RATING

Shakertown’s reinforced Dolly Varden T&G, with its clear vertical grain cedar face, passed ASTM E84 testing with a Class A flame spread rating. This designation allows the installation of a natural wood surface in interior applications where a Class A rating is required.

The testing was conducted at QAI Laboratories in Rancho Cucamonga, California, using the industry standard Steiner Tunnel test method. The Dolly Varden T&G with a Western Red Cedar face completed the test with a Flame Spread Index (FSI) of 25 and a Smoke Development Index (SDI) of only 80, earning the building product its Class A designation.

Shakertown has been developing reinforced cedar products since 1954, introducing the shingle panel in the same year. Shakertown launched the Dolly Varden T&G product in 2015 after four years of research and development.

■ SRS DISTRIBUTION EXPANDS TO OHIO, KENTUCKY WITH MARSH BUILDING PRODUCTS

SRS Distribution Inc. announced it has acquired Marsh Building Products, Inc., a leading distributor of residential and commercial building products.

Headquartered in Fort Thomas, Kentucky, Marsh was founded in 1989 by brothers Ken & Mike Middleton and is run today by President Patrick McNickle. The company operates out of eight facilities across Ohio and Kentucky and

currently employs a team of about 130 people. McNickle will stay aboard and the Marsh name will, too.

“(Marsh) adds considerable complementary product volume to our current footprint in the Midwest, which will enhance our ability to provide a one-stop-shop experience to both new and existing customers throughout the region,” said Dan Tinker, President and CEO of SRS.

SRS Distribution is a building products distributor with more than 700 locations across 44 states.

■ VINYL INSTITUTE CREATES RECYCLING GRANT PROGRAM

The Vinyl Institute (VI), a U.S. trade association representing the leading manufacturers of vinyl, has announced the formation of VIABILITY, a first-of-its-kind, industry-wide recycling grant program aimed at accelerating post-consumer PVC recycling across the country.

The grant program will make available up to \$1 million in funds each year over the next three years from four PVC resin manufacturers in the U.S. (Formosa, Oxy, Shintech, and Westlake).

Individual grants are available to qualifying industry collaborations such as trade associations, material recovery facilities, construction and demolition waste facilities, recyclers, or colleges and universities in amounts up to \$500,000. The funds may be used for the purchase of equipment, process investments, research and development, educational programs, and program management that supports long-

lasting and sustainable recycling of vinyl products. A seven-member grant committee of the Vinyl Institute will choose recipients of the grants.

Learn more about the program at www.vinylinfo.org/recycling.

■ CSFI PUBLISHES EPD FOR SPRAY FOAM INSULATION

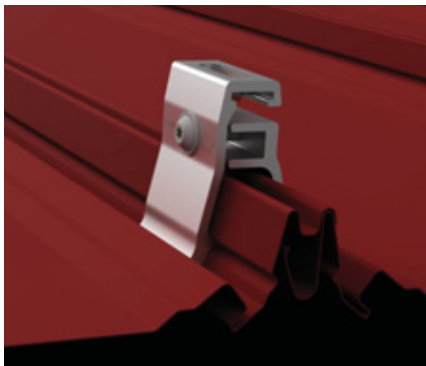
Carlisle Spray Foam Insulation (CSFI), a leading manufacturer of spray polyurethane foam insulation products in North America, announced the publication of a third-party verified Environmental Product Declaration, or EPD, for its complete spray foam insulation product portfolio.

A first for the spray foam industry, this product-specific TYPE III EPD assesses the total lifecycle environmental impact of open-cell spray foam insulation and closed-cell spray foam based on hydrofluoroolefin (HFO) and hydrofluorocarbon (HFC) blowing agents as well as CSFI’s new ultra-low global warming potential (GWP) products: SealTite™ PRO HFO and SealTite ONE. By publishing the spray foam industry’s first EPD, CSFI underlines its commitment to help deliver a more sustainable future, making it easier for architects and builders to specify energy-efficient products with a low environmental footprint.

EPDs equip specifiers with an objective, independently produced report that analyzes the energy use and environmental impact of all phases of a product’s life—from raw material extraction to end-of-life. CSFI partnered with Sphera, a leading provider of Environmental, Social and Governance (ESG) performance, data, and consulting services, to conduct a Life Cycle Assessment and Underwriters Laboratory (UL) and independently certify and publish the results.

The study showed ultra-low GWP products SealTite PRO HFO and SealTite ONE have a GWP that’s 84 percent lower than HFC products and 33 percent lower than the spray foam industry average for low GWP alternatives. **RB**

BY RURAL BUILDER STAFF



■ S-5! UNVEILS NEW CLAMP FOR RIVERCLACK PROFILES

S-5!, the inventor of engineered, manufactured, metal roof attachments, introduced its new S-5-RC™ clamp for attaching a wide range of rooftop accessories to the Riverclack® metal roof profile. The two-piece design of the S-5-RC interfaces with the rib geometry and creates a mechanical interlock strong enough to mount most rooftop applications with certified holding strength, protecting the roof from corrosion and preserving the metal panels' thermal cycling characteristics.

Applicable for small- and large-scale industrial, commercial and institutional projects, the clamp can be installed anywhere along the seam for placement flexibility. Installers can utilize the S-5-RC with rails or pair the clamp with the S-5! PVKIT® solar solution for streamlined rail-less and penetration-free solar mounting to save time and money.

Made of high-tensile structural aluminum to match Riverclack's long-lasting performance, the S-5-RC requires no maintenance or reinspection and is warranted for the life of the roof.

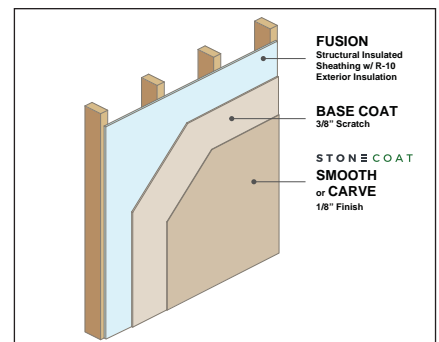
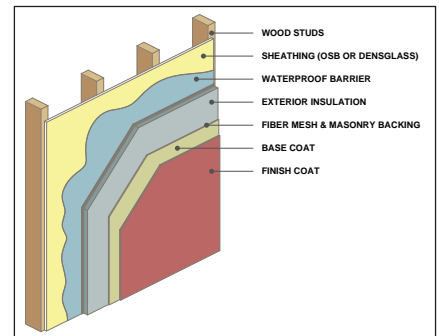
■ ZIRCON STUD FINDERS THEIR MOST ADVANCED EVER

For decades, stud finders have been designed based on capacitive technology that identifies changes in density behind the walls. While this technology can indicate the location of wood stud framing, it also discovers metal, plastic, wiring, and other objects in walls just as easily, often creating "false positives."



For professionals and DIYers, this innovative technology will provide a more accurate representation of what is behind the wall and significantly improve confidence that what is detected is truly a wood stud. The benefits are significant: minimized rework, less damage created, and increased safety. The latest invention is Zircon's Wood Stud SuperScan® with Target Control® Technology + FILTERz™. By analyzing the complex data streams from multiple sensors and controlling the result using sophisticated intelligence, the stud finder finds wood studs and filters out metallic objects, such as plumbing, conduit, straps, brackets, screws, protector plates, or ductwork in the wall. Additionally, the technology alerts the user to the presence of other low signal-strength, non-metallic targets, like plastic pipe, PEX tubing, and wiring.

A new and improved user interface provides an intuitive "go/no go" indication in response to what is being sensed. With a new haptic vibration and a patented Spot-Lite® Pointer that shines an arrow-shaped beam on the wall, users can clearly understand the target's location and areas to avoid.



The traditional wall or panel, top, and the new StoneCoat FUSION system, above.

■ NEW STONECOAT PANEL REPLACES FOUR LAYERS

StoneCoat has debuted a new FUSION system showcasing a single panel that replaces four layers of materials used in traditional exterior wall systems — exterior insulation, OSB sheathing, waterproof and vapor barriers, and metal lath.

FUSION'S structural insulated sheathing and integrated masonry backing are compatible with most exterior claddings. Their R10 insulation helps meet new energy code requirements, and FUSION also offers up to R30 insulation with 6-inch thickness. The panels also resist cracking, rotting, and mold compared to traditional building materials. The panels are lightweight, making installation faster and easier. FUSION is also a sustainable, carbon-neutral product, as the laminate is made from recycled petroleum products, making it easier for builders, developers, and architects to meet environmental requirements and gain LEED points.

The FUSION panel is part of the StoneCoat building system.



■ **WEATHER SHIELD®
EXPANDS VUE COLLECTION™
WITH HINGED PATIO DOOR**

Weather Shield® recently expanded its VUE Collection®, an ultra-modern, all-aluminum product line, to include the new Hinged Patio Door. The new door system joins with the Collection's existing Multi-Slide Patio Doors to create glass gateways that combine expansive outdoor views with the ability to maximize space

and seamlessly blend into most room configurations. Available in customizable heights up to 12' feet tall, they are also constructed with a unique polyamide design that helps prevent thermal bowing in addition to promoting exceptional thermal and structural performances.

■ **FECON DEBUTS FMX28
BULL HOG® COMPACT
EXCAVATOR MULCHER**

Fecon LLC, a manufacturer of heavy-duty site preparation attachments and forestry accessories, recently debuted the FMX28 Bull Hog® compact excavator mulcher attachment. Capable of mulching overgrowth, underbrush and small trees, the FMX28 attachment offers a versatile solution for clearing property lines, pastureland, real estate lots, ditches, trails, fencerows and invasive species, and more.

Paired with 3.5- to 8-ton excavators, the compact package makes it easy to access traditionally difficult-to-reach places with precision — making it a perfect fit for owner-operators, rental centers, and right-of-way maintenance.

The excavator-mounted FMX28 allows for surgical precision in vegetation management, enabling the removal of a single tree in a group or even specific branches that need to be trimmed back from obstructions — an ability traditional skid-steer mounted mulching heads can't offer. Unlike other units which are simply shrunk down from a larger design, the FMX28 features a design purpose-built and optimized for standard flow excavators that are 3.5- to 5-tons and can operate with as little as 12 gpm, ensuring exceptional performance in demanding site clearing and mulching applications. **RB**

Check Out Our Digital Magazine Websites

www.ruralbuildermagazine.com

www.framebuildingnews.com

www.readmetalroofing.com

www.rollformingmagazine.com

www.garageshedcarportbuilder.com

www.roofingelements magazine.com

Developing a New Product Line

What it Took to Get Plyco's Victory Vinyl Windows Across the Finish Line

PLYCO IS A RECOGNIZED NAME in construction. Their aluminum windows have been a go-to product for post-frame builders and contractors for decades. As times and materials change, however, the industry requests more choices and Plyco strives to please. They are on the brink of delivering their new window line to the post-frame world. But what does it take to get a new product line to this jumping off point?

IT BEGINS WITH AN IDEA

With vinyl becoming more popular, management began realizing several years ago that their customers would be interested in a vinyl line. However, vinyl had traditionally been a lower quality window choice, and that was not what they had in mind, according to Tom Granitz, Vice President of Sales Marketing. They wanted a line they could be proud of. Of course, when contemplating new product development, one of the first things a company usually does is talk to their customers, and that is what they did.

"We spent a lot of time homing in on the exact product that was right for our customers, based on the details of what they think, want, and need," Granitz said.

That contemplation period began approximately three years ago. It wasn't until about a year and a half later that they made a commitment to developing this new line. Once that happened, the move forward was multi-faceted.

IT'S A GO!...NOW WHAT?

The Plyco team had many pieces of the puzzle to fit together once they decided to embark on this journey. They started by looking at products the competition had in the marketplace, considering their pros and cons, and comparing them to the wish list they had compiled based on discussions with their customers.

Functions requested by customers included horizontal and vertical sliders as well as fixed windows. White, clay, and the increasingly popular black were color options they specified. As far as trim, many customers wanted the popular Step-Saver option along with the traditional nail fin and no nail fin options.

With all of this information in mind, they began to investigate product components, such as high quality dyes, and frame composition. Quality in a frame is driven by the extruder and

the chemistry, including the amount of recycled material and the titanium dioxide content which helps keep the color true due to its ability to act as a UV filtering ingredient. The chemical makeup they wanted would have good color retention, and wouldn't warp or crack over time.

THE CHECKLIST

The development team had to find an extruder that provided the quality they were looking for and it was important to everyone involved that the supply chain did not extend to far shores, which, as the industry has seen in the last few years, can complicate processes. The company found what they were looking for with Rehau, North America. They are a German, multinational company with a manufacturing plant in Mexico.

Plyco's engineering department, under Al Geisthart, created CAD drawings based on Rehau's drawings, adjusting for the post frame industry and engineering for the sizes they planned to offer.

Since the extrusions would come in a lineal form, 188" long, the team had to look at what equipment they would need. These included three main types of equipment: accurate saws, welding-melting for rebonding corners, and a computer-controlled cleaner that cleans up welding residue. Each of these items needed to be researched, decided upon, and purchased. Meanwhile the facility

staff had to start preparing the space for these new processes.

Then there is the question of who can run these processes. Employees had to be sourced.

When the new machinery came in, the group had to calibrate, program, and learn how to use them.

Once all of these pieces came together, the next step was ...

TESTING...1, 2, 3

"When it comes to testing," Granitz said, "what people are interested in is a third party, a disinterested tester who verifies that what you say about your product is true, so that is our usual



uPVC Series 190 Single Horizontal Slider (HS) - Argon Filled - Warm Edge Spacer								
Glass Type (1)	Frame Type	Total Unit (2)/(5)			Visible Light Transmittance (3)/(5)	UV Transmission Glass Area	AAMA/WDMA CSA 101 / I.S.2 A440-17 NAFS-1 HS-LC-PG30 (72" x 42" Test Size)	Air Infiltration cfm/sq.ft.
		U-Value	U Value Glass Center	SHGC Solar Heat Gain Coeff.				
3/4" Lo-E 272 Insulated DS (3mm) Glass	uPVC	0.29	0.25	0.34 / 0.30	0.58 / 0.52	16%		0.11
Structural - NAFS Results: Maximum Size Tested 3/6 x 6/0; i.e.) 42 x 72 (1,067 x 1,829); Performance Grade 30 (30 psf design pressure)								

uPVC Series 190 Single Hung (VHS) - Argon Filled - Warm Edge Spacer								
Glass Type (1)	Frame Type	Total Unit (2)/(5)			Visible Light Transmittance (3)/(5)	UV Transmission Glass Area	AAMA/WDMA CSA 101 / I.S.2 A440-17 NAFS-1 H-LC-PG30 (42" x 72" Test Size)	Air Infiltration cfm/sq.ft.
		U-Value	U Value Glass Center	SHGC Solar Heat Gain Coeff.				
3/4" Lo-E 272 Insulated DS (3mm) Glass	uPVC	0.29	0.25	0.34 / 0.30	0.58 / 0.52	16%		0.11
Structural - NAFS Results: Maximum Size Tested 6/0 x 4/8; i.e.) 71 x 55 (1,797 x 1,397); Performance Grade 35 (35 psf design pressure)								

procedure. with most of our product lines.”

Window testing standards are accredited by the AAMA (American Architectural Manufacturers Association). This creates a level playing field for companies, both big and small, to have their windows accredited. All windows face the same testing criteria. Third party testing groups come into the facility and test the windows to verify that they meet the criteria for the class of window in question. The quality control process is completed in the plant and is done according to defined criteria.

Each window type has a defined “gateway” set of minimum requirements for each performance class: R (residential), LC (Light Commercial), CW (Commercial Windows), or AW (Architectural Windows). They must achieve minimum performance grades for air leakage resistance, water penetration resistance, and uniform load.

One of the critical tests is the window’s U-value; how well does the window prevent the movement of cold or heat through the window. In general, this rating can vary from .20 to 1.20, the lower the U-Value the better. Overall performance and the window’s center are tested.

Structural performance of the frame is tested for bending, breaking, and bowing.

Once trim packages are applied, AAMA’s CS 101 testing is redone on the windows to determine air and water

infiltration based on applied pressure in pounds per square foot.

Windows are mounted in a wall and air is sucked through while readings are taken to determine how much air passes through. The water test is a similar process; water is applied along with air pressure to determine how well the window will keep water out.

The structural test simulates wind gusts of over 110 miles per hour.

Of course, different products will have differing requirements and expenses attached, but, Geisthart warned, “testing is costly and extensive.”

CHALLENGES

One of the most challenging aspects of this process was time spent waiting for equipment needed for stamping, welding, and punching.

Originally the management team expected a 6-9 month time period to develop, test, and get their new product line on the market. Eighteen months later, Granitz attributes supply chain issues as the biggest reason for the delay.

The pool of available employees is challenging for everyone at this point in time, but when you are trying to launch a whole new product line, you simply have to source more people.

Granitz says that the labor pool is pretty small to begin with, and what makes it extra challenging is that you are looking

for someone who is not just going to show up and do the minimum necessary; you need someone who will be engaged. While the equipment automates a lot of the work, you still need someone who calibrates machinery, cuts material, does quality inspections, and does these things well. You want people who will not skip steps, people who take pride in a job well done.

Plyco’s expectations for new hires does help them to meet their goals. They assume that none of their new employees will have experience with window manufacturing; they take people who want to work and train them into the positions they need.

TIMELINE ADVICE

Part of a successful rollout is planning, and Grantiz feels that timelines are different since all of the supply chain issues and labor pool issues began. “If you think something will take 30 days, plan for 60,” he said. “If we had factored these things in, we’d be right on time.”

ABOUT TO TAKE THE LEAP

The Victory Vinyl Window Line is just about ready to make its debut. It was shown at the NFBA Show, so some customers are aware and demand is starting to build. Granitz says that they are going to take the release easy, as in they will probably start with limited sizes and trim packages to begin with, and maybe just a few colors. Some sizes and colors are currently being pre-built, but they do not know how long this stock will last and they don’t want to cause an immediate backlog.

Geisthart says the release of Victory Vinyl is just phase one.

“Everything was done with an eye on future expansion,” Geisthart explained, “There will be future phases based on customer demand. Different colors, functions, extrusions — we will go wherever the customer wants,” he said.

RB



DELIVERANCE
ANTI-SHOCK SAFETY HAMMERS
"OUCHLESS"

ANTI-SHOCK SAFETY HAMMERS

Drive Nails & Spikes Faster!
Reduce Repetitive Use Injuries

www.DeliverancePoweredSafetyHammers.com

Acu-Form Roll Forming Equipment
MANUFACTURER OF ROLL FORMING EQUIPMENT

PHONE: (330) 674-4003 EMAIL: WAYNE@ACU-FORM.COM
FAX: (330) 674-4035 WEBSITE: ACUFORMEQUIPMENT.COM



Aztec Washer Company



MASTER FLASH®
ROOFING • PLUMBING • ELECTRICAL • HVAC • SOLAR

From the smallest to the **LARGEST**,
the most complete line available.

Pipe Range: Fits: 1/8" to 39-1/2" Pipes
Base Range: 2-1/4" to 44" (1 meter)

1-800-WASHER 5 (927-4375) • Ph: 858-513-4350 • info@aztecwasher.com • www.aztecwasher.com

DMI = BUILDING INVESTMENT PROTECTION



Let DMI complete your building project
with Code Approved & Warrantied:

HWB & PANGAKE FASTENERS • ANCHORS • PIPE FLASHINGS
REFLECTIVE INSULATION • POLYCARBONATE PANELS
SOLID & VENTED FOAM CLOSURES

www.directmetalsinc.com 855-800-8878

Pre-Cut Rollformers
Post-Cut Rollformers
Trim Folders
Trim Rollformers
Slit & Recoil Lines
Controls

**Your Single Source
Equipment Provider**



THE BRADBURY GROUP

1.620.345.6394
bradburygroup.com

Everlast Roofing, Inc.

OUR NAME SAYS IT ALL

PROFILE OPTIONS

EVERLAST II EVERDRAIN

WHY EVERLAST?
AZM® with Activate Technology
COLORBOND® Paint System
Cut Edge Corrosion Inhibitor (CECI)
Heat forming
Most corrosion resistant panel in the industry

AZM ACTIVE TECHNOLOGY **Colorbond**

Lebanon, PA 10 Enterprise Court Lebanon, PA 17042 Howe, IN 7180 N 050 E Howe, IN 46746 Bridgton, ME 24 JR Mains Drive Bridgton, ME 04009 Orwell, OH 161 Grand Valley Ave Orwell, OH 44076

FOR MORE INFORMATION CALL: 888.339.0059 OR VISIT US AT WWW.EVERLASTROOFING.COM

Golden Rule
FASTENERS

**QUALITY PRODUCTS
COMPETITIVE PRICES
& MOST ORDERS SHIP THE SAME DAY**

• Screws • Closures • Ridge Vent
• Pipe Flashings • Butyl Tape • And much more!

Ph: (334) 283-4030 - FAX (334) 283-4032
info@goldenrulefastenersinc.com - www.goldenrulefastenersinc.com

PREMIUM QUALITY
ROLLFORMING MACHINERY



PANEL LINES CZ PURLIN LINES
TRIM LINES CHANNEL LINES
SLITTING LINES ROLL UP DOOR LINES

WWW.ASCMT.COM TEL: (509) 534-6600

Productive Trim Solutions



Variobend
USA

SLINET
RSCO machines



877-289-3030
info@hersheysmm.com
VariobendUSA.com

I-BEAM SLIDING DOORS



MADE IN USA

DOORS THAT WORK!

960 E Cemetery Ave, Chenoa, IL 61726
815-945-3667 • ibeamdoor.com
ibeamdoor@gmail.com



Manufacturers of Residential & Commercial Garage Doors



KEYMAR MFG.

Arthur, IL. 61911
sales@kevmar.net
217.543.2828

LELAND Specialty Fasteners

Master Grippers® • Grippers MDP®

Master Drillers®

Master Tappers®

Master Deckers®

Our Powder Coated paint system allows us to match your painted steel supplier's warranty.

LELAND INDUSTRIES INC.

Made in Canada

1.800.263.3393
www.lelandindustries.com

UNITED STEEL SUPPLY

STEEL PRODUCTS FOR THE METAL ROOFING & METAL BUILDING INDUSTRY

Understanding Superior Service



512-263-0954 • unitedsteelsupply.com

smartbuild systems

THE COMPLETE DESIGN SOFTWARE FOR POST FRAME AND ALL METAL BUILDINGS!

SmartBuildSystems.com
303.579.6277

PROTECTION YOU CAN COUNT ON!



SSG Classic Snow Stoppers
Made of all stainless steel products.



RMG Premium Snow Stopper
Made out of 14-gauge stainless steel.



Contact us and we can give you all the details!
717-209-0418

WE WELCOME WHOLESALERS!

CARPORT FRAMING TUBE MILLS



FORMS
2.00"
2.25"
2.50"

UCG
UNIVERSAL CONTROLS GROUP
PERRYSBURG, OHIO USA

(419) 872-2364 www.utubeonline.com



Levi's
Scan to view our Snow Defenders!



Request a Sample!

WE ADD THE VALUE TO THE METAL



- Automation Systems
- Metal Construction Rollformers
- Coil Processing
- Forming & Fabrication
- Recondition Existing Machines

620-382-3751
www.marionmanufacturing.com

RECOILING
 CALL. CUT. DONE.



METAL EXTERIORS
 ROOF AND WALL SYSTEMS

- Precision slitting
- 36 color options
- Custom blanking
- 26 gauge steel

CALL US: 419-896-2200 metalexteriors.com

MATERIALS TRAILER

DESIGNED FOR METAL ROOFING AND POLE BARN INDUSTRIES, TRANSPORTING BUILDING SUPPLIES AND RAW MATERIALS



Pine Hill
 Driven by You.

PineHillTrailers.com | 717.288.2443



PSI Green Post™
 Planet Saver Industries

THE MOST AFFORDABLE, ALL-IN-ONE SOLUTION FOR IN-GROUND POST DECAY AND UPLIFT RESTRAINT

P (610) 377-3270
www.planetsaverind.com Made in the USA

FASTER THAN EVER



SAFE-WAY
 GARAGE DOORS

CALL US TODAY!
(877) 775-1670
SAFEWAYDOOR.COM *OUR LEAD TIMES WILL BLOW YOU AWAY!*

WRAP THEIR BUILDING UP WITH WARMTH! **NEW!!!**



FAST • EASY • LOW COST

Retrofit Clip

www.retrofitclip.com • retrofitclip@hotmail.com
 1-800-431-9661 • Manitoba, Canada

Performance in Post Frame



PLYCO
 CORPORATION

800.558.5895 • plyco.com



SUPPLYING OUR DEALERS THE BEST MATERIALS & SERVICES FOR OVER 45 YEARS!

Commercial • Equestrian
Suburban • Industrial

CONTACT US TODAY!
800-548-6765
system@stockadebuildings.com



2024
GARAGE • SHED • CARPORT
BUILDER SHOW

KNOXVILLE, TENNESSEE
JANUARY 24-25, 2024

FOR INFORMATION CONTACT MISSY • 920-216-3007

4TH ANNUAL
Rollforming Construction Show

SEPTEMBER 27 & 28, 2023

Duke Energy Center
Cincinnati, OH

FOR MORE INFORMATION
CONTACT MISSY BEYER:
missy@shieldwallmedia.com
920-216-3007

REGISTRATION NOW OPEN!

www.constructionrollformingshow.com

DID YOU KNOW?

It costs less to buy a Business Card ad than it does to have cards printed.
We even give your "cards" to more than 40,000 potential customers.



**Actual Card Size
(3.5" x 2")**

FOR MORE INFO CONTACT GARY REICHERT:
gary@shieldwallmedia.com • 715-252-6360





This article is from the July/August 1975 issue of Farm Building News.

FOR 50+ YEARS RURAL BUILDER has been providing the news, trends and resources builders need. Prior to the January 1974 edition, "Farm Building News," as it was called, was in newspaper form. However, those old papers are not to be found in our Shield Wall library. We would love to see some of them... it's our lost heritage! If you have one/some of them please drop a line to me: rocky@shieldwallmedia.com. We'll publish a brief news story about you, your organization, and your projects in return!



1975 Dream Barn Becomes Reality

By Wally E. Schulz

FOR YEARS, JOE ROWBOTHAM OF

Walworth, Wisconsin, dreamed of just how he'd build his dairy barn of the future.

Sure, it was just a dream until one day last summer when fire destroyed his old barn, and his dreams were soon to become a reality.

"The fire started in the haymow, and it was a lucky thing the cows weren't inside at the time," said Rowbotham. "The barn was totally destroyed, so it meant we had to rebuild. It was then I incorporated all the new ideas I had been dreaming about into the building plans."

The dairyman decided to put up a one-story barn and store his hay and straw in a separate building. This is located away from the barn because Rowbotham didn't want his barn to go up in flames if a fire started in the hay again.

Thiele Bros. of Allen Grove, Wisconsin, was contracted to build the barn. Plans were drawn up by Vern Voss of Starline's farmstead planning service, with Rowbotham suggesting his original ideas here and there.

The one-story, 232-ft.-long building is equipped with 72 Starline stanchions.

EXTRA-WIDE MANGERS

Mangers ahead of the cattle are constructed extra-wide to make feeding easier. "There aren't the skinned knuckles and cramped quarters to work in with the feed cart," said Rowbotham. "We are putting clay tile for 2 ft. in front of each cow to facilitate manger cleaning."

One of the unique features of the barn is that it was built at an angle; the cow stalls become longer as they reach the other end. For instance, the first stall on one side measures 5 ft. 8 in., while the stall on the other end of the barn measures 6 ft. 4 in.

"This method allows us to put the smaller cows in the smaller stalls and the larger ones in the larger stalls," said Rowbotham. "I have my Holstein cattle on the other side of the barn where the stalls are longer."

Placed over the back of each milk cow is an electric training bar which teaches the cow to deposit her droppings directly into the gutter. She can't arch her back upwards and thus deposit them on the stall floor instead of in the gutter.

Running the full length of the barn is a board located directly above the rear of



The extra-wide alleys make it easy for Joe when he sweeps out with the power equipment.

the cattle on each side of the center drive. On this board are kept the individual records of each milk cow. They tell the cow's birthday, day bred, service sire's name, due date of calf, day freshened and best record in milk ever made.

INDIVIDUAL FEEDING RECORDS

"On the backside of this board we keep the number of scoops of feed to be fed each individual cow," said the dairy farmer. "It can be seen from the feed manger in front of the cows as the herdsman feeds them."

There is a total of 36 Starline lever stalls for the bigger cows to use. Eighteen are tie stalls which are most practical for the registered herd of Jerseys; the other 18 are adjustable stalls for first-calf heifers.

At the end of the barn are six box stalls measuring 12 x 14 ft., which are used by the grandma cows, sick animals, and as maternity stalls.

Tilting mangers are constructed in this area to make feeding chores much easier. "We can tilt the manger to the floor and quickly clean it out," said Rowbotham. "Then it can be lifted out and snapped back into feeding position."

The milk line in the barn is made up of two loops, so it is higher and out of the way in the feeding alley and lower and more accessible in the working area.

EXTRA-WIDE ALLEYS

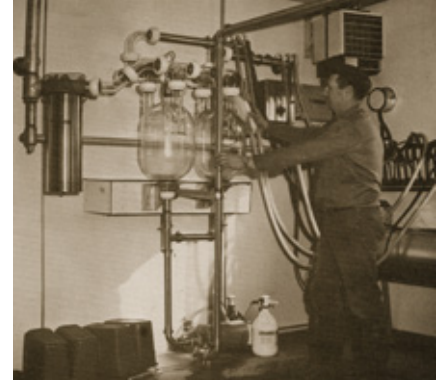
Farmers are attracted by 6-ft. wide alleys in the barn which accommodate power feeding and sweeping equipment. Small alleys would not allow motorized equipment to pass through.

Seven 22-in. Starline fans ensure good ventilation. In the winter, fresh air is taken into the attic. There it is tempered and brought into the barn through ceiling louvers at the west end.

"Air is then exhausted through the fans on the east wall," says Rowbotham. "During the summer months, the fans will pull the fresh air through the barn from 20 open windows on the west wall. Twenty windows located on the east wall will usually be kept closed."

The 22 x 40-in. windows are all fitted with screens to eliminate the fly problem. They can be opened during the summer and do not cause drafts on the cattle.

Visitors are awed and amazed at the inside walls of the modern barn. The walls are lined with brown chip wall pan-



DeLaval equipment is in the milking parlor. Note the Marlite panels on the walls.

els which are 4 x 8-ft. sections, ¾-inch thick. Chips in the paneling fade from dark brown to lighter tan. The surface was sealed and then varnished.

"We'll wash it with a power washer when it becomes dirty," said Rowbotham. "It won't take long to clean it. Other farmers really like this modern wallboard in the silo room, office, utility rooms and throughout the inside of the dairy barn."

On the east side of the barn are two 20 x 55 ft. Madison silos, a feed room, and an outside feeding area where manger-sweeps are fed to the beef cattle.

"We don't waste a thing in the mangers of the dairy cattle," said Rowbotham. "We just sweep 'em up and feed 'em to the beef cattle who really relish the leftovers."

The south end of the barn has the cow exit and a 28 x 40-ft. manure storage room with shed space for inside spreader storage. The exercise yard for the cattle is 60 x 128 ft.; they are let out for about an hour each day.

Rowbotham has a total of 600 acres of land in the farm and has a herd of 18 registered Jersey cattle and 20 heifers, plus 180 Holstein cattle.

The dairyman's barn is winning a lot of praise from the surrounding farmers.

"I've tried to put a lot of time-saving ideas into my new barn," said Rowbotham. "A dairyman has a lot of time to think about new ideas to add to his barn while he's doing his chores over the years. I did, too, and I've now had a chance to put them to the test." **RB**



ALL PHOTOS SUBMITTED BY TANDO BUILDING PRODUCTS.

Historic Farmhouse Made Modern

Affinity Farms in New York Utilizes Comfort Windows & Doors, TandoStone

AFFINITY FARM IN SKANEATELES, NY is a historic house on an Equestrian Training Facility offering professional instruction in hunters, jumpers and equitation. Founded by Kim and Bill Allan in 2006, the circa 1900 structure and horse farm is just three miles up the hill from Skaneateles Lake.

The Village of Skaneateles, the Iroquois term for “long lake,” is an area rich in history and scenic landscapes, first settled by veterans of the Revolutionary War through land grants. The village attracts tourists and history buffs as part of the Finger Lakes region. The Allans found it to be the perfect setting for their rustic horse farm. An equestrian champion herself, Kim is certified as a US Hunter Jumper Association Trainer, Centered Riding Instructor and Founder of the Affinity Farm Interscholastic Equestrian Team. Bill Allan is the Principal at Baker High School in Baldwinsville, NY, and instructor of equestrian programs at Affinity Farm.

According to Kim, the home was in



need of an update to increase its curb appeal. “We had a vision to give the house a Modern Farmhouse look to tie in with the equestrian center,” she said. Bill was a bit skeptical at first and when the couple first pulled into the driveway, Bill remembers saying, “Oh man, what a dump, and Kim said wow it’s beautiful. She could envision what it could be and all I saw was the

amount of work it was going to take.”

To achieve their dream, they contracted with Comfort Windows and Doors of Syracuse, one of Upstate New York’s leading remodeling companies, to turn their classic home into a Modern Farmhouse. It’s a style made popular over the past several years. Comfort Windows and Doors had previously expanded their indoor riding

THE DETAILS:

Building: Affinity Farms
Equestrian Training Facility,
Skaneateles, N.Y.

Building Size: 80' by 200'

Shingles: Alside Classics –
Cape Cod Gray

Siding: Alside Glacier White
Board & Batten

Cladding: Tando Composites
TandoStone - Stacked Stone
(Glacier Bay color)

Entry Door: Signet ProVia

Windows: Comfort Windows
& Doors handcrafted windows

Trim, Fascia: Alside Siding
Products



TandoStone was used to clad the foundation walls and added inner accents to the porch.



arena and upgraded the horse barns so they felt confident they could easily manage their home's exterior transformation.

For the new exterior, the Allans chose a white vertical siding for a board and batten look, along with upgrades to the windows and doors, deck and porch. "This is the classic white farmhouse with black windows and trim that you see on TV

home shows," said Jason Passante, Corporate Marketing Director for Comfort Windows & Doors. "Kim had the vision for the farmhouse and we were able to meet it as the project developed."

Jim Brewster, Comfort's Product Specialist on the project, was also familiar with TandoStone, leading to the foundational cladding of TandoStone's Stacked

Stone style in Glacier Bay color, extending it up 5 feet on the foundation to break up the siding.

The Allans' Affinity Farm fulfills their equestrian dream that harkens back to its 1900s roots, but with modern materials that add durable beauty to ensure this Skaneateles jewel lasts well into the future. **RB**



CSI: Mid-Year State of the Industry Preview

Shield Wall Media, with help from METALCON and the MCA, has completed the mid-year State of the Industry Survey. The purpose of the mid-year survey is to measure changes in market sentiment from the previous survey. Rather than focus on an entire year, this survey focused on year to date and predictions for Q3 and Q4 2023.

WITH A FEW EXCEPTIONS, THE general expectation is still positive, but slightly less so than in the October 2022 survey.


Rural Builder has the largest cross-section of the building industry of any of our publications.

The bright spots are Residential-Single Family, Agricultural and Industrial. All are predicting modest gains.

Interestingly the perceived sales metrics did not appear to directly translate to a view of the “General Business Climate.” For example, Industrial showed a 10% improvement in “Increased Profitability” category and a 5% decrease in the view of the “General Economy.”

There is a significant difference in the view toward “General Business Climate” of the market segments covered by Rural Builder and the “All Respondents” category. Rural Builder subscribers had a 10% brighter outlook than All Respondents and several categories were significantly more optimistic.

There will be a longer, more detailed article about this survey in the September issue. **RB**

 For more titles, check out Shield Wall Media online: www.shieldwallmedia.com

Percentage of respondents predicting future increased gross sales	October 2022 Survey	May 2023 Survey
All respondents	52%	45%
Post Frame	49%	41%
Metal Buildings	57%	35%
Wood Stick Built	52%	40%
Residential Single Family	49%	57%
Residential Multi-Family	67%	51%
Agricultural	64%	65%
Commercial	51%	53%
Industrial	38%	54%
Rural Builder Subscribers	54%	44%

Percentage of respondents predicting future increased units sold	October 2022 Survey	May 2023 Survey
All respondents	45%	41%
Post Frame	45%	34%
Metal Buildings	53%	39%
Wood Stick Built	47%	38%
Residential Single Family	42%	49%
Residential Multi-Family	52%	49%
Agricultural	50%	52%
Commercial	40%	49%
Industrial	38%	54%
Rural Builder Subscribers	48%	33%

Percentage of respondents predicting future increased profitability	October 2022 Survey	May 2023 Survey
All respondents	43%	39%
Post Frame	35%	39%
Metal Buildings	50%	42%
Wood Stick Built	40%	38%
Residential Single Family	42%	45%
Residential Multi-Family	66%	48%
Agricultural	47%	47%
Commercial	41%	44%
Industrial	38%	48%
Rural Builder Subscribers	42%	37%

Percentage who believe the general business climate in the US will improve	October 2022 Survey	May 2023 Survey
All respondents	24%	16%
Post Frame	19%	30%
Metal Buildings	28%	32%
Wood Stick Built	19%	39%
Residential Single Family	26%	31%
Residential Multi-Family	50%	48%
Agricultural	16%	27%
Commercial	23%	28%
Industrial	38%	33%
Rural Builder Subscribers	24%	27%

GET MORE INFORMATION ABOUT PRODUCTS & SERVICES SEEN IN THIS ISSUE. HERE'S HOW:



If you are looking for more information from companies featured in this issue, fill out this form.

Mail the completed form to us, and we will have those companies get in touch with you. There's no need to fill out multiple forms; we'll do the legwork for you.

Name (please print) _____

Signature (required) _____

Company _____

Address _____

City _____ State _____ Zip _____

Telephone (_____) _____

E-mail _____ Date _____

Please check one or more boxes to subscribe FREE/Renew for 3 years:

- Garage, Shed & Carport Builder Magazine*
 Frame Building News
 Metal Roofing Magazine
 Rural Builder
 Rollforming Magazine
 Roofing Elements Magazine
 Metal Builder

I would like to receive my subscription: By Mail Digitally

Check this box if you wish to receive our Construction Express newsletter and offers from our partners.

Email address is required to receive newsletter.

CONTACT NAME & EMAIL (OR) NAME & PHONE NUMBER ARE REQUIRED. WITHOUT THIS INFORMATION WE WILL NOT PROCESS THE REQUEST.

CHECK WHICH TITLE APPLIES TO YOU:

- President
 Owner
 Partner
 General Manager
 Sales Manager/Rep
 Engineer/Architect
 Vice President
 Foreman
 Installer
 Other _____

PLEASE CHECK THE PRIMARY CATEGORY THAT DESCRIBES YOUR BUSINESS:

- Builder, Dealer, Remodeler or Installer
 Roofing Contractor
 Metal Roofing Contractor
 Building Material Dealer/Distributor
 General Contractor/Remodeler
 Manufacturer/Rep of Manufacturer
 Architect/Specifier
 Construction Consultant/Engineer
 Building Owner/Developer
 Other (Please Specify) _____

ENGAGED IN THE FOLLOWING APPLICATIONS:

- Gutters/Accessories
 Institutional
 Residential
 Agricultural
 Commercial
 Industrial

SELECT A MAXIMUM OF 5 COMPANIES TO REQUEST INFORMATION FROM:

Company Name: _____ PAGE: _____

Company Name: _____ PAGE: _____

Company Name: _____ PAGE: _____

Company Name: _____ PAGE: _____

Company Name: _____ PAGE: _____

I understand that by providing the above information I hereby consent to receive communication regarding my subscription via US Mail, telephone, and e-mail sent by *Rural Builder*.

RB JULY 2023

Metal Builder

RURAL BUILDER MAGAZINE SPECIAL SECTION



**CHOOSING
BIG DOORS**

METAL'S ROLE IN HANGARS

WHAT YOU NEED
TO KNOW ABOUT
AC472



What's the best way to sell more buildings?

SmartBuild/Emodeler!

What do most buyers do before buying? They search online.

Now, imagine that building buyers found you online and could design their own building on your website?

Boost your sales. Give us a call!

With SmartBuild's Emodeler system on your website, you can invite an unlimited number of visitors to design their own building and request a quote. You capture their valuable contact information and can then generate a complete material list, drawings and a bid proposal with a button push.

If you are already a SmartBuild customer, we can have Emodeler working for you in minutes.

If you are not, let us show you how SmartBuild can generate buildable material lists and accurate pricing on any post frame structure, all metal building or shed!



Subsection	Cost	Price		Wright
		Taxable	Nontaxable	
Framing	\$10,288.86	\$10,803.30	\$0.00	14384.72
Sheathing	\$5,830.65	\$6,122.18	\$0.00	3101.85
Trim	\$2,315.14	\$2,430.90	\$0.00	596.73953
Doors & Windows	\$14,544.81	\$15,271.93	\$0.02	946.9
Accessories	\$80.94	\$84.99	\$0.00	50
Trusses	\$3,801.45	\$3,991.52	\$0.00	2805
Labor	\$0.08	\$0.00	\$0.08	0
Freight	\$0.00	\$0.00	\$0.00	0
Taxable:			\$38,704.82	
Sales Tax:	7.000%		\$2,709.34	
Nontaxable:			\$0.10	
Grand total:	\$36,861.93	\$41,414.26		21885.20953

The History of Metal in Iceland

Necessity mothers invention, as we know, and I just read about one such experiment in Reykjavik, the capital city of Iceland, dating back more than 100 years.

Everything below comes from a fascinating article on Bloomberg's site: <https://www.bloomberg.com/news/articles/2020-09-23/the-history-of-reykjavik-s-iron-and-wood-homes>

Not having much wood because of its proximity to the North Pole, homes there were built out of earth and sod. Eventually in the 1700s and 1800s, the country started importing wood from Scandinavian countries, and then the "experiment" I'm referencing started, according to the article, "when Icelanders started trading with the U.K. in the 1880s, they discovered a new-fangled material that was more durable: wrought iron sheets, sealed against corrosion by dipping them in molten zinc."

I'll borrow an entire paragraph from the article here, because I can't paraphrase it any better than author Feargus O'Sullivan wrote it:

These houses became the default type both in Reykjavik and elsewhere in Iceland. When the city experienced a major fire in 1915 that left metal-clad houses largely unharmed, the city made this trend into law, requiring a corrugated coating for all new houses built close together. Kept in place until the mid-1920s, this bylaw ended up giving Iceland's capital the largest cluster of metal-clad buildings in the world.

The article says that most of Reykjavik's ironclad homes were built between 1880 and 1925. At that point, the country moved largely to concrete, and for societal reasons, the metal buildings were associated with poverty and often deconstructed. Only in



Traditional corrugated ironclad houses on a street in Reykjavik.

the recent past has there been a movement to save the homes and refurbish them, now that they're seen as historic and not emblematic of poverty.

There's a lesson in this that the metal building industry already knows. The sod houses crumbled, the wood houses burned down, and the metal buildings remain. They'll still be standing beautifully 100 years from now.



— Rocky

Contents

Big Doors:

Pick One for Your Project

PAGE 4

Hanging With Style:

Hangars Fit for Specialty Planes

PAGE 8

AC472 Accreditation:

What You Need to Know

PAGE 12



On the cover: Pioneer Inc. and Varco Pruden Buildings contributed to this new manufacturing facility for the WACO Aircraft Corporation. Photo by Jason Keen Photography.



Sheet Doors

BIG DOORS:

Pick One for Your Project

Selecting an overhead door for a project, especially when there are so many options available today, can be quite intimidating for the unseasoned industry professional. Not only do you have to sift through an array of providers, but each provider has a breadth of products, options, and services.

To make things even more complicated, everyone's marketing to you that they're the very best. Luckily, with some sound, industry advice and a few simple steps, we can make an overwhelming door selection process easy. Breaking the process down step-by-step is key. It's time to put the marketing aside and get down to business.

STEP 1: DETERMINE THE SIZE OF THE OPENING

The first step in narrowing down your door selection is to determine the exact size of your finished opening. Knowing these

measurements up front will be fundamental to your door order, no matter the type of door or provider you go with. Since different overhead doors have specific size restrictions and requirements, it's important to get this step right.

How to determine the exact size of the finished opening:

1. Measure your rough opening size. This is the exact width and height of the finished opening. Doors are ordered by opening size, such as 10' wide x 12' high. An incorrect example would be 10'x12'.
2. Check the side room. This is the area required on each side of the door for the installation of the guides. You'll want to make sure you have enough clearance to install the door.
3. Check the head room. This is the top of the door to the ceiling, or to the nearest obstruction.
4. Check the back room from the face of the door jamb.

5. Measure the clearance from the inside edge of the jamb to the wall or to the nearest obstruction.

6. Determine the jamb type. Is it masonry, steel, or wood?

Once you've taken these measurements and established the jamb type, you'll have everything you need to start your door order. We suggest seeking a leading provider that has a variety of door models, sizes, and options available to accommodate virtually any application and meet your every need. As a door dealer, partnering with a leading provider that has quality products and dependable service can be extremely beneficial to your operations.

STEP 2: CHOOSE THE TYPE OF DOOR

Different applications call for different types of doors. For example, you typically wouldn't install the same overhead door on your home garage as you would a commercial warehouse. Identifying the application will help you determine what type of overhead door you need. For example, if you're looking for an overhead door to enclose a backyard shed, a light-duty commercial sheet door is likely the most appropriate solution. However, if you're looking for an overhead door to enclose an oversized opening inside of a freight terminal, a heavy-duty rolling steel door might be the better choice. When choosing your overhead door, it's important to note that there are three main types of overhead doors in the industry:

- Sheet Doors
- Rolling Steel Doors
- Sectional Doors

SHEET DOORS

Sheet doors are constructed in sections of corrugated steel sheets. They share a compact design that rolls up to store in a coil above the door's opening when in the open position. You can find sheet doors in a variety of applications from self-storage facilities to garages and sheds, barns, and warehouses. Because of their compact design, sheet doors are the ideal solution for buildings struggling with limited headroom.

There are two main types of sheet doors to choose from, sheet doors with dead-axle assemblies vs. sheet doors with live-axle assemblies. Dead-axle door assemblies have a fully enclosed barrel that protects the door's springs and strengthens the axle assembly. Unlike the live-axle assembly, a dead-axle assembly remains stationary when the door is operated and doesn't turn with the door. This eliminates axle push and shift that commonly occurs with live-axle doors, and it allows for a straighter travel path for the door's curtain in the guides.

With dead-axle door assemblies, springs are pre-greased in the factory and enclosed inside the barrel assembly. The grease penetrates the innermost pores of the sheet door's spring with additives, which displaces moisture and prevents the formation of rust and corrosion. Pre-greased springs also relieve the friction typically created between spring coils, which is why sheet doors with dead-axle assemblies are known to operate much smoother.

When a door's springs are enclosed inside of the barrel assembly, they're also protected from harmful environmental elements such as dust and dirt that could negatively impact the door's life cycle. Not only does this dead-axle design increase the sustainability of your door, but it means you can say goodbye to wasting time, money, and resources on maintenance such as re-lubricating your sheet door's springs to keep them operating in optimal condition.

There are many models of sheet doors, varying in size and duty. The biggest difference between light-duty, medium-duty, and heavy-duty sheet doors is the gauge and depth of their guides. A stronger guide allows the door to handle more frequent and demanding operations. However, heavy-duty doors aren't always needed. Going with the door that best fits your application can help ensure you're selecting the most cost-effective product for your project.



Shed with Sheet Door

ROLLING STEEL DOORS

Rolling steel doors are constructed differently than sheet doors but operate in a very similar way. Rather than a corrugated sheet of steel, rolling steel doors are constructed with narrow, thin slats of steel that interlock to form one continuous curtain. The slatted design increases the strength and durability of the door's curtain. Because of their unique design, rolling steel doors can often be produced in large sizes to accommodate oversized openings. Some leading providers have sizing options all the way up to 40' wide and 30' high, varying by model.

Commonly found with leading providers, rolling steel doors can be designed with extended service cut-outs. This is a unique advantage in the overhead door industry because it allows you to cost-effectively repair your overhead door if it experiences damage. By removing the service cut-out, you can remove and replace the individual slats that were subject to damage, rather than replacing the door's entire curtain. This greatly reduces material, maintenance, and labor costs associated with overhead door repairs.



Rolling Steel Door

There are many options when it comes to rolling steel doors. For example, a full line includes service doors, insulated service doors, wind-rated doors, fire-rated doors, counter shutters, fire-rated counter shutters, and even rolling grills. Each model maximizes space with its unique design, freeing up the ceiling which allows you to enhance lighting, utilize emergency fire sprinklers, and maximize HVAC systems.

SECTIONAL DOORS

You're probably already familiar with sectional doors, as they're commonly found in residential garages. But, did you know these doors can operate in two different ways? Sectional doors can retract vertically up the wall or up and over the floor space. While they have unique advantages such as high R-values and low U-factors, they don't always make the best fit for commercial and industrial applications. This is because sectional doors have many working parts, and they're exposed to environmental elements 100% of the time. Not only can they take longer and cost more to install, but their exposed parts are prone to damage and often require routine, consistent, and costly maintenance. You can also run into a problem with sectional doors if you have headroom or side room restrictions. Because they take up a significant amount of ceiling and wall space, they can interfere with HVAC systems, lighting, and emergency fire sprinklers. Identifying your application will help you determine if a sectional door will be beneficial or burdensome to your project.



Sectional Door

STEP 3: CONSIDER LOCATION AND ENVIRONMENT

Depending on the location and environment of your project, there could be certain building and safety codes that you're required to meet. For example, if you're working on a project in Florida, you'll likely be required to install a door that's wind load certified. Luckily, leading providers carry an array of models, sizes, and options and likely have products with the specifications you need. If you'd like to learn more about the codes and requirements in your area, be sure to check out the International Building Code produced by the International Code Council at codes.iccsafe.org.

STEP 4: CHOOSE OPTIONS AND ENHANCEMENTS

Toward the end of your door selection process, you have the liberty to get creative. For example, if the door is going to be used frequently, you might want to consider adding an operator to open and close the door automatically. Leading providers will have a variety of operators to accommodate your overhead door selection, from slim-fit designs to weather-resistant options.

Another option to consider is the color of your door. After all, the color you choose for your door says a lot about your project. From Polar Blue to Sunset Orange, leading providers have a breadth of color options to choose from.

Choosing an overhead door doesn't have to be difficult. With the right provider, you can narrow down your door selection and come up with the perfect product to meet your application's needs. Most leading providers can provide you with a comprehensive door comparison chart that breaks down each model by size and option. If you need help finding the right overhead door or provider, don't hesitate to turn to the experts. Many professionals in the door industry have been doing this for years and can help you find the perfect closure for your building. **MB**

■ MBCEA AND MBMA HOLD ANNUAL CONFERENCE

The MBCEA (Metal Building Contractors & Erectors Association) and MBMA (Metal Buildings Manufacturers Association) met for a co-located annual event in Nashville on May 8-10. The 54th Annual MBCEA Conference hosted more than 500 people.

"I would like to acknowledge Sasha Demyan for all her time and efforts to bring the conference to fruition," said Jen Heimburger, President of the MBCEA, in the organization's email newsletter. She is also the President of Heimburger Construction. She also thanked the committee members: David Leinbach (Kaiser Martin Group), Robert Tiffin (Silvercote), Alexander Carey (Svenska Builders), Jarrod Turner (TBT Construction), Tucker Cope (C Tucker Cope and Associates), and Dave Tomchak (Bay Insulation). Tony Bouquot and Kerry Sinclair represented the MBMA in the planning of this joint meeting.

Heimburger said the MBCEA used the show to continue its mission of elevating the professionalism of the industry by "creating our metal building assembly curriculum, focusing on re-roof with our new video and presentation at METALCON, enhancing the member experience on our website, and continuing our commitment to AC 478."

She said membership grew by more than 100 members to over 600 members in the past 12 months. One of the organization's next big initiatives is the Metal Building Assembly Training Program, which has a goal of \$1 million in funds and is two-thirds of the way there. The program will have a goal of training new employees on metal building assembly.

Next year's conference will be in April in San Diego.

■ MBMA ANNOUNCES STUDENT CONTEST WINNERS

The MBMA in February granted \$28,500 in awards to six winners and to

their faculty sponsors in an online ceremony that culminated the second annual Student Design Competition.

Bobby Buttrick, a graduate student at the University of Massachusetts at Amherst, took home the top prize of \$5,000. He was advised by Professor Stephen Schreiber, Chair of the Department of Architecture in the College of Humanities and Fine Arts.

The competition took place during the 2022 fall semester. The contest for undergraduate and graduate architecture students challenged each participant to create an innovative metal building design for a fire station and department headquarters.

The five-member panel of judges included: Eric Pros, AIA, director of design for DS Architecture in Cleveland, Ohio; Terri Meyer Boake, LEED AP, professor at the University of Waterloo's School of Architecture, Cambridge, Ontario; Lauren Gwaltney, AIA, senior associate with Williams Blackstock Architects in Birmingham, Alabama; John Underwood, consultant to Behlen Mfg. Co., Columbus, Nebraska; and Robert Tiffin, national accounts manager with Silvercote in Greenville, South Carolina, and chair of the MBMA Architecture Committee.

In other MBMA news, the organization announced that Christen Funk, President of Butler Manufacturing, has been added to the board of directors.

■ AISI GETS NSSF GRANT

A research project progressing from the American Iron and Steel Institute's (AISI) Small Project/Fellowship Program has received significant funding through the National Science Foundation (NSF) to advance performance-based fire design for cold-formed steel structures.

Thomas Gernay, Ph.D., Assistant Professor in the Department of Civil and Systems Engineering at Johns Hopkins University (JHU), was named a recipient of the NSF's Faculty Early Career Development (CAREER) Award for nearly \$580,000 over five years. The award will

enable research to develop an advanced science-based framework for assessing the fire performance of cold-formed steel structures that results in more accurate modeling to ensure increased public safety, resource efficiency and resilience. The NSF award will run from July 1, 2023 through June 30, 2028.

The NSF funding will allow Dr. Gernay to build on research initiated through a 2021 AISI Small Project/Fellowship Program award for "Structural Design for Fire Conditions of a Prototype Metal Building Using the New Proposed Appendix to AISI S100, North American Specification for the Design of Cold-Formed Steel Structural Members."

The AISI also recently announced four winning research proposals for its 2023 Small Project/Fellowship Program. Four universities are receiving funding to research topics including shear walls sheathed by corrugated sheets, bare steel deck diaphragms, steel roof decks, and framing seismic design.

Also, the AISI formed a new group that will be primarily responsible for the ongoing development of AISI S250, North American Standard for Thermal Transmittance of Building Envelopes With Cold-Formed Steel Framing. The new Committee on Energy Standards falls under the administrative oversight of the AISI Standards Council, which also oversees the Committee on Specifications and the Committee on Framing Standards.

■ LINETEC PROMOTES PUPP TO REGIONAL SALES MANAGER

Linetec has promoted Tony Pupp to regional sales manager, responsible for leading the company's outside sales team serving specific territories across the United States. Headquartered in Wisconsin, Linetec offers a central, single source solution for architectural finishing of aluminum products in both residential and commercial buildings, and other applications. Pupp has been with Linetec for more than 30 years. **MB**



JASON KEEN PHOTOGRAPHY

Hanging With Style

Hangars Fit for Specialty Planes

HANGING BIPLANES

BY AMANDA WELCH,
BUILDER ENGAGEMENT
MANAGER, VARCO PRUDEN

Erecting airplane hangars can be quite challenging. The clear span widths and costs alone make it quite the undertaking. When WACO Aircraft Corporation

(WACO), a producer of biplanes, expanded their operations at Battle Creek Executive Airport in Battle Creek, Michigan, they considered their options and went with Pioneer Inc. using metal building technology from Varco Pruden Buildings (Varco Pruden).

To achieve the clear spans needed

for the interior of the buildings and at the hangar door end frames, the Varco Pruden Rigid Frame system was used, which does not require any interior columns. Providing clear spans up to 300' or more, along with on-center and off-center ridges and single-slope designs, these structures allow flexibility in the



JASON KEEN PHOTOGRAPHY

use of interior space. The Hangar Area D utilized 165'4" wide clear span Rigid Frames, and the Hangar 2 (Areas A-B) used 205'4" wide clear span Rigid Frames. The Engine Assembly building has Rigid Frames with a 96'8" clear span and the Fab Shop building has Rigid Frames with a 71'4" wide clear span.

Pioneer Inc. used two cranes simultaneously to set the main frames because of the clear span. The building team had a detailed erection plan showing how to temporarily brace the building during erection until all the permanent bracing was installed. Because the work was performed at an active airfield, every crane pick was a "critical pick" that had to be carefully coordinated.

There are two parapets on the hangars that were cut on a radius. A company with specialized expertise was hired to lay out the curved parapet, as it needed to be impeccably consistent along the entire width of the hangar. They gave the building team a point every 3 feet along the wall so that the team could connect the dots to cut the panels.

The SSR™ standing seam roof system was used for the 66,300-square-foot building project, with a 490:12 roof pitch. The SSR™ System has durable, low-maintenance panels that are interlocked and mechanically field-seamed into place, yielding a single membrane that allows for an efficient and affordable roof solution.

For the WACO building complex, the architectural appeal was enhanced using a ThermalClad™ wall system. ThermalClad™ wall panels offer thermal performance with an attractive profile. The double-walled sandwich panels have an insulated core made from foamed-in-place, blister-free, non-CFC polyurethane. The embossed G-90 steel exterior panels are coated in a 70% fluoropolymer finish to provide long-term, low-maintenance performance. For two of the four buildings, the wall panels were positioned horizontally to give each building a long, sleek, elegant visual aesthetic.

The buildings are topped with a ThermoDeck roof system. The ThermoDeck system combines the Varco Pruden roof system with a multipurpose Deck-liner which provides multiple layers



of uncompressed insulation to offer in-place thermal values of R-20 to R-38.5. The result is decreased energy usage long term. With its continuous vapor retarder, this system controls condensation to provide an extended product life.

The crew had not previously installed a ThermoDeck system, so the group gained expertise as the project progressed. "The result was a success," said Adam Wheeler, director of metal buildings at Pioneer, Inc. "It turned out to be an excellent, clean system that the owners were thrilled with."

AeroDoor International, well known for designing, manufacturing, and installing steel sliding aircraft hangar doors, provided two steel, horizontal rolling hangar motorized doors with sensing edges. Each has a height of 28 feet, with widths ranging from 120 to 160 feet. The doors are built to withstand wind loads up to 115 mph.

METAL: The Material of Choice

Metal buildings are the primary airplane hangar solution in the U.S. today. Metal buildings first gained a significant market share when they became popular during the Second World War.

Metal building systems are the principal design solution for aircraft hangars for several reasons, explains Tony Bouquot, general manager of the Metal Building Manufacturers Association. "Metal building systems are popular choices for airport hangars because they are cost-effective and can offer clear spans to suit any size aircraft. From an environmental perspective, metal buildings use steel for the primary structural members, and we know that steel is the most recycled and recyclable building material in the world." Bouquot says another added value is that the structural members in a metal building system are custom engineered to handle the specific load needs for the building, an important attribute to accommodate the heavy loads in both hangars and aircraft manufacturing facilities. **MB**





HANGING HISTORY

**BY CULLEN ENDERS,
MARKETING, THE HANGAR
AT 743**

The Hangar at 743 is an exclusive event venue that maintains and houses World War II aircraft and artifacts. The recently restored hangar is located on the runway of Albany International Airport.

From the outside, The Hangar at 743 looks like any other airplane hangar; however, if you take a look inside, you'll see a rejuvenated airplane hangar like you've never seen before.

The original construction and use of the hangar was for the New York State Police Aviation Unit. In 2015, it was refurbished and then used as executive offices and hangar space for an electronics company, that was sold in 2019.

The hangar is now known as The Hangar at 743 and is used as an exclusive and unique venue with historical aircraft and artifacts on display.

The high-end venue space is equipped

with a cocktail bar, modern kitchenette area, mezzanine, and a 60-foot x 20-foot hydraulic Schweiss hangar door that opens to the runway for the perfect background setting.

The décor of the hangar is completed with custom made art pieces from Mecha

Art and Moto Art. The second hangar located next door to the venue space is where The Warbird Factory and Mecha Art operate.

Warbird Factory works to keep our greatest generation alive through living aircraft. Keeping them operational





provides enthusiasts and the public with an experience that elevates the senses, as opposed to something sitting still and static in a museum. Mecha Art takes pieces of historical aircraft that can no longer be used in the airplanes and turns them into custom art pieces that tell a story. Many of these pieces can be found throughout the venue's décor. The Hangar at 743, Warbird Factory, and Mecha Art work together to provide guests with experiences like no other.

The Hangar did not have original plans on file with the county building department. It came to light during construction that the building needed additional depth footings which, in turn, caused the need for additional structural welding for the door support. This challenge was well handled by Hoffman/Riley and BBL.

General Contractor Bishop Beaudry Construction LLC of Schenectady NY led the remodeling project with architect Hoffman and Riley of Albany, New York.

The hangar walls are clad with ribbed metal plate, trimmed with walnut boards re-purposed from an old barn. The



The Warbird Factory conducts aircraft maintenance, repairs, and restoration. Specializing in vintage warbirds Their major project right now is the complete restoration of a 1944 B-25 Mitchell aircraft that, according to unclear records, may have dropped bombs in Italy. The airplane crashed in 2020, and the Warbird Factory's goal is to get it flying again. Learn more at Hangar743.com

flooring is custom color epoxy.

The hangar door was originally composed of three different panels. The new door with hydraulic lift and custom windows for optimal lighting is from Schweiss Doors.

The remodel included a built-in kitchen with seating, four bathrooms, lockers,

overhead LED lights on dimmers, a lobby, a conference room, new ventilation, and a mezzanine/balcony.

The interior design and concept was created by Diane Meyers, who is now with Interior Designs Atelier.

The roofing was done by Titan Roofing Inc. and Garland Co. Inc. **MB**



AC472 Accreditation

Why You Should Consider Getting Certified or Buying From Companies That Are

The International Accreditation Service (IAS) accredits the inspection programs of companies that design and fabricate custom engineered metal building systems. The accreditation is based on requirements in IAS Accreditation Criteria AC472, International Building Code® and related standards. The accreditation criteria covers inspections of metal building system elements that are essential for designing, specifying, building or approving metal building systems. Here is more detail on the program.

The AC472 Accreditation Program is the most comprehensive quality assurance accreditation program of its kind. A unique characteristic of the AC472 Accreditation Program is that it audits the integrity of design engineering and manufacturing processes. It focuses on several key areas:

- Audit of order documents providing the customer with clear information on what he/she has ordered.
- Audit of the design/detailing process to assure adherence to requested codes and to confirm that the project require-

ments are met in a rational engineering manner. This audit not only covers the building-code applications but also the proper use of design standards such as AISC, AISI, etc.

- Audit of raw material usages including proper ASTM standards, ordering practices, tracking of mill certifications, product traceability, etc.
- Audits assure comprehensive traceability of materials and workmanship.
- Audit of manufacturing practices including machinery calibrations, measuring tools, weld certifications, etc.
- Audits to ensure the metal building manufacturer has a well-managed quality assurance system and a qualified staff. This includes verification of licensed professional engineers who design and detail the metal building system, and certified weld inspectors.

This is all verified annually through two on-site inspections of the firm's design and manufacturing facilities and of representative projects to confirm that the appropriate standards are in place and being applied.

This assures building officials that the

manufacturer has comprehensive quality assurance processes in place that provide high-quality, reliable buildings.

Why require an accredited manufacturer?

Requiring an AC472-accredited manufacturer provides an extra level of assurance that the building supplier's engineering/order/design fabrication processes all conform to high-quality standards and are evaluated by a respected independent third party.

Building officials can deem AC472-accredited manufacturers as approved fabricators as defined in Chapter 17 of the International Building Code; elimination of additional inspections; cost savings to verify code compliance of metal building fabrication; and assurance the metal building manufacturer's staff has a well-qualified quality system in place.

What is the International Accreditation Service, Inc.?

The International Accreditation Service (IAS) is a wholly-owned subsidiary of the International Code Council, which

evaluates and accredits building departments, special inspection agencies, testing and calibration laboratories, fabricator inspection programs, and oversees the AC472 Accreditation Program for Metal Building Systems Manufacturers.

IAS measures a manufacturer's ability to conform to documents and standards referenced in building codes through on-site assessment and periodic monitoring by IAS-accredited third-party inspection agencies. It also scrutinizes a manufacturer's quality assurance program.

Why was the AC472 Accreditation Program developed?

As industry products and design programs advanced, metal building systems became very successful in entering new markets involving larger buildings with high human occupancy. Thus, the members of the Metal Building Manufacturers Association (MBMA), who developed this expanding technology, felt a respon-

sibility to work with IAS to develop an accreditation program to critically evaluate the sales, engineering and manufacturing functions in the metal building systems industry and to comply with the special inspection requirements in Chapter 17 of the International Building Code®.

Don't ISO and AISC accomplish the same things as AC472?

No. Those programs only address the manufacturing process — not the unique needs of building systems. Since the design, detailing and manufacturing is done by the same company, these processes are mutually dependent and need to be evaluated together.

With conventional construction, I receive a set of design calculations and drawings stamped by a registered professional engineer. Why isn't that adequate for metal building systems?

When a conventional designer selects

standard beam sizes off of AISC tables or out of SJI manuals, those sections are then manufactured by a fabricator. In the case of metal building systems, the design and fabricating processes are customized and require ongoing communications between the engineering and fabricating teams. The only way to be assured that these functions are being properly integrated is to require that the supplier have AC472 accreditation.

Are there areas in the country where building codes have adopted criteria requiring AC472 accreditation on building systems projects?

Yes. Most jurisdictions throughout the country have adopted the International Building Code® or an amended version of the code and enforce Chapter 17 special inspection requirements and rely on the AC472 Accreditation Program for Metal Building Systems Manufacturers to designate approved fabricators. **MB**

What Does AC472 Accreditation Mean to Manufacturers and Builders?

WHY SHOULD A MANUFACTURER GET ACCREDITED?

- It provides third party verification that your firm is an approved manufacturer that meets specific and comprehensive requirements as described in Chapter 17 of the International Building Code.

- It is a benchmark for companies that design and manufacture engineered metal building systems. It shows a level of serious commitment to providing products and services that meet the highest industry standards.

- It provides a level of confidence to all constituents — owners, architects, builders, code officials, etc. — that your buildings will be designed and manufactured according to code and specifications.

- When competing against other

building manufacturers, it gives the accredited firm a competitive advantage because the firm has achieved the highest level of industry recognition as defined by the highly respected International Code Council.

WHY SHOULD A BUILDER USE STEEL FROM AN ACCREDITED COMPANY?

Here are five good reasons:

1. Your local building code official has the means to approve the inspection programs of manufacturers involved in the fabrication of metal building systems and meet the requirements of Chapter 17 of the IBC. This should expedite the approval process.

2. Allowing only accredited suppliers

helps protect your good name by guaranteeing that an audited supplier is on the project.

3. Since the building supplier is doing the structural design, accreditation assures that the product is designed by professional engineers with demonstrated knowledge of building systems and applicable codes.

4. Accreditation requires that the manufacturer has a certified weld inspector, uses raw materials that comply with applicable specifications and can provide product and workmanship traceability.

5. Accreditation requires that Letters of Certification and erection drawings are clearly written and show all necessary information for the proper erection of the building. **MB**