

The Only Magazine Dedicated to the Effects of Weather and Climate on Roofing

# ROOFING ELEMENTS

METAL ROOFING MAGAZINE SPECIAL SECTION

[www.roofingelementsmagazine.com](http://www.roofingelementsmagazine.com)

SUMMER 2024 • Vol. 4, Issue 2

**FALL PROTECTION  
DURING INCLEMENT WEATHER**

**HOT  
TOPIC**

**FIRE RESISTANCE AT THE  
WILDLAND-URBAN INTERFACE**

**GUTTERBRUSH  
WEATHERING  
THE STORM**

# CONTENTS

## FEATURES

- 3** News
- 6** Gutterbrush  
Weathering the Storm
- 8** Safety Update  
Fall Protection During Inclement Weather
- 12** Hot Topic  
Building Fire Resistance In The Wildland-Urban Interface
- 15** New Products
- 16** Roofer Profile  
Meet International Roofing

## COMING NEXT ISSUE

- ARMA Technical Report
- Rooftop Solar 101

## ON THE COVER:

Plum Orchard mansion in the Cumberland Island National Seashore in Southeast Georgia was originally built by the Carnegie family in the 1890s and is now on the National Register of Historic Places and managed by the United States National Park Service. During the estate's re-roof, Register Roofing installed DaVinci composite cedar shake and Johns Manville modified bitumen.  
PHOTO COURTESY OF REGISTER ROOFING.



## NEWS

### TECTA AMERICA ACQUIRES EBERHARD COMPANIES

Tecta America announces the acquisition of Eberhard Companies based in Van Nuys, California, and Las Vegas, Nevada.

“Dave and I look forward to working with the entire Tecta team in serving our clients as Eberhard has since 1945,” said Brian Mowatt.

Eberhard has served the greater Los Angeles and Las Vegas markets since 1945. The company is one of the most recognized commercial roofing providers in the aforementioned markets and has performed some of the most iconic roofing work over the last 80 years. Eberhard has

established itself as a premier provider of new construction, re-roofing and service and maintenance services for property owners, general contractors as well as local, state and federal government customers. Eberhard’s focus on safety and taking care of its people and customers has been the keys to its success and growth.

Brian Mowatt, Dave Stefko and Paul McKellar will continue in their current roles alongside other key members of management. The operation will be known as Eberhard, a Tecta America Company, LLC in the southern California market and Eberhard Southwest, a Tecta

America Company, LLC, in the southern Nevada market.

Tecta America Corporation has grown to over 95 locations nationwide and is the largest roofing contractor in the United States, with an impeccable quality and safety reputation. Tecta is an approved applicator of all major manufacturers.

### SPRI POSTS WHITE PAPER ON IBC CHANGE

SPRI, Inc., the trade association representing the manufacturers of single-ply roofing systems and related component materials, has posted a new white paper that details the process of



building consensus among multiple diverse stakeholders, to change the International Building Code (IBC).

The recently released 2024 International Building Code, includes language for the first time that clarifies how Lightning Protection Systems (LPS) when used on commercial structures, should be attached to roofing assemblies, roof covers, metal edge systems and gutters.

The new language, which has been added as new subsections in Section 1511 'Rooftop Structures,' in the 2024 edition of the IBC, stipulates that the work must be completed in accordance with the manufacturer's or a design professional's instructions, and where LPS components are secured to, or penetrate the roof, they must be properly flashed. The specific language reads as follows:

- 1511.7 Other rooftop structures. Rooftop structures not regulated by Sections 1511.2 through 1511.6 shall comply with Sections 1511.7.1 through 1511.7.6, as applicable.

- 1511.7.6 Lightning Protection Systems. Lightning protection system components shall be installed in accordance with Sections 1511.7.6.1, 1511.7.6.2, and 2703 of this code.

- 1511.7.6.1 Installation on metal edge systems or gutters. Lightning protection system components attached to ANSI/SPRI/FM 4435/ES-1 or ANSI/SPRI GT-1 tested metal edge systems or gutters shall be installed with compatible brackets, fasteners, or adhesives, in accordance with the metal edge systems or gutter manufacturer's installation instructions. Where the metal edge system or gutter manufacturer is unknown, installation shall be as directed by a registered design professional.

- 1511.7.6.2 Installation on roof coverings. Lightning protection system components directly attached to or through the roof covering shall be installed in accordance with this chapter and the roof covering manufacturer's installation instructions. Flashing shall be installed

in accordance with the roof assembly manufacturer's installation instructions and Sections 1503.2 and 1507 where the lightning protection system installation results in a penetration through the roof covering. When the roof covering manufacturer is unknown, installation shall be as directed by a registered design professional.

SPRI, along with representatives from the Lightning Protection Institute (LPI), the United Lightning Protection Association (ULPA), UL Solutions, the Asphalt Roofing Manufacturers Association (ARMA), the National Roofing Contractors Association (NRCA), the National Electrical Manufacturers Association (NEMA), and the Roof Coating Manufacturers Association (RCMA), worked closely for several months to build consensus to get new language written, approved and adopted into the International Building Code (IBC) which goes beyond the existing installation standards outlined in NFPA 7980 and UL 96A.

The white paper, titled 'Lightning Protection Code Change Updates,' was co-written by SPRI (SPRI.org) and the Lightning Protection Institute with then SPRI President Brad Van Dam and Lightning Protection Institute Executive Director Tim Harger leading the effort. The white paper provides details not only about how changes are made to the IBC, but also the process of building consensus among diverse stakeholders.

### **BITEC MERGES WITH VIKING**

Bitec, Inc. has announced its merger with the Viking Products Group, formerly based in Northeast, Ohio. This partnership will give roofing contractor and distributor customers access to an extensive suite of roofing-related materials that deliver unique benefits such as the incorporation of recycled materials and design features that facilitate a quality installation, while expanding Bitec's reach throughout the U.S. and Canada.

Viking Products Group was founded

in 1996 as Commercial Innovations, Inc. to create a customer-responsive product and service offering for contractors and distributors. The company was rebranded under the Viking name in 2018. Reorganizing and consolidating Viking warehouse, service, and support operations to Arkansas under the guidance of Bitec's experienced leadership team will enable both organizations to serve their customers more effectively and more efficiently.



*Brett Wygal, President of Viking Products Group (left) and Joel Shealey, Vice President of Bitec.*

Joel Shealey, vice president of Bitec who took on the role of Bitec president in January, reports, "The whole will be even stronger than the sum of its parts. We are two sales organizations serving the same markets. Aside from the obvious advantage of becoming more efficient at serving our customers, this merger will expand Bitec's sales reach and give our customers access to some leading-edge products, including GreenSlope single-component polyurethane primer/adhesive for water ponding repair, sustainable Leadax® Armored Flashing, and StrongHold single-ply membranes, which are available in both KEE and PVC formulations."

According to Brett Wygal, Viking president, Bitec will be retaining the Viking brand and acquiring all Viking product and intellectual property. He expects the merger to create sales

momentum, reporting, “We’ve been talking to our sales reps and they are really excited about this next step in our growth. Our customers will benefit from a deeper offering of modified bitumen options and the great support a more mature organization can provide.”

Back-end integrations are already underway and the merger will be completed early in the first quarter of 2024.

### ELEVATE ANNOUNCES LEADERSHIP CHANGES

Elevate™, a leading commercial roofing, wall and lining systems provider, has strategically reoriented its U.S. Sales organization and leadership team. The Elevate internal U.S. Sales team is now organized into East and West divisions, each led by a Senior Sales Director. The newly created role of Vice President of Supply Chain & Customer Experience will focus on end-to-end optimization, collaboration across the organization, and providing exceptional service to customers. Elevate implemented these changes to reinforce the commitment to improved customer centricity and provide more regionally focused customer support.

David Finn and Allen Sopko have both been promoted to the role of Senior Sales Director, with Finn leading the East and Sopko leading the West. In their new roles, the Senior Sales Directors will be responsible for regionally organized teams of Regional Sales, Strategic Account, and Regional Account Managers. The Elevate Technical and Warranty teams will be regionally aligned with their Sales partners to allow for more effective collaboration within each market. Together, these teams will be uniquely positioned to address customers’ needs, and in partnership with Elevate independent sales representatives, will focus on delivering an outstanding customer experience.

Jennifer Hemgesberg has been promoted to Vice President of Supply Chain & Customer Experience to enhance the integrated supply chain, focusing on

end-to-end optimization and promoting collaborative efforts across the Holcim Building Envelope organization, including the Elevate brand. Hemgesberg will be responsible for demand and supply chain planning and will lead the Elevate Customer Experience (CX) program, reinforcing the brand’s commitment to customer loyalty and satisfaction. Hemgesberg’s professional experience includes a diverse background in supply chain planning and customer-centered programs, priming her to optimize customer service and drive sustainable growth.



*Marcin Pazera, PIMA Senior Director*

### PIMA PROMOTES MARCIN PAZERA, PH.D., TO SENIOR DIRECTORSHIP

The Polyisocyanurate Insulation Manufacturers Association (PIMA) has announced the promotion of Marcin Pazera, Ph.D., to the position of Senior Director, Technical Affairs, effective January 2024. In this expanded leadership role, Pazera will continue to support PIMA’s mission to be a reliable and trusted voice in the roofing and building envelope industries. As PIMA’s Senior Director of Technical Affairs, he will serve as the association’s technical expert in discussions that help shape the future of the buildings we live, work and learn in.

Pazera joined PIMA as its Technical

Director in November 2017. Since then, he has provided technical oversight for the association’s Product Standards Work Group, QualityMark Work Group and Codes Work Group. With over 15 years of extensive industry experience and deep acumen, Pazera is a respected resource for questions on polyiso product performance, particularly at the intersection of building science and building envelope performance. His in-depth knowledge of issues impacting the insulation industry makes Pazera an influential voice at technical venues including the American Society for Testing and Materials (ASTM), and at both the International Code Council (ICC) and the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) 90.1 Committee, where he leads PIMA’s efforts in code development for energy efficiency provisions in the building envelope.

“As interest in advanced building materials and whole-building performance reaches new heights, polyiso will continue to play a key role in reducing the carbon and energy footprint of our built environment,” PIMA President, Justin Koscher, said. “Marcin’s technical expertise, leadership and collegial approach is critical to the success of the polyiso industry and of those who rely on the high-performance insulation to improve their roofs and building projects.”

An accomplished professional, Pazera earned his Ph.D. in Mechanical Engineering from Syracuse University, New York, and has authored over 30 technical papers in peer-reviewed journals. His presentations at numerous conferences, including ASTM and Building Envelope Science and Technology (BEST), also underline his dedication to advancing the roofing and building envelope industries.

Pazera’s promotion reflects his commitment to PIMA and the polyiso industry. As Senior Director of Technical Affairs, Pazera is well-positioned to help

the association continue advocating for energy-efficient building envelopes by championing high-performance insulation solutions like polyiso.



James Julian, Mule-Hide Products

### JAMES JULIAN JOINS MULE-HIDE PRODUCTS CO.

James Julian has joined Mule-Hide Products Co. Inc., manufacturer of low-slope roofing products and systems, as territory manager for the Louisiana-Arkansas-Missouri territory.

He is the company's lead contact with contractors throughout the three states, helping ensure projects are completed efficiently and according to specification; working with contractors and ABC Supply Co. Inc. branch teams to develop the best solutions to meet property owners' roofing needs; and providing ongoing product, technical and sales training for contractors and ABC Supply associates.

Julian has worked in the roofing and construction industries in the St. Louis area for nearly 20 years. Most recently he was Central South region supervisor for roofing materials manufacturer Tremco Roofing & Building Maintenance, covering Arkansas, Oklahoma, Kansas and Missouri. In that role, he supervised all self-performed commercial projects, including repair, restoration, single-ply

and coatings projects.

Prior to that, he was a commercial roofing contractor, working as a project manager for JRC Inc. and as director of

operations and field superintendent for CMT Roofing Inc. He also was vice president of Julian Construction Services for 10 years. ●



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# GUTTERBRUSH

## WEATHER EVERY STORM WITH ETHICS AND COMMON SENSE

### RECOGNIZING THE NICHE

Bob Schreiber's cabin up north amidst the pine trees, is where he goes to enjoy hunting and fishing. One thing he is not enthused about is cleaning out the gutters. Once when he went to clear out the gutters, he discovered that he had previously left the chimney brush he had used to clean out the gutters, in the gutter - and that was the only unclogged space! From this discovery, a business was born.

In 2004 Bob and son Randy messed around with the concept, building models and experimenting until they had developed 5 sizes of GutterBrushes. Then the business went on the road in Ohio with 5 guys going door-to-door selling the product.

### NAVIGATING UNKNOWN WATERS

"The challenge for a small business starting out," Alex O'Hanley, Building Envelope Expert at GutterBrush said, "is getting the word out and achieving credibility with a unique product."

Schreiber's product was an out-of-the-box approach; other products meant to keep debris out of the gutter generally involved covering, enclosing or restricting the gutter opening. The biggest problem with gutter guards is they can get dirty and send the water past the gutter. Bob invented a product that is non-restrictive, fills the gutter, and solves

clogging by filtering debris. Schreiber and team chipped away at the challenge of getting their product out in front of people by knocking on doors, presenting



Randy Schreiber and Alex O'Hanley at a Trade Show

at trade shows, and even introducing their product on talk shows.

"It was easy to get onto some of the shows early on, O'Hanley said. "At some point the team encountered Gary Sullivan; who thought the product was ingenious and featured it on his "At Home With Gary Sullivan" radio show. The product was even presented on The Today Show."

### COVID AND BEYOND

More recently the company has faced challenges that many companies have

encountered. While GutterBrush is made in the USA, at times necessary materials and packaging were in short supply as well as people to transport them. Covid created many challenges that the company more than survived by staying focused while working hard to solve problems and communicating clearly with customers, explaining delays and new ETAs.

When labor, materials, and other supply costs rose due to recent inflation, the team, through the leadership of Randy Schreiber, decided not to pass on those cost increases, choosing instead to absorb rising expenses and help customers by keeping the price down. Keeping the cost low has paid off in the long run as customers have realized the tremendous value the product continues to provide for the hard-earned dollar; during hard times the company developed even more loyal customers. Further, as customers realized an improved value, it allowed the company to counterbalance shrinking margins with increased sales volume and customer acquisition.

### TODAY

Today, the company serves contractors, landscapers, metal building companies, and DIYers across the United States. Their self-fitting brush gutter guards solve gutter clogging in gutters on pre-fab buildings, sunrooms, car ports,



and lanais, fitting unique and unusual gutters as well as standard k-style seamless gutters.

Sourced from various companies in the states, the product features a galvanized steel core and UV-protected bristle brushes made to fit and fill gutters.

### LESSONS THAT LEAD TO SMOOTH SAILING

Looking back at where the company has been, O’Hanley said the key to surviving and thriving is operating with good morals, values, and principles. Everyone has to work hard, but operating with a true basis of “goodness” allows GutterBrush to make progress on even the roughest roads. “People want to work for good companies, culture matters”



says O’Hanley. Our core provides resilience that helps the company move forward after weathering a storm.

“There is no magical answer to success,” O’Hanley said. “It’s all the common sense stuff that gets you there,” he continued. “Work hard, be prepared, and treat your customers well.”

You also need an employee-friendly culture, according to O’Hanley. “Caring about people has to start at the top,” he said, “and it’s hard to fabricate that kind of culture if it’s not there. Start paying attention to the things you do on a daily basis.”

One thing O’Hanley said he wished

he had done sooner is investigate adjacent markets and attend their trade shows to see if there was potential there. GutterBrushes fit the gutters of certain metal and pre-fabricated metal buildings and lanais that were challenged to find a fit. These prefabricated gutters have had issues with other gutter protection products due to their odd shape and size. Now that the people in those markets have discovered that this product fits their gutters, they are excited. This has created many new relationships and possibilities for GutterBrush.

### INTO THE HORIZON

As GutterBrush approaches its 20th anniversary in 2024, O’Hanley is optimistic about its future. The company is still growing, and they are putting together a new sample box of all brush sizes, to help contractors as they fit the product to their project’s gutters. The simplicity, effectiveness, and easy installation are key factors that O’Hanley believes will drive organic growth for many years to come. ●



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# FALL PROTECTION

## ROOFTOP SAFETY DURING INCLEMENT WEATHER



Roof hatch doors can become hazards during windy conditions. Photos courtesy of Diversified Fall Protection.

**R**ooftop work can be dangerous enough in perfect weather conditions, but adding wind, rain, snow, fog, hail, or other inclement weather can bring challenging complications that increase a roofer's overall risk factor. Additional precautions must be taken to ensure that roofer safety is never compromised, and the task can still be completed. When working at heights, safety must always be the top priority.

Strong winds, slippery surfaces, and reduced visibility are some of the factors inclement weather brings that can increase the likelihood of accidents, resulting in injuries or even fatalities.

Unfortunately, OSHA does not provide specific regulations or standards for employers to help keep their workers safe during inclement weather. However, OSHA's General Duty Clause requires employers to provide a workplace that is "free from recognized hazards that are causing or are likely to cause death or serious physical harm to [their] employees." Furthermore, OSHA outlines specific duties for building owners when it comes to their rooftop (AKA walking working surface).

As with almost any other workplace hazard or dangerous environment, inclement weather is something that can be anticipated, and proactive measures

can be taken to prevent incidents and protect workers from harm. Depending on the type of expected inclement weather, different measures can be taken to increase individual workers' safety:

### STRONG WIND

If a crew is working under strong wind conditions, be mindful that certain objects can increase a roofer's risk of falling. If a roofer is carrying around large sheets of plywood or metal, that object can act like a sail and potentially cause them to lose stability. Unattended and unsecured objects may also get caught by the wind, becoming dangerous for workers at height, or equipment and people on lower levels. It is important to always keep as much distance between the work zone and the edge of the walking working surface as possible. If the roof is ladder-accessed with hatch doors, consider that strong winds can make hatch doors more difficult to operate. An upgrade to an automatic open/close system before an anticipated storm could be a proactive measure with significant value to future worker productivity and company safety initiatives.

### RAINY WEATHER

Rainy weather creates slippery conditions, and slippery conditions are more likely to cause a roofer to slip, trip, or fall. If possible, map out the job site and lay down weatherproof mats along work areas to give more traction on rooftops. A slip on a flat slope roof could cause sprains or other injuries, but a slip on a sloped surface could bring more serious





accidents, including the potential to fall off the roof.

If work is expected to occur during extremely wet conditions, it might be necessary to temporarily use a vinyl-coated or an alternative harness made of water-resistant materials. Excessive water has the potential to cause irreparable damage to a body harness and might make it unusable for future use. Every time a work environment changes, it is important to evaluate whether the current PPE being used is appropriate.

### **FREEZING TEMPERATURES**

Freezing temperatures can cause ice to develop on a rooftop, further increasing the chances of a slip, trip, or fall occurring. Additionally, freezing temperatures and snowfall can prevent certain anchors from functioning properly. For example, a swivel anchor

might not be able to move as freely as it would under normal, warmer weather conditions. Upon inspecting anchor points before each use, if an anchor point is found to not be working properly, it is not safe to use that anchorage until better weather conditions arise. Consult with your job site/organization's Competent Person to discuss alternative anchorage solutions.

When the temperature plummets, it is likely roofers will need to wear additional layers of clothing for warmth. Before starting work and during the pre-use harness inspection, be sure to verify that the roofer's body harness still fits properly over the additional clothing. The body harness must be the outermost layer worn, so as not to obstruct access to the dorsal D-ring. It is likely some roofers will need to upgrade to a larger-sized harness in anticipation of winter

work to accommodate bulky clothing and still provide an optimal fit that will keep the roofer safe in the case of a fall. If a harness is not donned properly per manufacturer specifications, it cannot be guaranteed that it will work exactly as designed during a fall incident.

Specialized PPE can provide a safer work environment for crews. For example, certain products can attach to the bottom of work boots to provide extra traction on icy or slippery walking working surfaces. All PPE must be worn during body harness pre-use inspections, to confirm they do not interfere with the user's Personal Fall Arrest System (PFAS).

### **EFFECTIVE PLANNING**

Adjusting your pre-task planning process to accommodate inclement weather will better prepare your crew, despite whatever weather conditions arise. As

the saying goes, “fall protection starts on the ground,” because your fall protection program is only as good as your planning process. Be it rain or shine, training and well-prepared rescue plans are vital to the success of your fall protection program. It is important to ensure emergency response plans are understood and communicated by your crew, and that each component of your fall protection equipment is inspected before each use, as required by OSHA.

## FINDING THE RIGHT SOLUTION

Eliminating the fall hazard altogether is the preferred method of fall protection. If the fall hazards cannot be elimi-

nated, then the next best solution is a passive form of fall protection, such as guardrail. Most passive fall protections would require no modifications for use in inclement weather.

If a passive fall protection system cannot be used, an active system will still protect users during inclement weather, however, it will require user interaction and training to protect properly. Active solutions include travel restraint systems, which prevent users from reaching a hazard, and fall arrest systems, which stop a fall once it has occurred. While all these options can save roofers’ lives, there is still more risk than eliminating the hazard or using a passive system. ●

**Philip Jacklin** is Continuing Education Program Manager for Diversified Fall Protection. Since 2018, Philip has been training workers on best practices when using their fall protection, and advising safety managers, EHS leaders, plant maintenance managers, and other safety professionals on how to create more efficient fall protection programs.



## CALENDAR OF EVENTS



### September

**Sept 18-19**

Construction Rollforming Show, DeVos Place, Grand Rapids, Michigan. [constructionrollformingshow.com](http://constructionrollformingshow.com)

**Sept 25-26**

RICOWI Fall Conference, Rome, New York. Tour of the Revere Copper Plant scheduled. <https://ricowi.com>

**Sept 29-Oct 1**

Western Roofing Expo Convention & Trade Show (WRE), Paris Las Vegas Hotel & Casino, Las Vegas, Nevada. [www.westernroofingexpo.com](http://www.westernroofingexpo.com)

### October

**Oct 15-17**

FABTECH 2024, Orange County Convention Center, Orlando, Florida. [www.fabtechexpo.com](http://www.fabtechexpo.com).

**Oct 21-23**

Midwest Roofing Contractors Association Conference & Expo, Saint Paul RiverCentre, St. Paul, Minnesota. [www.mrca.org](http://www.mrca.org)

**Oct 30-Nov 1**

METALCON, Atlanta Convention Center, Atlanta, Georgia. [www.metalcon.com](http://www.metalcon.com)

### 2025

#### January

**Jan 15-16, 2025**

Garage, Shed, Carport Builder Show, Greenville Convention Center, Greenville, South Carolina.

<https://garageshedcarportbuilder.com/show-registration/>

### February

**Feb 19-21, 2025**

International Roofing Expo, Henry Gonzales Convention Center, San Antonio, Texas. [www.theroofingexpo.com](http://www.theroofingexpo.com)

### April

**April 2-4, 2025**

Frame Building Expo, Knoxville Convention Center, Knoxville, Tennessee. [nfba.org](http://nfba.org)

### June

**June 4-6, 2025**

FRSA’s 103rd Annual Convention and the Florida Roofing & Sheet Metal Expo. Gaylord Palms Resort & Convention Center, Kissimmee, Florida. [www.floridarroof.com/](http://www.floridarroof.com/) ●

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# HOT TOPIC

## SUPPORTING FIRE RESISTANT ROOFS AT THE WILDLAND URBAN INTERFACE

BY TITANIUM

Given the devastating consequences fire can inflict on human life, wildlife, and property, fire resistance will always be a priority when it comes to the design and construction of homes – including the roof. Concern about the fire-resistance of structures is especially high in critical environments like Wildland Urban Interface (WUI) zones.

Although fires are not necessarily more common in the U.S., they are becoming more common closer to WUI

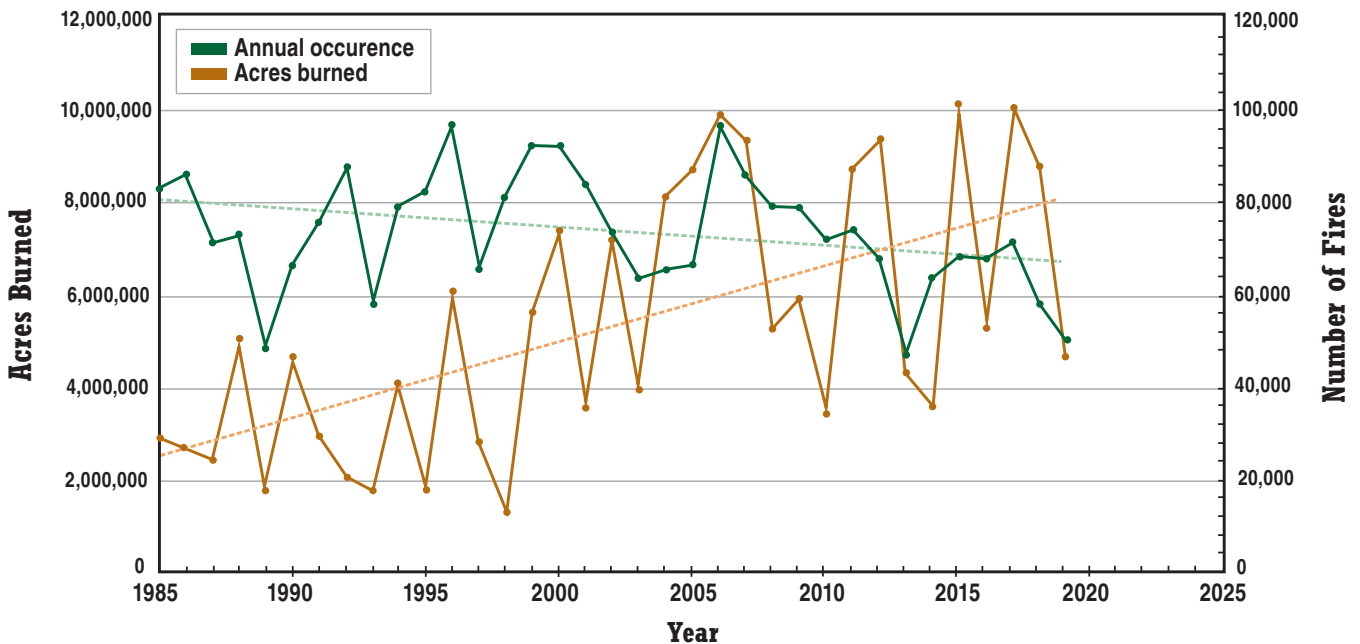
zones according to Dr. Ian Giammanco, managing director for standards and data analytics at the Insurance Institute for Business and Home Safety IBHS and a research meteorologist. “Human activities, whether electrical activities, homes being built closer together or construction moving closer to wildland areas means fires are increasingly a concern at the WUI,” says Dr. Giammanco.

While electrical concerns like energy-generating roof assemblies did not contribute to historic fires of centuries past,

Dr. Giammanco notes that the denser construction practices seen near WUI areas today are similar to the practices in the 18th, and 19th centuries that led to homes being “sandwiched” together and destroyed by catastrophic fires.

Along with sustained periods of drought in some parts of the country, increased construction in WUI zones helps explain why more efforts are being undertaken to reduce wildfire risk. As an example, Wildfire Prepared is a voluntary, research-based mitigation and assessment program developed by IBHS

### United States Annual Fire Occurrence Data: Interagency Fire Center



that is designed to meaningfully reduce wildfire risk. These efforts include specifications for every part of the house and surrounding property – from fences to walls to roof assemblies. Given the volume and size of airborne burning brands present during a wildfire, advancements in building science are helping provide fire-resistant roofs that are capable of helping to curb the spread of wildfires from home-to-home.

## FIRE-RESISTANT CLASSIFICATIONS FOR ROOFS

Before discussing innovations to support safety at a home's roof, it's helpful to consider how roofs are classified and tested. Residential roofs are evaluated as assemblies (including the roof covering, underlayment, and roof sheathing) and are tested and listed according to three classifications:

**Class A** – effective against severe fire exposure

**Class B** – effective against moderate fire exposure

**Class C** – effective against light fire exposure

Two code required tests – ASTM E108 and UL 790 – are used to classify residential roof assemblies. These tests are intended to evaluate the ability of a roof assembly to resist the penetration or spread of flames to the interior of a structure, allowing more time for a home's occupants to evacuate. The testing process is very similar for all roof assemblies including those incorporating asphalt shingle and metal roof coverings. Solar (PV) assemblies are tested with a burning brand on top of the PV panel and between the PV panel and the roof covering.

## THE TESTING PROCESS

The burning brand test evaluates the ability of a roof assembly to resist ignition of the underside of the roof sheathing

as the assembly is exposed to a 12 mph wind velocity. When shingles are tested, the most acute point of vulnerability is typically the area at the intersection of the horizontal and vertical joints in the deck. With concrete or clay tile, the tile can break anywhere allowing for glowing pieces of the brand to fall into those cracks. The ability of the underlayment to resist conducted heat is critical when testing metal roofs as metal rapidly conducts heat into the underlying materials.

The burning brand test for the various classes includes a different number and size of brands for each class:

### Class A

The brand is 12 inches x 12 inches x 2.25 inches, and is constructed of hardwood pieces with air spaces in between. The brand is ignited on all 6 sides for a specified period of time, and placed in the most vulnerable area of the deck (top of the brand 3 inches above the horizontal joint in the deck).

### Class B

The Class B burning brand test incorporates two brands that measure 6 inches x 6 inches x 2.25 inches, also constructed of hardwood pieces with air spaces in between. One brand is ignited on all 6 sides, then placed on the roof deck with the top edge 1.5 inches above the horizontal deck joint, and at least 6 inches

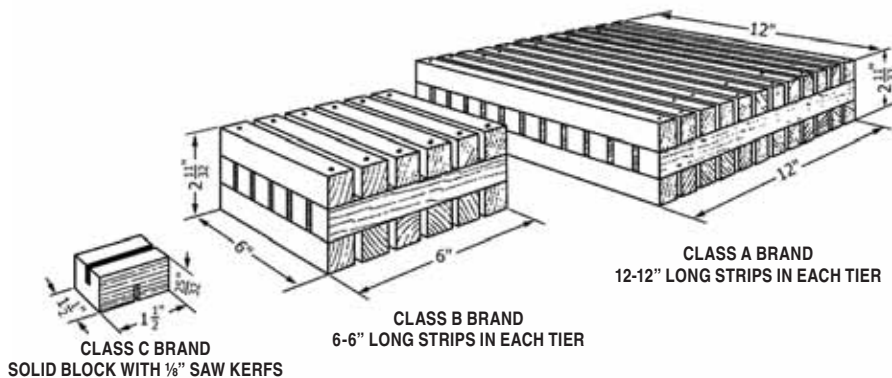
from one edge of the deck. Once the first brand has burned completely, the second brand is placed on the deck at least 6 inches from the opposite edge of the deck.

### Class C

Class C brands are much smaller at 1.5 inches x 1.5 inches x .75 inches. The Class C test incorporates placement of 20 of these brands across the deck. The Class C test is not a stringent test at all. Solar panels in and of themselves tend to be tested to C, which is easier for the panels to pass.

The total time of the burning brand test is 1.5 hours, or until all burning activity ceases - whichever is shorter. Many asphalt shingle decks pass at between 45-50 minutes based on performance observed. Generally, if there is no sign of fire activity on the deck, if the temperature is in the 250°F to 300°F range and if there aren't any glowing brands coming off the deck, an assembly is considered to pass the test - even before the 1.5-hour test is up. By the same means, if the deck is still blowing red hot and 1.5 hours passes, an assembly is considered to have passed the test.

Finally, the arrangement/coursing of the roof covering is such that the fewest number of layers in the system are covering the horizontal joint in the sheathing.



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## CONSIDERING ENERGY GENERATING SYSTEMS

Energy-generating systems present special challenges for fire resistance. The PV cell encapsulant in solar panels is highly flammable. When the encapsulant catches fire, the other components of the roof assembly work to protect the deck from the massive amount of heat generated by the fire that is generated. Class A is not required for the PV modules themselves – Class C is the minimum requirement and typically what’s achieved in such assemblies.

## DESIGNING CLASS A ASSEMBLIES - UNDERLAYMENT CONSIDERATIONS

Underlayment plays an essential role in supporting the performance of roof assemblies – including fire resistance. Acknowledging trends and a market need for more Class A assemblies, engineers and scientists conducted extensive research and testing to formulate and produce a fire-resistant synthetic underlayment that can stand up to Class A testing requirements. The initiative led to Titanium® FR—a cost effective approach for passing the rigorous testing required for Class A materials.

While safety is always the highest priority, other factors also inform an underlayment selection decision. Walkability, tear-resistance, and ease of install are all criteria to evaluate, along with a material’s ability to withstand UV exposure. Selecting an underlayment that can be installed in a single layer minimizes

labor and supports efficiency on the jobsite. A real differentiation in Titanium® FR is a surface that supports walkability and slip-resistance. The product was also designed to be tear-resistant, easy to handle and handle up to 180 days of UV exposure. Building on years of research, the formulation includes a proprietary blend of fire-resistant technologies including retardant blend and facer. It was first introduced at the International Roofing Expo in 2023.

## LOOKING FORWARD - FINDING A COMMON LANGUAGE

In speaking with firefighting groups, code officials and stakeholders across many jurisdictions, it is apparent that the industry suffers from inconsistency in the language used to address fire resistance. There is a lot of debate at the international code level regarding the semantics of fire resistance, classifications and listings and a task group is working to make language more consistent.

The severity, size of fires and subsequent losses suggest that the risk is going up. All parts of a home should be considered as wildfire readiness demands a “system approach” according to Dr. Giammanco . When it comes to the roof, selecting roof assembly components that can stand up to the harshest conditions as reflected by Class A roofing assemblies measured per ASTM E108 or UL 790 can support specifiers in recommending products for traditional steep slope and energy-generating roof assemblies. ●

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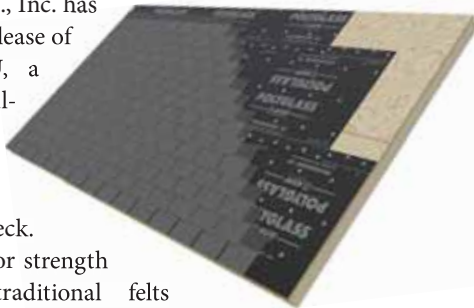
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**715-252-6360**  
**gary@shieldwallmedia.com**



## POLYGLASS POLYANCHOR UNDERLAYMENT

Polyglass U.S.A., Inc. has announced the release of Polyanchor™ SU, a lightweight, nailable synthetic roof underlayment designed to protect the roof deck.



It offers superior strength compared to traditional felts resulting in enhanced wind uplift resistance, increased durability in the face of heavy foot traffic, and resilience against adverse weather conditions. The lightweight design of the 10-square roll ensures a swift and efficient roof deck covering process for installers.

The product is suited for use under asphalt shingles, synthetic shingles, and cedar shake roof covering systems accommodating a variety of roofing materials. Featuring a non-woven fiber surface top and polymeric coated bottom surface, Polyanchor SU provides durability through heavy foot traffic

<https://polyglass.us>

## PROGRESSIVE MATERIALS READY PATCH

Silicone roof coatings manufacturer Progressive Materials (PM Silicone), based in southern Indiana, has announced the introduction of its latest product: Ready Patch (RP 300), a versatile, fibered sealant that's designed to stop leaks instantly — even under water. This new product can be applied on flat or vertical surfaces and stops water penetration instantly. RP 300 will cure out completely in wet or dry locations and will result in a flexible patch over holes, cracks, or splits, as well as around flashings, vents, metal edging, and more.



Key benefits include: No mixing necessary; can be applied under water/on wet surfaces, in temps as low as -20°F; adheres to almost any surface and freeze/thaw stable; can be re-coated with silicone or acrylic coatings; low VOCs and low flash point; freeze/thaw stable.

<https://pmsilicone.com>

## BENJAMIN OBDYKE VAPORDRY SA UNDERLAYMENT

Benjamin Obdyke is addressing an increasing problem of moisture buildup under the roof with the introduction of VaporDry SA, one of the industry's first self-adhered, vapor-permeable

roofing membranes.

VaporDry SA features a continuous acrylic adhesive that is repositionable during installation and self-seals around roofing fasteners, allowing the membrane to serve as an air-control layer in addition to a moisture-control layer. The acrylic adhesive also is approved for 250-degree F service temperatures, so it is appropriate for use under metal roofs. The membrane's tri-laminate structure is durable under foot traffic, and a reinforcement scrim in the adhesive provides for more tensile strength. The surface is slip-resistant and features printed overlay guides for easier installation.

VaporDry SA is suitable for use with all roofing types, including wood, metal, composite, and asphalt, with a pitch of 3:12 or greater. For maximum drying potential, install VaporDry SA as a system with Cedar Breather Ventilated Roof Mat for wood, metal, and cold roof applications. VaporDry SA meets ASTM D1970 testing standards for nail sealability and ICC-ES AC48 for Self-Adhered Underlayments to be used as an ice barrier, and it can be left exposed for 120 days. It comes in 4.75' x 80' rolls.

[benjaminobdyke.com](http://benjaminobdyke.com)



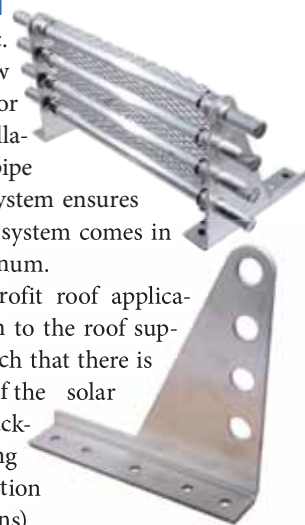
## ROCKY MOUNTAIN SNOW GUARDS DRIFT SOLAR SNOW FENCE SYSTEM

Rocky Mountain Snow Guards, Inc. has introduced the Drift Solar Snow Fence System. Designed specifically for snow retention below solar panel installations on shingle roofs, the 12" tall, 4-pipe aluminum Drift Solar snow retention system ensures no snow slips past the snow fence. The system comes in Mill Finish Aluminum or Coated Aluminum.

Suitable for both new roof and retrofit roof applications, the brackets must be bolted down to the roof support structure. Installation should be such that there is a minimum of 12" between the bottom of the solar panel and the snow fence tubes. The bracket can be flush at the eave with the tubing side facing down-slope (reversed installation compared to other snow fence installations).

Five ½" x 3.5" lag bolts (not included) and the individually sold Ice Screens must be installed with the Drift Solar snow fence system to impede the movement of snow between the tubing. Drift Solar 4-Pipe Fence-Style Snow Guard Bolt-Down Brackets are also available for end placements on the system.

[www.rockymountainsnowguards.com](http://www.rockymountainsnowguards.com) ●



# BEING OF SERVICE IS THE BEST REWARD

## INTERNATIONAL ROOFING

BY LINDA SCHMID

### GETTING STARTED

Lorena Vargas Schultz grew up around construction sites; her parents were in roofing and she often accompanied her dad to the new construction job site and spent her time dreaming. She imagined her family was moving into the home, and she planned where her room would be and which room her brother would have.

Eventually, Schultz grew up and her dreams changed. Her family realized that there was a need for more roofing companies in the area who offered good service to their customers. With all the stormy weather in southwestern Florida where Schultz lived, there was a lot of roofing work; so much in fact that small roofing outfits would quickly grow big, and their service would suffer. The family decided they could do better, and in 2018 International Roofing opened its doors.

The local roofing industry was partic-



ularly busy at that time since they were feeling the aftermath of Hurricane Irma. It was a very challenging time according to Schultz, owner, as they were just getting started and they were an unknown entity. While they did have some connections from their years in the industry, initially many people were suspicious

because they had had bad experiences with roofers or heard negative stories about area roofers. However, with so many damaged roofs, it didn't take long before someone gave them a chance. Then the neighbor saw that they had done a good job and had offered good service, so they wanted International Roofing to fix their roof. They were growing a reputation as a company that did great work and was easy to work with and it got them lots of work, which was great, but they were still a very small enterprise... it was challenging to keep up with the work that was coming their way. What a wonderful challenge to have!

### FIVE YEARS IN

Word of mouth has made the company quite successful; they are beginning to market their services for the first time. They specialize in metal and compos-





ite roofing, but they do everything, tile, shakes, residential, commercial, and flat roofing. Their local service area is within a tri-county area: Collier, Lee, and Charlotte, but they cover the entire state of Florida for composite or metal roofing.

The company was at Ground Zero for Hurricane Ian, and trying to keep up with the work was difficult; even maintaining their standards of communication became difficult. Schultz places a premium on efficient communication; it is part of their commitment to excellent customer service.

Concrete tile is another challenge the company is navigating. The supply chain is lagging behind by 8-10 months; some customers have waited a year for their tile.

## REFLECTING ON SUCCESS

Schultz is proud that her family has been able to gel and become a team. Her mother handles the accounting and human resources, her dad handles production and directs the crews, and Schultz focuses on sales and marketing.

“We are a small but mighty team,” Schultz said. “Every employee is an important cog in the machine. And while we work hard, we have a lot of fun too.”

Proof of their great teamwork is the reputation they have built as the “go-to” company for composite shingles Schultz said. They were one of the first contractors to do composite slate and shake in Florida.

## ADVICE

Schultz’s advice to someone starting out in the industry is to refrain from stressing out that everything isn’t perfect from day one.

“Be okay with where you are,” Schultz said. “Work hard, but don’t stress out about what you aren’t doing or haven’t got yet. It will come in time; trust the process.”

Further, she believes that small business leaders can get caught up in focusing on sales at the expense of other equally important things. For example, when



she prepared for maternity leave last year, she was working on getting business in the door. In retrospect, she said, “I should have been focused on structure; getting people in place to handle the day-to-day. Sometimes small business leaders fail to see how a good, solid structure can impact ROI, but long term they will see it.”

## GOOD BUSINESS

The mission, Schultz said, is not just to install roofs, it’s to help people and to do it in the most respectful way possible. This means being reliable; showing up when you say you will. It means that when a mistake is made, contact the customer and explain what has happened, then fix it. It means being transparent.

## IR CARES

Schultz is serious about wanting to help people; that’s what the “IR Cares” event is all about. This year marks the

fourth year of this event. It is held every August, Schultz’s birthday month, and it has encompassed everything from blood drives to helping in soup kitchens to backpack drives for kids going back to school. Each year, Schultz has wanted to give away a free roof, but she ran into a lot of challenges. The government has a lot of rules regarding qualifying people for this type of give-away, but this year she partnered with a couple of local organizations and made it happen!

Builders Care vetted local families and found some qualifying folks who needed a roof. Beacon donated the materials needed, and International Roofing provided the labor. Everyone in the company was given time to participate and experience giving back. Office workers painted, some cleaned up the yard; the employees loved being of service. Schultz said the company plans to do this again every year; a great way to give back and something wonderful to look forward to. ●