

Tree House Brewing's New Facility

More Industrial & Warehouse Projects

→ BUSINESS SENSE

Psychology-Based Strategies Can Help Close More Sales

→ COOL ROOFS

Dispelling Myths About Cool Roof Performance

→ TECH POINT

FEMA's National Mitigation Investment Strategy

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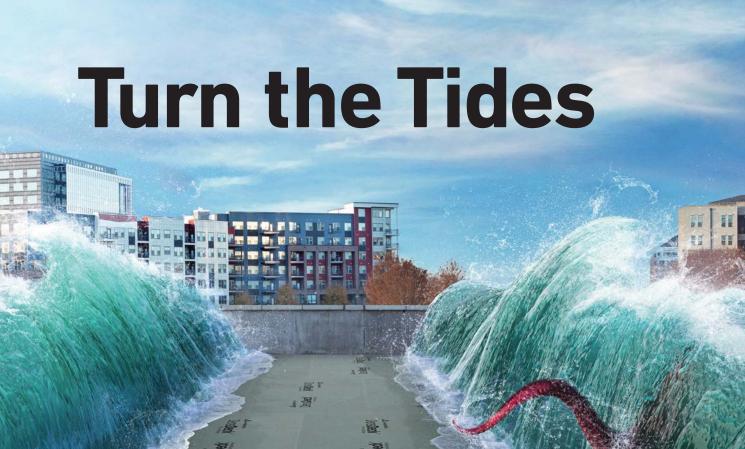


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^{1.} Few elements are as damaging as moisture which is why every effort should be taken to avoid exposure before, during, and after installation. Damage or reduction in performance resulting from more than an incidental amount of moisture is NOT covered by the limited warranty for DensDeck® Roof Boards. Visit densdeck.com for additional information on installation guidelines and product warranty.

2. Based on roof heards mylisched manufacturing specifications as of December 1, 2017.



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BUSINESS IS HOPPING

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VOL. 9, NO. 4 Is published bimonthly by HRT Publishing LLC, 4711 Hope Valley Road, Box 202, Durham, NC 27707. Telephone (919) 593-5318. POSTMASTER: Send address changes to *Roofing*, 4711 Hope Valley Road, Box 202, Durham, NC 27707. *Roofing* is published six times per year: January/February, March/April, May/June, July/August, September/October and November/December. The magazine is written for the building professional concerned with the design, specification and application of roofing. Issues with bonus distribution at national, regional, state and local roofing and construction conventions and trade shows occur regularly throughout the year.



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THIS ISSUE IS INTERACTIVE

Download the free Layar Augmented Reality app. (The QR code will help you find the app.) Then, hover over pages 17 and 79 with a smartphone or tablet and watch a video that brings the content to life.







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ON THE COVER

Tree House Brewing recently opened a 51,200-square-foot brewery on 68 acres in Charlton, Massachusetts. Customers are known to travel from miles around to purchase Tree House's ales, IPAs and stouts. The reflective roof system that the company selected to cover its new facility features a PVC membrane.



Photo: Sika Sarnafil



Roofing project cost:



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RAISE THE ROOF

WRITTEN BY CHRIS KING

Tough Questions



spent Father's Day in a less than optimal spot - visiting my dad in the local hospital.

My father is 87, and a fall down the stairs resulted in life-threatening injuries. As I headed to the intensive care unit that first night, I didn't know what to expect. However, I did know what my father's wishes were regarding his care.

My dad is an attorney, and he prides himself on his estate planning, which is guided by two principles: taking care of his family and not paying a penny more in taxes than he has to. My brother,

my sister and I know the details and who to contact when he passes away. But when my mom passed away unexpectedly more than a decade ago, we realized we didn't know what her wishes were regarding critical care or even her funeral.

We learned from those mistakes. Our family discussed not only dad's estate plan but his preferences for a funeral service (less funeral home, more Irish wake) and his thoughts about being kept alive by artificial means (no). I have a durable power of attorney in my briefcase and a form designating me as his patient advocate.

I was able to concentrate on the most important thing: making sure my dad got the care he needed. With the help of some talented and dedicated health care professionals, he's doing much better now; he's in a rehab unit and back on his feet. Hopefully we won't need to look at his estate plans for a long time to come.

I can't imagine going through the experience without that preparation. I thought back on the article about exit and succession planning in our last issue by Angie Lewis titled "Leaving Your Business Legacy." In it, she details the advice of business planning experts Kevin Kennedy and Joe Bazzano of Beacon Exit Planning, who spell out retirement strategies. They also stress the importance of contingency planning – preparing for an unexpected illness or death.

If you haven't read that article yet, I strongly urge you to do so. You can also log on to view an on-demand webinar on the same subject sponsored by Atlas Roofing (https://asphaltlife.atlasroofing.com/article/exit-planning-webinar).

Contact your attorney and get advice specifically tailored for your situation. Then talk to your family members and ask some tough questions. Take it from me, these conversations are not easy, but asking tough questions now can make difficult times a lot easier. R

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Roofing welcomes letters to the editor. Letters must be signed and include a return address/email and telephone

number. Roofing reserves the right to edit letters for clarity and length. Send letters to Chris@RoofingMagazine.com.

If you enjoyed reading this issue, please consider submitting something for the next one. Let's talk about ideas! Call Chris King at (248) 376-5115; email him at chris@roofingmagazine.com; post a comment on our website; and/ or Facebook and tweet us. This magazine—and your peers—are counting on you!

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CONTRIBUTORS



Stan Bastek is director of marketing and sales development for Atlas Roofing. In "Business Sense," page 34, he explores the psychological and emotional roots of purchasing decisions and offers psychology-based strategies to make advertising campaigns and sales pitches more effective.



Kurt Shickman is the executive director of the Global Cool Cities Alliance, a non-profit that helps cities reduce urban heat through cooler buildings and surfaces. In "Cool Roofs," page 38, he examines the performance of cool roofs in northern climates.



Jared Blum is the executive director of the EPDM Roofing Association (ERA) and serves as chair of the Environmental and Energy Study Institute. In "Tech Point," page 44, he details ERA's response to FEMA's draft of a **National Mitigation** Investment Strategy, offering strategies to improve rebuilding efforts.



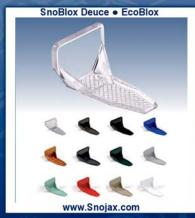
Rick Mockler is a technical sales representative at Hunter Panels. His more than 30 years in the insulation industry includes a range of design, estimating and sales roles. In "Details," page 48, he explains how to use polyiso insulation products to make roof system installations more efficient.



Bennett Judson is executive director of The Roofing Industry Alliance for Progress (The Alliance) and vice president of meeting services for NRCA. In "Education," page 74, she details some of the programs and projects The Alliance is currently focusing on in order to improve and advance the roofing industry.

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NEW&NOTABLE



A.C.T. Metal Deck Supply Opens Tennessee Location

A.C.T. METAL DECK SUPPLY announced the grand opening of its newest location in Milan, Tennessee. This opening increases its network to 15 metal deck distribution centers to better serve the construction industry.

"This location will help us serve our customers in the region including Western Tennessee, Arkansas and Mississippi," said Nick V. Polizzi, President of A.C.T. Metal Deck Supply. "When a customer has a short lead time or a roofing contractor runs into rusted deck while replacing a leaking roof, they need metal deck right now, and we have it in stock for immediate use."

A.C.T. Metal Deck Supply has more than 48 years of experience in the industry and a complete inventory of metal roof deck, form deck and composite floor decks in stock now at 15 locations including Albany, New York; Atlanta, Georgia; Aurora, Ilinois; Columbus, Ohio; Fort Worth, Texas; Greensboro, North Carolina; Hagerstown, Maryland; Houston, Texas; Indianapolis, Indiana; Jacksonville, Florida; Kansas City, Missouri; Knoxville, Tennessee; Milan, Tennessee; San Antonio, Texas; and St. Louis, Missouri.

For more information, visit www.metaldecksupply.com.



National Roofing Partners Names New President

National Roofing Partners (NRP) appointed Rodney Shrader as its president. According to NRP, with a 20-year record of success in the facilities storage and rental space, Shrader brings a new level of leadership to the national network of tier-one roofing contractors. Having worked for Acton Mobile since 2004, Shrader was most recently executive vice president of sales and marketing, where he was instrumental in growing the company. For more information, visit www.nationalroofingpartners.com.

Roofing Technology Think Tank Elects Board of Directors



Roofing Technology Think Tank (RT3), a group of progressive roofing professionals focused on technology solutions for the roofing industry, announced that it has elected six directors of the board. RT3 was formed to act as a conduit for curating knowledge on technologies that can help roofing contractors and the roofing industry overall. Formed in July of 2017, the group has grown from 20 founding members to more than 60. The think tank was officially incorporated in 2018.

Heidi J. Ellsworth, Partner,
RoofersCoffeeShop.com, and Karen Inman,
Chief Operating Officer, Antis Roofing and
Waterproofing, will serve three-year terms
on the board. Steve Little, Head Coach at
K-Post Roofing, and Ken Kelly, President
of Kelly Roofing, will serve two-year terms,
while Trent Cotney, Cotney Construction Law,
and Tom Whitaker, President of Harness
Software, will serve one-year terms.

"It is about education and the initiative to understand and then disseminate innovative technologies into the roofing industry," Ellsworth said. "One of the ways to attract the new generation and a diversified labor force is to incorporate the use of technology including robotics, drones, software, cloud solutions and cutting-edge technologies that we are not even aware of yet."

For more information about RT3, visit www.rt3thinktank.com.



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NEW&NOTABLE



Tecta America Arizona Lends a Helping Hand at Teen Challenge of Arizona Facility

TECTA AMERICA ARIZONA recently donated its time to repair the roof on the Teen Challenge of Arizona at Home of Hope (TCAZ) facility in Casa Grande, Arizona. A home of recovery for women and children, the building that provides a safe haven for its residents was in dire need of help after sustaining weather-related damage in 2016.

The project was presented by the National Women in Roofing - Arizona (NWiRAZ) chapter as part of its mission of giving back to the local community. Rebecca Clements, member of



NWiRAZ and Service Manager for Tecta America Arizona, gladly stepped in to help the TCAZ while working with roofing industry affiliates to make it happen. The team members at Tecta volunteered their skill and time to repair the 30,000-square-foot roof and the needed material was generously donated by Glendale-based Elite Roofing Supply.

"We are proud to have been part of this project," commented Clements. "Tecta is committed to playing an active role in supporting the community and when I was made aware of the need, we immediately jumped in to help."

For more information about Tecta America Arizona, visit <u>www.tectaamerica.com/commercial-roofing-phoenix-arizona</u>.

ABC Supply Receives Gallup Great Workplace Award

ABC Supply Co. Inc. has been awarded the Gallup Great Workplace Award for the 12th year in a row. The prestigious award recognizes businesses around the world that engage employees and provide exemplary working environments. ABC Supply is one of just 39 companies worldwide to receive the award in 2018.

"It is an honor to have ABC Supply recognized as one of the best workplaces in the world," said Chairman Diane Hendricks. "We pride ourselves on employing great people, and it is because of our amazing associates that we continue to receive this high recognition."

"ABC Supply focuses on making sure our associates know they are valued; they are the core of our company," added President and CEO Keith Rozolis.

For more information, visit <u>www.abcsupply.</u> <u>com.</u>

Owens Corning Earns 2018 Women's Choice Award

Owens Corning announced that it earned the 2018 Women's Choice Award. This designation is based on a national survey reflecting responses from thousands of women in the United States who were asked to select brands they would highly recommend to friends and family.

"We are honored that women have expressed their confidence in Owens Corning Roofing with the Women's Choice Award. Women have long driven design and style decisions inside and outside the home, including the roof," said Sue Burkett, marketing manager, Owens Corning Roofing. Delia Passi, Chief Executive Officer and Founder of the Women's Choice Award, stated, "By carrying the Women's Choice Award seal, brands like Owens Corning signify their commitment to empower women to make smart buying choices, which is important because women's spending power continues to grow."

For more information, visit <u>www.</u> <u>owenscorning.com</u>.



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JEWSFROM**NRCA**

The Rosemont, Ill.-based National Roofing Contractors Association represents all segments of the roofing industry, including contractors; manufacturers; distributors; architects; consultants; engineers; building owners; and city, state and government agencies. NRCA's mission is to infoarm and assist the roofing industry, act as its principal advocate and help members in serving their customers. For information about NRCA and its services and offerings, visit www.NRCA.net.



Alliance Awards \$55,000 in Scholarships Through Melvin Kruger Endowed Scholarship Program

The Roofing Industry Alliance for Progress has announced the recipients of its 2018 Melvin Kruger Endowed Scholarships, which include three new recipients and the renewal of eight scholarships for the 2018-19 academic year.

The Alliance awarded new general scholarships to Elaina Krumholz, daughter of Erik Krumholz, sales representative for Tremco Inc., Beachwood, Ohio' and John Paynter, son of Bill Paynter, manufacturer representative for Duro-Last Roofing, Saginaw, Michigan.

A new Firestone Scholarship also was awarded to Cameron Tickerhoff, son of Joshua Tickerhoff, foreman for Kalkreuth Roofing and Sheet Metal Inc., Wheeling, West Virginia.

The Alliance also renewed eight Melvin

Kruger Endowed Scholarships, including two general scholarships to Nicolas Calvert, who attends West Virginia University, Morgantown, West Virginia, and Jonah Manson, who attends Iowa State University, Ames, Iowa.

In addition, a Firestone Scholarship was renewed for Alyssa Merna, who attends Olivette Nazarene University, Bourbonnais, Illinois. A Beacon Roofing Supply Scholarship was renewed for Salvador Flores Garcia, who attends University of California Berkley, Berkley, California. An OMG Roofing Products Inc. Scholarship was renewed for Lillian McKenzie, who attends Clemson University, Clemson, South Carolina. A Dan Cohen Scholarship was renewed for Christian Cole,

who attends Kennesaw State University, Kennesaw, Georgia. A Fred Good Scholarship also was renewed for Ivy Rivas, who attends University of California Davis, Davis, California. A William A. Good Scholarship was renewed for Sophie McGuire, who attends University of Alabama, Tuscaloosa, Alabama.

Each recipient will receive a \$5,000 award. A total of \$55,000 in scholarships was awarded for the 2018-19 school year -\$40,000 for renewals and \$15,000 for new recipients. To date, 125 students have received \$790,000 in scholarship awards.

For more information, visit www. roofingindustryalliance.net.







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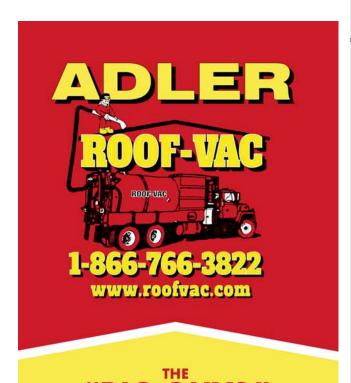
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CHTOOLS.....



CertainTeed Unveils New Job Costing and Bidding Software

CertainTeed introduced InstaBid, a proprietary web-based software system available on both desktop and mobile devices to help roofing contractors take the guesswork out of ordering materials, meeting installation specifications and generating sales proposals. According to the company, InstaBid helps roofing companies produce Good, Better, Best roofing proposals quickly with accurate job costing, material lists and job-specific installer notes, thereby saving time, improving operational efficiency and helping ensure solid margins. To learn more, contractors can visit www.instabidsoftware.com and try a 30-day complimentary trial. For more information, visit www. certainteed.com.



Hydrotech Launches New Protected Membrane Roof Planning Guide

American Hydrotech announced the availability of the company's Protected Membrane Roof (PMR) Planning Guide, a new resource representing more than 50 years of proven assembly experience across the globe and 35-plus years of Hydrotech's industry knowledge. The guide educates architects, engineers, general contractors and other design professionals on the key benefits of a protected membrane roof versus a conventional roof, the technology currently available and best practices for effective installations. The guide also takes an in-depth look at today's environmental challenges, detailing best practices, sustainability, LEED requirements and storm water management opportunities on the roof. It is currently available for download in PDF format free of charge at www.hydrotechusa.com.



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EVENTS

JULY

10-14

NRCA MIDYEAR MEETINGS

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National Roofing Contractors Association www.NRCA.net

23-26

2018 INTERNATIONAL ROOF COATINGS CONFERENCE

Chicago

Roof Coatings Manufacturers Association www.RoofCoatingsConference.com

AUGUST

CERTA TRAIN-THE-TRAINER AUTHORIZATION

Elain. Illinois

National Roofing Contractors Association www.NRCA.net

SEPTEMBER

13

CERTA TRAIN-THE-TRAINER AUTHORIZATION

Elgin, Illinois

National Roofing Contractors Association www.NRCA.net

13-14

CANADIAN BUILDING ENVELOPE TECHNOLOGY SYMPOSIUM

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www.RCI-online.org

14

CERTA TRAIN-THE-TRAINER REAUTHORIZATION

Elgin, Illinois

National Roofing Contractors Association www.NRCA.net

24-28

CITIES ALIVE 2018

Brooklyn, New York www.CitiesAlive.org

OCTOBER

3-5

CONSTRUCT

Long Beach, California www.constructshow.com

RETROFIT CONFERENCE 2018

Charlotte, North Carolina www.retrofitconference.com

10-12

METALCON 2018

Charlotte, North Carolina www.metalcon.com

24-26

MRCA CONFERENCE AND EXPO

Omaha, Nebraska Midwest Roofing Contractors Association www.mrca.org

NOVEMBER

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13-16

NRCA FALL COMMITTEE MEETINGS

Chicago

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14-16

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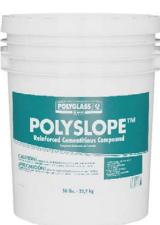
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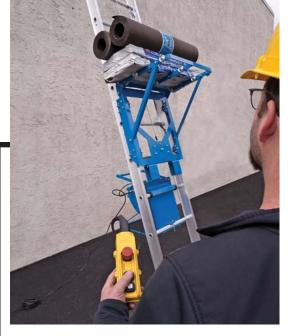




New Designer Shingle Line Offers Scotchgard Protector

Atlas Roofing Corporation offers Legend Designer Fiberglass Shingles. With bold cuts and high-contrast color, these threetab designer shingles are designed to provide the high style of an architectural look at an attractive price for homeowners. According to the company, Legend is the industry's first three-tab shingle that features the power of Scotchgard Protector, which helps prevent ugly black streaks caused by algae. Legend shingles come with a 40-year Limited Warranty against manufacturing defects and a 110-mph Wind Limited Warranty.

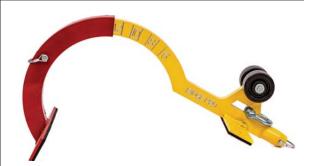
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New Electric Hoist Moves Operator Away From the Load

Safety Hoist Company launches its new electric material hoist, which moves the operator a safe distance away from the hoist and its load. According to the manufacturer, its unique pendant control makes this one of the safest hoists available today. The hoist runs on 110-volt electric household current, and its controlled descent enables safe, smooth transport both up and down. The electric hoist is guiet, environmentally-friendly, and free from harmful emissions, so it can be used both indoors and outdoors. It can handle up to 500 pounds without sacrificing speed or efficiency.

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Work Gloves Offer Advanced Fit, Safety and Comfort

PrimeSource Building Products offers GRX Gloves, a brand-new line of quality gloves designed to promote hand safety and offer value for American workers. According to the manufacturer, GRX Gloves offer workers the latest technology in comfort, fit and safety to deliver a range of tighter fitting, more

breathable gloves for a variety



of applications and weather conditions. The GRX glove line will be available through the PrimeSource network of pro-contractor supply location and pro-supply locations like 84 Lumber and BMC.

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New Line of Fasteners Designed for Extreme Environments

The new 40-year Ply-Lo Extreme line of fasteners from East Coast Fasteners is designed for extreme environments. According to the manufacturer, Ply-Lo Extreme was successfully tested in accordance to ASTM B117 for more than 3,000 hours of salt spray. With all the features of the original Ply-Lo fastener, the Ply-Lo Extreme is available in #10, #12 and #14, with a 40-year warranty.

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Retrofit **Roof Drains Feature Integrated** Vortex Breaker

OMG Roofing Products introduces a new line of retrofit roof drains called Hercules-Plus. The drains feature integrated vortex breaker technology, which helps improve drain performance to guickly remove water from the roof. According to the manufacturer, independent performance testing shows that Hercules-Plus RetroDrains provide up to 2.5 times greater flow capacity than original Hercules Drains without vortex breaker technology. Drains are available in four sizes: 3 inches, 4 inches, 5 inches and 6 inches, and with an optional TPO or PVC coated flange for direct membrane attachment.

www.OMGRoofing.com | Circle No. 26



Storm Repair System Uses Shrink Wrapping Technology

Stormseal is a storm recovery system that protects damaged roofs or walls with a patented wind-, rain- and hail-resistant polyethylene film. The technology, pioneered in Australia, is now available in the United States. According to the manufacturer, Stormseal is designed to replace flapping, leaking, flyaway tarpaulins. The low-density patented polyethylene film is cut and fitted at the worksite with the heat "shrink wrapping" technique, changing the chemical structure of the film and enhancing its strength.

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component, solvent-based primer can be applied by a spray brush or a roller. The product is designed to provide exceptional adhesion to new and aged TPO and PVC membranes. In addition, this high-performance coating provides excellent surface for subsequent application of acrylic, 100 percent solids Silicone and fluoropolymer coatings.

www.Everestsystemsco.com | Circle No. 30

Backpack Version of Induction **Welding System** Now Available

SFS Group USA Inc. offers the new isoweld Backpack, a portable and versatile induction welder for installing single-ply membrane. Providing the same functions as the isoweld 3000 stand-up



tool, the Backpack system offers greater speed and agility. It includes a power generator that is interchangeable with the isoweld 3000 stand-up tool frame, replaceable closed cell foam shoulder straps with integral waist strap, and the original low profile hand-held inductor for detail work which converts to stand-up mode for ultimate productivity.

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Rigid Insulation Designed for Variety of Wall Assemblies

Atlas EnergyShield Pro is a rigid insulation designed for commercial wall assemblies. With thousands of NFPA 285 approved assemblies, EnergyShield Pro can be used in a variety of wall configurations, according to the manufacturer. In addition, the product offers a high R-value and meets rigorous testing requirements for use as a weather-resistant barrier (WRB) and as an air barrier. Available with foil or coated glass facers, EnergyShield Pro products offer options for vapor closed or vapor open designs.

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Precut Polysio Sump Panel Arrives Ready to Install

Hunter Panels offers its new 4-foot-by-4-foot Target Sump. The polyiso insulation panel is ideal for low-slope applications, ships flat, arrives ready to install and increases the slope around drains to ensure water will flow to the drain instead of ponding. According to the manufacturer, the Target Sump's coated glass (CG) facer provides improved dimensional stability, fire performance, resistance to mold growth and is compatible with all major roofing membranes and application techniques. The product complements the company's 8-foot-by-8-foot hinged Target Sump.

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ROOFERS'CHOICE

Composite Shake Shingles Offered in New Colors

The Nature Crafted Collection From DaVinci Roofscapes Captures Look of Natural Shake

αVinci Roofscapes launches the Nature Crafted Collection of composite shake shingles, which includes three realistic, nature-inspired colors: Aged Cedar, Mossy Cedar and Black Oak. According to the manufacturer, each new color reflects different progressive aging processes found on real shake shingles. The Nature Crafted Collection is designed to capture the look of a moment and retain it for decades. The Nature Crafted Collection is available on all DaVinci Multi-Width and Single-Width Shake composite roofing tiles.

"The DaVinci Nature Crafted Collection is our most ambitious foray into color development in our company's history," said Ray Rosewall, president and CEO of DaVinci Roofscapes. "Our proprietary process technology enables us to recreate the natural warmth and softness of a patina previously only created by time and exposure to the elements."

The realistic-looking colors on the composite shake tiles provide homeowners with the ability to gain the specific natural color they desire for roofing tiles without the hassles of dealing with real wood. The DaVinci shake products have a lifetime limited warranty and







will not split, crack, curl or fade, according to the company. Each tile has been crafted to resist fire and impact, along with high winds, mold, algae, fungus and insects. The composite tiles come in both wavy and straight grains throughout each shake tile to achieve an authentic wood look.

Research, time and attention have been dedicated to the development of the Nature Crafted Collection to assure a unique variety of colors appealing to homeowners nationwide. "We had our teams scanning the country to identify any colors that may be missing from our current selections," said Rosewall. "This allowed us to identify three distinct 'aged' cedar palettes with different

tones. In most cases when real wood has aged to the point where these beautiful patinas appear, the cedar itself begins to deteriorate as a roofing material. We have captured those natural colors and married them up with our composite shakes to offer longterm performance without the worry of failing roof materials."

"People who truly appreciate the natural aesthetic that comes with the aging of a cedar shake tile will find the new colors in the Nature Crafted Collection very realistic," Rosewall said. "The hues and tones replicated on these tiles are 'consistently inconsistent' ... much like Mother Nature makes them." R



The "Roofers' Choice" winner is determined by the product that receives the most reader inquiries from the "Materials & Gadgets" section in a previous issue. This product received the most inquiries from our March/April 2018 issue.



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etting potential customers to choose your roofing company rather than the competition comes down to more than just a name or reputation. Because consumer buying decisions are based in human psychology and emotion, you need to know how the brain interprets information so you can adjust your sales strategy accordingly.

To help close your next big roofing job, try incorporating some of the following psychology-based strategies into your advertising and sales pitch.

USE THE FRAMING EFFECT

Consumers hate to miss out on opportunities.

For example, consider these two statements:

- 1. Book an appointment online and receive a discount!
- 2. Book an appointment online before August 1 and receive 10 percent off a new roof installation!

Both offer essentially the same

proposition – book online to save some money. Put the first one on your website and you would get a few responses. Use the second appeal, however, and you could expect a considerably higher conversion rate.

Adding a deadline triggers a psychological technique known as the framing effect in your customers' minds.

According to the framing effect, people react differently based on how options are presented. The thought of being left out — a condition known as loss aversion, or FOMO (fear of missing out) - causes a stronger, more immediate response than a simple discount or reward does.

Marketingland.com used college students to document how the framing effect works. Researchers sent emails reminding Ph.D. students to register for an economics conference. Some emails offered a discount for registering early, others mentioned a penalty for registering late. The penalty email had a much bigger impact, spurring 93 percent of the recipients to sign up early. By contrast, only 67 percent registered early when presented with the discount option.

Understanding the framing effect helps you position your value more effectively to customers. Combine that knowledge with some local market research and you have a good chance of outmaneuvering your competitors.

YOU GET WHAT YOU PAY FOR

In addition to urgency and gain, consumers generally feel better when paying more for things that have tangible value versus paying less on a purchase with suspect quality or little value. To most consumers, price is a reflection of the quality of your work. Furthermore, your willingness to price match is a reflection of how much value they should place in you.

Consider the psychology of "we match all competitive quotes," "lowest prices in town" or "free roof inspections." You have set an expectation that your time has no value and your brand is built around a willingness to be cheap. When you take the time to defend your price with a well-developed sales pitch and refuse to compromise on quality, your customer will view your bid as a benchmark for all the rest.

Just keep in mind that you won't win them all – because there will always be a segment of the market looking for the lowest cost and a company willing to offer it.

AVOID ANALYSIS PARALYSIS

Always give customers fewer options. This strategy may sound counterintuitive, but if you give consumers too many alternatives, they are likely to avoid choosing any – a result known as "analysis paralysis."

Instead of overwhelming buyers with every shingle type and color, group your



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Patent pending on the electric hoist

products into a handful of categories from which they can choose, or perform a needs analysis to condition the sale before presenting product options.

PROVIDE SOCIAL PROOF

People like to fit in with the crowd and follow their peers. If one person approves of your services and products, his/her friends and family are likely to approve too. It's a technique called social proof.

You can use digital media platforms to provide social proof and showcase how your current customers are benefitting from your roofing expertise.

For instance, always ask recent customers to write reviews on Facebook, Google and the Better Business Bureau (BBB). And don't forget Yelp and other review sites. You can also encourage your customers to share your social content on their own Facebook pages, which they are more likely to do if you post transformative before-and-after photos and/or videos of their home.

APPLY THE THEORY OF RECIPROCITY

Giving people something helps create a bond between them and your company — even if it's something as simple as a "like" on Facebook, a helpful video you share or an EagleView Report showing aerial images of their home.

Creating a feeling of loyalty can inspire customers to remember you when they are ready to tackle their next big project.

LET YOUR BODY TALK

When meeting with prospects in person, use nonverbal cues in your body language to help make a good first impression and establish trust.

For instance:

- Open your arms. Crossing your arms signals a closed-off or defensive attitude. Keeping your arms open and relaxed shows that you're fully involved and interested in the discussion.
- Lean forward. Leaning forward and in toward customers illustrates that you're engaged in the conversation and paying attention.

 Mirror. Try to match and mirror the body language of prospective buyers. Reflecting back the same posture, gestures and movements as your customers helps them to relax and feel comfortable during the sales pitch.

TAP INTO THE REPTILIAN BRAIN

Consumers continuously evaluate whether products and services are worth the cost. This decision-making process takes place in the reptilian brain — the oldest evolutionary layer of the brain. The reptilian brain is made up of the brain stem and cerebellum, which not only control the body's vital functions, such as breathing and heart rate, but also instinctual actions and decisions.

Grab the attention of a customer's reptilian brain with your company's website or advertising and you'll have a much better chance of guiding them toward a sale. This strategy is known as neuromarketing.

For example, the reptilian brain easily understands contrast. Show customers why your business is better than your competitor's and why what you have to say is important. To stand out, use phrases such as "We are the only \square " and "We are the best."

The reptilian brain is geared to respond to visuals, so images can be far more persuasive than words. Be creative in your communications. Use short, simple sentences and include images that demonstrate the value of your claims. Incorporate customer testimonials as proof and share quick demonstrations of your products that will grab a consumer's attention.

Incorporating psychology into your sales pitch and advertising is not about trying to trick customers. It's about understanding how people's brains interpret information so you can make decisions and focus your messaging accordingly.

Using these strategies to understand people's minds can help you be more confident in your dealings with prospective customers and ultimately help you land more jobs.

"All things being equal, the simplest solution tends to be the best one." - William of Occam



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COOL ROOFS

WRITTEN BY KURT SHICKMAN

Cool Roofs Are Still a Hot Topic

The overwhelming consensus is that cool roofs are a clear top choice in warm climates, but what about cooler ones?

Studies and decades of real-world experience clearly show that cool roofs are net energy savers and improve thermal comfort in Climate Zones 1-3. The model codes (ASHRAE and the I-codes) already include requirements for some new and replacement roofs to be highly reflective in these areas.

But what about "cool, northern" climates like Climate Zone 4? Shown in vellow on the ASHRAE Climate Zone Map in Figure 1, Zone 4 stretches from the Mid-Atlantic across the southern Appalachian states to the southern Midwest.

There are a number of myths that have led to a notion that the dividing line between "warm" and "cool" lies

between Climate Zone 3 and Zone 4. In "cool" climates where heating degree days outnumber cooling degree days, the traditional thinking goes, the cost of extra heating demand caused by cool roofs in winter would offset the cooling energy cost savings in summer. Despite decades of market experience and a vast body of research supporting the net benefits of cool roofs in Climate Zone 4, this line of thinking has been an obstacle to cool roof policy in the United States. Let's dispel some of those myths by looking at a few facts.

Winter heating penalties associated with cool roofs in cool climates are vastly overstated. Higher insulation levels in Climate Zone 4 do not Research over the last couple of year (field and modeling), some of which I've cited in this article, show that the so-called "winter heating penalty" is much smaller than many thought. Specifically, a field and modeling study done at Princeton University's campus (in Climate Zone 4) compared cool and black membranes over roofs with insulation levels up to R-48. The studies show that cool roofs reduce heat inflow in summer but have the same heat loss in winter as black surfaced roofs over the same level of insulation. Another study evaluated the impact of reflective roofs on new and older vintage commercial buildings in cold locations including Anchorage, Milwaukee, Montreal, and Toronto. All cities in the study are located in climates zones north of Climate Zone 4 and experience longer, colder winters than cities in Climate Zone 4. The study finds that "Cool roofs for the simulated buildings resulted in annual energy expenditure savings in all cold climates." The study also identified peak energy savings in addition to the base energy efficiency gains.

offset the benefits of cool roofs.

 Heating and cooling degree days are not a good way to determine the appropriateness of cool roofs. Heating/cooling degree days indicate the intensity of the annual heating/cooling demand in a location, as a function of how far the outdoor air temperature is below/ above a "comfortable" temperature and how much of the year is spent below/above that threshold. These

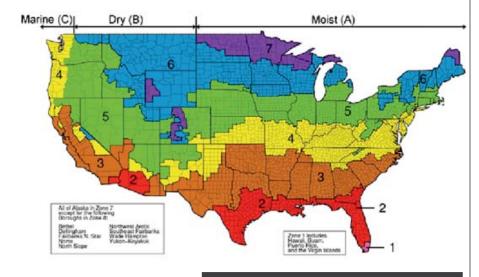


FIGURE 1. ASHRAE Climate Zone Map. Cool roofs are currently required in Zones 1-3 only.



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9,121,178; and other patents pending.

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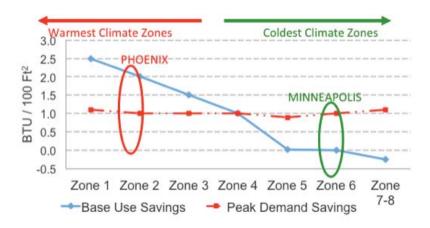


FIGURE 2. Peak demand is remarkably similar across climates. Source: Dr. Jim Hoff. "Reducing Peak Energy Demand: A Hidden Benefit of Cool Roofs."

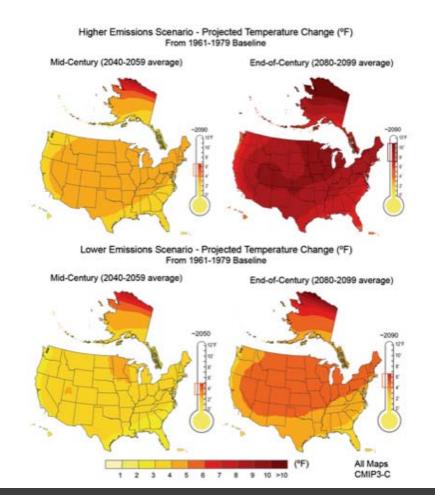


FIGURE 3. Projected temperature change for mid-century (left) and end-of-century (right) in the United States under higher (top) and lower (bottom) emissions scenarios. The brackets on the thermometers represent the likely range of model projections, though lower or higher outcomes are possible. Source: USGCRP (2009).

metrics paint a misleading picture because they are based on outdoor air temperature and do not account for the sun's ability to heat buildings or on the heat generated by human activity in the building. To illustrate this point, consider a cool sunny day during which the outdoor temperature approaches, but never exceeds, the comfort threshold (meaning zero cooling degree days). The sun may nevertheless heat the building enough throughout the day to require air conditioning by late afternoon, and cooling degree days would then underestimate actual cooling energy use.

Conversely, the sun's heat on a cold sunny day may cause heating degree days to overstate the true demand for heating energy. This suggests that reflective roofs can save energy over the course of a year even if heating degree days exceed cooling degree days. Or take heat from building occupancy and activity – many commercial buildings run space cooling yearround, thus negating the concept of a heating penalty altogether. The effect of occupancy will only increase as building standards require more insulation and fewer air gaps. The comparison of heating and cooling degree days, though simple and logical-sounding, is actually a very unreliable rule of thumb for the assessing the suitability of reflective roofs.

Peak energy demand reduction is a huge, but often overlooked, benefit of cool roofs in all climate zones. Reflective roofs save the most energy during peak energy demand periods, like hot summer afternoons. Field studies indicate a peak demand savings of 15 percent to 30 percent resulting from reflective roofs (see http://www. coolrooftoolkit.org/wp-content/uploads/2012/07/CEE_FL-Cool-Roof. pdf).

Unfortunately, most energy savings calculators exclude peak demand, thus painting only a partial picture of the energy savings opportunity of cool roofs. Peak reductions



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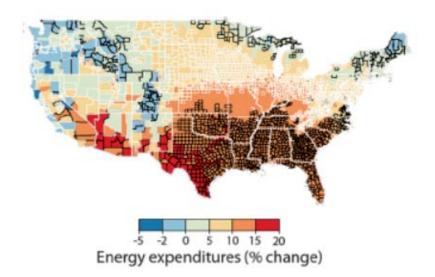












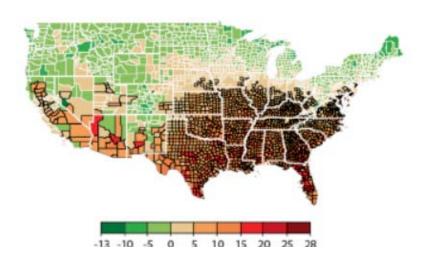


FIGURE 4. Energy cost increases and total damages from rising heat. Source: Solomon Hsiang et al. "Estimating economic damage from Climate Change in the U.S." Science, June 2017.

are more than just an energy saver. Most utilities charge a peak demand fee to non-residential customers based on their maximum demand in a given period of time. This fee can be more than half the bill for some customers. Peak demand is also different from "base" cooling demand because it is not driven by climate. The graph in Figure 3 compares base

and peak cooling demand for all U.S. climate zones and finds that peak demand requirements in Minneapolis are the same as they are in Phoenix.

 "Cool" climates in the United States are starting to feel a lot hotter. Scientists predict an average increase in temperatures of 4-6 degrees Fahrenheit in the United

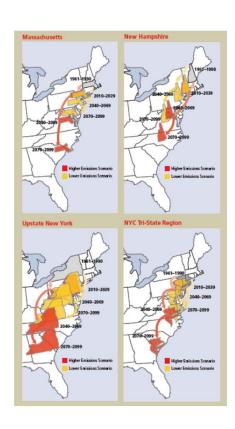


FIGURE 5. Summers in New England could soon feel like summers in South Carolina. Source: Union of Concerned Scientists. "The Changing Northeast Climate," 2006.

States over the next 30 years or so. But as the maps in Figures 4 and 5 show, the amount of warming and its economic impact will be most acutely experienced in parts of the United States covered by Climate Zones 1 through 4.

It won't just be hot areas getting hotter. An analysis by Union of Concerned Scientists forecast that, under a high but realistic emissions scenario, summers in New York City (the northernmost city in Climate Zone 4) could feel like South Carolina. Recently, the school district in Eau Claire, Wisconsin committed to replacing its black membrane roofs with white ones to help reduce temperatures during their increasingly hot summers. So, even if one still believes that Climate Zone 4 is too cool for cool roofs now, it certainly won't be for long. R

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TECH POINT

WRITTEN BY **JARED O. BLUM**

Improving Disaster Mitigation Strategies

ERA Stresses the Importance of Roof Systems in Response to FEMA Draft Report

his past January, National Institute Building Sciences (NIBS), a non-governmental, non-profit organization, reported that for every dollar spent on mitigation efforts to protect the built environment from the ravages of natural disasters, six dollars could be saved. These findings were part of a follow-up to the widely cited benefit-cost ratio of four to one in a comparable study by NIBS more than a decade ago. For this most recent study, NIBS reviewed the outcomes of 23 years of mitigation grants funded by FEMA, HUD, and the U.S. Economic Development Administration.

On the same day that the NIBS study was released, FEMA released its draft National Mitigation Investment Strategy to provide a "national approach to investments in mitigation activities and risk management across the United States." According to the FEMA draft, the final investment strategy will be grounded in three fundamental principles: (1) catalyze private and non-profit sector mitigation investments and innovation: (2) improve collaboration between the federal government and state, local, tribal and territorial governments, respecting local expertise in mitigation investing: and (3) make data- and risk-informed decisions that include lifetime costs and risks. The investment strategy's overarching goal,

according to FEMA, is to improve the coordination and effectiveness of "mitigation investments," defined as risk management actions taken to avoid, reduce, or transfer risks from natural hazards, including severe weather.

FFMA invited comment on its draft report and will publish its final strategy in November. Given the potential impact of this report on the built environment, and the industries that work to incorporate resilient strategies, the EPDM Roofing Association (ERA) submitted feedback to FEMA. ERA represents Johns Manville, Firestone Building Products, and Carlisle SynTec Inc., the three EPDM manufacturing members of the association, whose businesses span the globe. EPDM roofing membranes have been one of the leading commercial roofing materials in the country for the past 40 years, and the companies' knowledge of the role of roof performance in achieving a building's resilience is unparalleled.

In our response to FEMA, ERA noted that we appreciate the role that the built environment plays in a comprehensive disaster mitigation strategy. As an organization, ERA has invested time and resources to gather and provide state-of-the-art information about various approaches to creating a resilient built environment. This past year, ERA established a new microsite, EPDMtheresilientroof.com, to provide the roofing industry with a one-stop source for information about resilience.

As part of information gathering for this site, ERA staff and members have visited three of the premier research facilities in the country: Oak Ridge National Laboratory, the Insurance Institute for Business and Home Safety (IBHS), and the National Center for Atmospheric Research. These visits were also devoted to gaining a fuller understanding of the intersection between public and private progress in research and development.

At the outset of our response to FEMA, ERA commended FEMA for its issuance of the draft strategy, and supported all the recommended goals as desirable as risk management strategies to be implemented at the private and public sector levels. However, given ERA's experience with building performance, we also focused our comments on two of the specific recommended strategies in the published draft.

First, ERA responded to the recommendation that "Federal departments and agencies should ensure up-to-date building standards are used for federal building projects and could incentivize state, local, tribal and territorial governments receiving federal aid for building projects to adopt and enforce, at a minimum, the most current version of model building codes." Commenting on this recommendation, ERA pointed out that a review of hurricane and related weather catastrophic events demonstrates that the better



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Steel Services Center (434) 847-2473 Machinery Group (434) 847-2494 the building quality and the better the building codes, the better the performance of the community. While there has been substantial improvement in many states across the country, adoption and compliance pose significant hurdles for overall performance in disaster events. The urgency of this cannot be overstated. Part of this effort to

upgrade the building codes and consequently overall resilience must focus on the quality of materials, installation, and inspection of final construction to ensure compliance by local authorities.

The experiences of the roofing industry in its inspection of many disasters over the years have confirmed that a well-installed, inspected,

and well-maintained roof is a linchpin of overall building resilience. ERA believes that federal funding to the states to allow for the kind of technical assistance that enhances code quality and state and local compliance programs necessary to achieve physical and community resilience should be provided. Additionally, ERA responded specifically to the recommendation that "Public sector entities should focus more on rebuilding better as well as rebuilding quickly following damage caused by natural disasters." ERA pointed out in its response that this recommendation to achieve rebuilding better buildings quickly following damage caused by natural disasters is among the most important in the report. As FEMA Deputy Director Roy White has pointed out in several presentations focused on resilience, it makes no sense for the agency to fund rebuilding of a destroyed facility to standards that existed when the original building was constructed with the likelihood that it would not be able to withstand another weather event beyond historic norms. Consequently, ERA recommends that FEMA and HUD need to have authority and appropriations to ensure that rebuilding is done with an eye towards future – not historic - climate conditions. This is in recognition that the original basis for many buildings that then are destroyed has been dramatically changed by recently evolving weather patterns. In addition, as the FEMA and NIBS study recently demonstrated, there is a payback to the government of a 6 to 1 ratio for investing in rebuilding to a more resilient standard.

There are many, many elements of the draft strategy that ERA supports; however, we believe the two mentioned above are particularly within our expertise and with which we are very familiar. We look forward to the final mitigation strategy report from FEMA, due to be released in November, and we encourage FEMA to incorporate our recommendations to ensure that the value of investment in resilience be realized to the fullest extent possible. R





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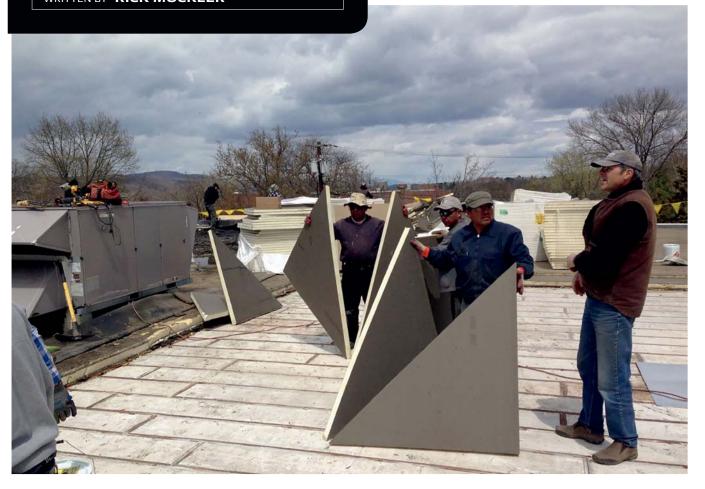
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WRITTEN BY RICK MOCKLER



Three Polyiso Roof **Insulation Options to** Simplify Your Next Job

s a roofing professional, you undoubtedly are familiar with polyiso insulation, as it is used in 70 percent or more of the commercial roofs in North America. Polyiso is popular with roofing professionals because it offers a high R-value per inch, is affordable, readily available, compatible with many roofing systems and meets both FM 4450 and UL 1256.

While you likely have specified

or installed flat stock polyiso products, you might be less familiar with specialized product make-ups, which can help you simplify roof insulation jobs. Three options to be aware of are:

- 1. Tapered systems
- 2. Pre-cut hips and valleys
- 3. Pre-fabricated sumps

TAPERED SYSTEMS

As roofing professionals know, water is the enemy of the roof assembly. To prevent ponding and provide a positive slope to drain, polyiso insulation

manufacturers offer sloped panels. Tapered polyiso typically comes in 4-foot-by-4-foot or 4-foot-by-8-foot panel sizes, and in various compressive strengths. Commonly available slopes (per foot) include 1/16 inch, 1/8 inch, 3/16 inch, 1/4 inch, 3/8 inch and 1/2 inch. Tapered systems range from two-panel to eight-panel repeats, with such systems including varying thicknesses of flat polyiso insulation to complete the taper profile.

Tapered polyiso insulation installs similar to flat stock polyiso insulation,



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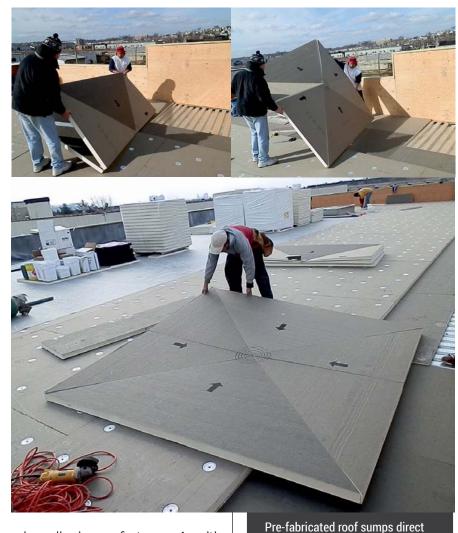
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using adhesives or fasteners. As with multi-layer flat stock installations, when installing tapered products, crews should stagger the joints between layers to reduce potential pathways for airflow and condensation within the insulation layers.

Full-service polyiso manufacturers can design a tapered insulation layout based on the roof plan and specified R-value. They then will provide shop drawings showing where to place each tapered and flat stock panel to ensure positive slope and effective drainage across the entire roof.

PRE-CUT HIPS AND VALLEYS

In addition to the one-way sloped tapered panels discussed above, roofing professionals have access to pre-cut hips and valleys made of polyiso insulation. The hips and valleys help direct water on more complex roof designs. Well-equipped manufacturers will custom design and fabricate pre-cut,

one-piece polyiso hips and valleys to meet your jobsite requirements including slope, and minimum and maximum thicknesses.

water to a center drain point, helping

to ensure proper drainage and

minimizing installation time.

While crews can form hips and valleys by field-cutting tapered panels, ordering the pre-cut, one-piece panels reduces labor time and costs, as well as dumpster fees. It also prevents material waste caused by cutting errors.

PRE-FABRICATED SUMPS

Going a step farther in slope complexity, and further reducing ponding water, some polyiso insulation manufacturers offer pre-fabricated roof sumps. Commonly available as 4-foot-by-4 foot panels that ship flat, pre-fabricated sumps direct water from four directions to a center drain point. Some

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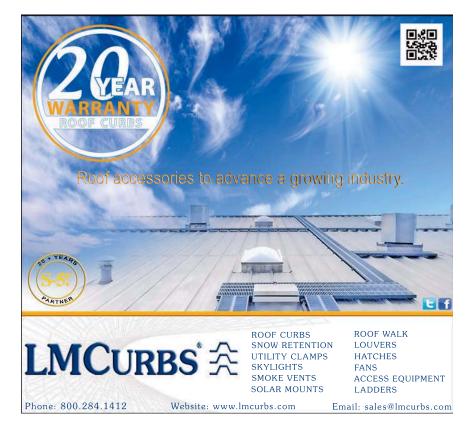




Easy-to-install KnuckleHeads can be loose laid, mechanically fastened or adhered to a single ply membrane with GREEN LINK Adhesive/Sealant. Molded from rugged glass-reinforced nylon, each Knucklehead can carry up to 600 lbs. of weight and provide elevations up to 18". KnuckleHeads are much lower cost than most pipe support systems on the market and easy installation keeps labor costs down.



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As with multi-layer flat stock installations, when installing tapered products, crews should stagger the joints between layers to reduce potential pathways for airflow and condensation within the insulation layers.

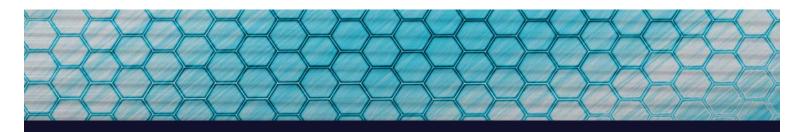
manufacturers also offer 8-foot-by-8-foot hinged sumps for greater design flexibility. All of these sumps offer a variety of starting thicknesses at the drain from 1/2 inch to 2 inches.

CHOOSING A POLYISO SUPPLIER

Roofing professionals can obtain polyiso roof insulation from several suppliers. Which one is right for you? Following are a few factors to consider to help simplify your next roofing job.

- Access to technical support: Some polyiso manufacturers provide customers with a variety of technical services. Having access to designers and estimators who work every day with specialized polyiso products takes the guesswork out of the process for you, saving time and money while helping ensure a high-quality roof.
- Ready availability: Choosing a supplier with facilities throughout the country helps ensure timely access to specialty polyiso insulations when you need them.
- Training support: To help your crews get up to speed faster on working with specialized polyiso roof insulation systems, look for a manufacturer that offers training support — whether via online videos, in person or on the jobsite.





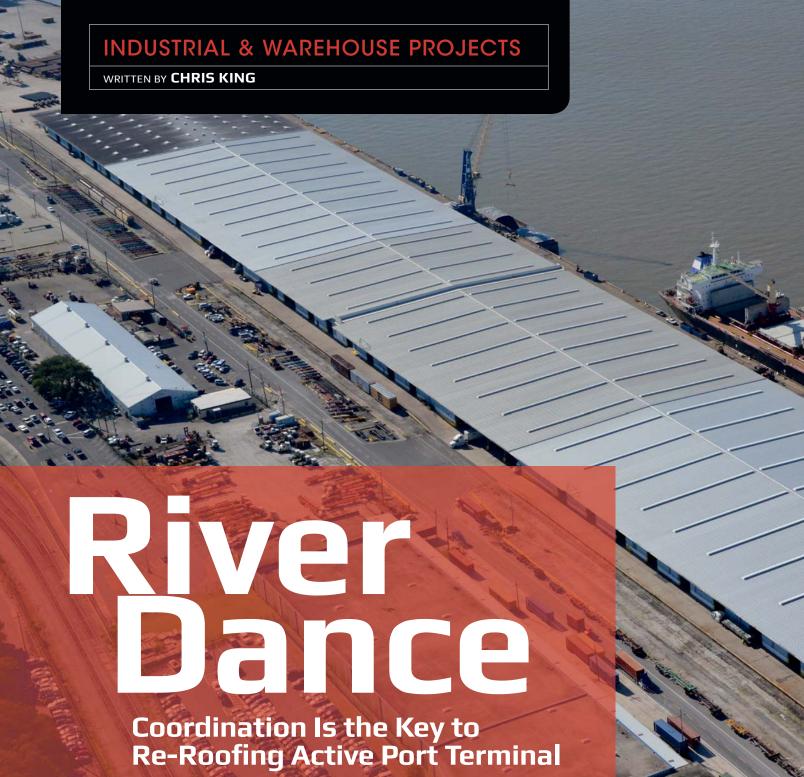
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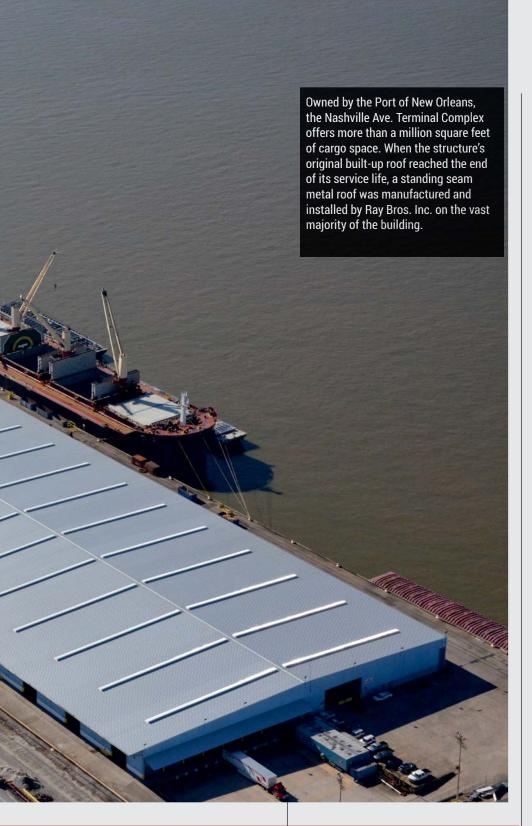
onstruction projects on active jobsites can mean coordinating a lot of moving parts. Projects don't get much more complicated than the recent roof replacement at the Nashville Ave. Terminal Complex, owned by the Port of New Orleans. The scope of

work was multifaceted, the schedule was daunting, and everyone entering the facility had to have the proper security credentials. All of the work was performed next to the Mississippi River on top of an active wharf building, with cargo coming in and going out on trucks and forklifts as ships were loaded and unloaded. Materials housed inside the

building were sensitive to moisture, dust and debris — and often had to be moved as work progressed.

Gino Ray Sr., president of Ray Bros. Inc., the roofing contractor on the project, likened it to a giant, three-dimensional puzzle. "It was almost like a Rubik's Cube," he says. "They had to move a section of material, and then

PHOTO: AERO PHOTO, WWW.AEROPHOTO.COM



when we finished a section, they slid the material over there so we could move on the next one. The whole time, the port was in operation. There was a lot of dancing involved."

THE TERMINAL

The Nashville Ave. Terminal Complex, operated by Ports America Louisiana

Inc., offers more than 1 million square feet of storage space. Built in the 1960s, the structure was a rigid-frame, iron building with a ballasted tar and gravel roof over a heavy tongue-and-groove wooden deck. Decades of problems had seriously deteriorated the wooden deck, as well as the four-by-four wood nailers that were bolted to

the rafters and purlins.

The structure's failing roof was replaced in three phases. During Phase 1, undertaken about a decade ago, a new built-up roof system was installed on one end of the building. When that section experienced performance issues, the owners looked for other options. Ray Bros. had the answer: an architectural metal roof.

Ray Bros. has been in business in New Orleans since 1996, when it was founded by Gino Ray Sr. The company has always focused primarily on metal roofing, and in the late '90s it began roll forming and manufacturing its own panels and systems. "Today we manufacture everything we install," Ray notes. "We're kind of a hybrid – a manufacturer/contractor."

The company's metal panel system had been installed on several other port buildings, and the owners specified it for Phase 2 of the project, which covered a 230,000-square-foot section near the center of the building on either side of the firewall. Phase 2 was completed in 2014. Phase 3 encompassed 420,000 square feet to complete the sections on either side of Phase 2. Work began in August of 2016 and completed in May of 2017.

Ray Bros. manufactured and installed all of the metal roofing on the building — a total of 650,000 square feet — and served as both the prime contractor and the roofing contractor on the third phase of the project. Ray credits his dedicated team, the cooperation of all of the companies involved, and an innovative strategy for coping with the project's many hurdles as the keys to a successful outcome.

BEEFING UP THE STRUCTURE

The standing seam metal roof system recommended by Ray Bros. was specified for its durability and low maintenance. The new system would give the port the long lifespan the owners desired, but it would necessitate some structural changes.

"Before we put the metal roof on, we had to beef up the existing trusses and reinforce the existing structure because it was such a light building now," Ray notes. "There was an enormous amount of welding to the exiting trusses and existing purlins that had to be done before we could begin to put the roof on."

The plan was to beef up the structure from the inside and install the new gutters. Then the old roof could then be torn off and the new metal roof installed. The roof installation would be completed in sections, with crews moving from one area to the next in sequence.

Gulf Coast Service Group served as the structural steel and demolition contractor. Crews on man lifts set up inside the building reinforced the existing steel structure. New angle irons

Nashville Ave. Terminal Complex

New Orleans, Louisiana

TEAM

ARCHITECT: Harris Craig Architects Inc., Tyler, Texas, <u>www.hcarch.com</u> **ARCHITECT:** ECM Consultants, Metairie, Louisiana, www. ecmconsultants.com General Contractor and Roofing CONTRACTOR: Ray Bros. Inc., New Orleans, Louisiana, www. raybrosinc.com Structural Steel and Demolition **CONTRACTOR:** Gulf Coast Service Group, Harvey, Louisiana SKYLIGHT INSTALLER: Glendale Enterprises, Norco, Louisiana, www. alendaleinc.com **SPRINKLER REPAIR CONTRACTOR:** S & S Sprinkler Company, Baton Rouge, Louisiana, <u>www.sssprinkler.com</u>

MATERIALS

METAL ROOF PANELS: 18-inch wide, 22-gauge galvalume MT-240 standing seam panels, Ray Bros. Inc.

SKYLIGHTS: CPI Daylighting Systems, www.cpidaylighting.com **ROLL FORMER:** Zimmerman Metals

Inc., www.zimmerman-metals.com

were welded to the bottom of the purlins. The existing sprinkler system had to be reconfigured, as it was attached to the four-by-four wood nailers that had to be removed. Work on the sprinklers was performed in conjunction with S & S Sprinkler Company. "We didn't have to dismantle the sprinkler system, just move it," Ray explains. "New hangers were mounted to the steel. We had to put a hanger on, take a hanger off. That was part of the tango dance as well."

After the welders completed their work, crews from RK Hydrovac vacuumed the ballast off the roof. Prior to the demolition work, approximately 4,100 linear feet of gutters were installed. Oversized gutters were manufactured from 16-gauge stainless steel in the Ray Bros. metal shop, and all of the joints were welded together. Gutter sections were raised into place with a lift and secured with stainless steel brackets and hangers. "That gutter weighed about 11 pounds per running foot, and we made it in 21-foot lengths," Ray notes.

THE ROOF INSTALLATION

The demolition crews and installation crews then swung into action. After sections of the deck were removed, metal panels were roll-formed on the site and installed. "The demo people would tear out a bay — which is a 20-foot section — all the way up to the ridge," Ray explains. "On one side of the roof,

the panels were 180 feet long. So, they would tear out a 20-foot-by-180-foot section, and we would come in right after that and put a 20-foot section of 180-foot panels down."

Panels were made from 22-gauge galvalume. Zimmerman Metals supplied roll forming machines to Ray Bros. Inc. to manufacture the company's proprietary product. The RBI MT-240 panels were 18 inches wide and interlock using continuous clips. A batten cap was installed over the top and then mechanically seamed using a machine manufactured by D.I. Roof Seamers.

The roll-up bay doors along the sides of the building and at the gable ends of the warehouse qualified it as a partially enclosed structure, which necessitated strict engineering standards. "In order to meet engineering standards, we had to use continuous clips," Ray notes.

Every third bay had a skylight system to light the interior. Skylights used on the project were manufactured by CPI Daylighting Systems and installed by Glendale Industries. Custom-made curbs and crickets were fashioned by Ray Bros.

When skylights could not be installed right away, the openings were covered with plywood and felt to eliminate safety hazards and keep the interior of the building dry. "When the Glendale Industries people would show up, we'd remove the plywood and they would put on their system," Ray notes. "As the





job progressed, we'd re-use the same plywood and temporary coverings as we went along. We'd just leapfrog the plywood from curb to curb."

After the roof was completed, the last step was to replace the wall panels in the interior that were designed to trap the smoke in the event of a fire. The old corrugated smoke panels were wired to the steel, but that system would not comply with today's standards, so Ray Bros. created a sub-framing system to attach new ones. "We had 500 squares of smoke panels to install beneath the roof system," Ray states. "We put in some16-gauge furring channels and attached the panels with screws. We manufactured all of that in house."

The demo crews, installation crews, and skylight crews kept moving in sequence under the direction of Jobsite Superintendent Robert Sinopoli, a 30-year industry veteran who has been with Ray Bros. ever since the company was founded. Sinopoli monitored everyone's progress on the site and made sure everyone knew their assignments each day. "Everybody leapfrogged everybody else," Ray notes. "Everyone had their own song and dance, and if one person got out of rhythm, it would domino back."

Everyone involved on the project also needed to have a dance card, as security on the site was tight. Workers needed to have a background check and Transportation Worker Identification Credential (TWIC). Every vehicle had to have proper registration, insurance and inspection tags. The jobsite did not allow personal vehicles, and this posed a problem for Ray Bros., as the company routinely had 40 to 50 workers on site. "Everybody had to be on a company vehicle in a seat with a seat belt," Ray notes. "I had to buy a used bus to transport workers in and out. We painted it, put our logo on it and made it look pretty. We just drove it 1.5 miles a day. At the end of the job, I sold the bus."

BIG CHUNKS

The project was wrapped up ahead of schedule, and it was the sequencing of work that was the key its success, according to Ray. "We didn't want to tackle this project one bay at a time; we were looking at big chunks at a time," he says. "We were able to develop a rhythm quicker that way. Instead of changing hats several times in the course of a day or a week, we put a hat on, let it stay on, got a big section done and moved on to the next. We didn't want to change tools and change personnel. We wanted to look at it like a monolithic application."

In the end, it all boiled down to pride — no one wanted to be the one to falter. "We self-perform a lot of our work, and we have existing relationships with all of the subcontractors we use," Ray says. "I'm never going to let them down or leave them hanging, and I know they



are going to do the same for me. That's what made that job go — no one wanted to be the weak link. Everybody had a job to do and they did it. It worked out great."

After the roof was installed, 50,000 square

feet of new corrugated smoke panels were

installed.

It was a true team effort. "This was like our Super Bowl, and we won," Ray concludes. "I'm real proud of my company, our people, and all the people we worked with. I know that on our next job, I can count on them and they know they can count on me." R

INDUSTRIAL & WAREHOUSE PROJECTS

WRITTEN BY CHRIS KING

GO BIG

Commercial Roofing Contractor Flexes Its Muscles on 1.3 Million-Square-Foot Project

PHOTO: JOHNS MANVILLE

ndustrial projects exceeding one million square feet of roofing might give some contractors pause, but at Orndorff & Spaid Roofing Inc., it's just another day at the office.

The third-generation family run roofing contractor has been in business since 1953. Orndorff & Spaid services the Baltimore-Washington metro area, as well as parts of Virginia, Pennsylvania, and Delaware. It focuses primarily on large-scale commercial projects, including warehouses, distribution centers, retail businesses, schools and data centers.

Orndorff & Spaid routinely tackles roofing projects up to 1.5 million square feet. The company strives to keep as much work as possible under its own control, and the necessary supplies and equipment are always on hand at its 13-acre headquarters in Beltsville, Maryland.

"We're a little bit unique as a roofing company in that we self-perform almost everything," says Richard Harville, vice president of estimating. "We have our own cranes, all our own lifts. We do our own trucking. We have an in-house mechanic's shop that repairs all of the equipment. All fuel servicing is done from our yard here. We also warehouse a fair share of material here because the logistics of running a job."

A recent new construction project at the former location of a Bethlehem Steel factory in Tradepoint St. John's was right up their alley. "This was a new construction project, fairly conventional in most regards except for one, and that had to do with the site," notes Harville. "Most of the site had been infilled over the years, and there was a lot of slag and other materials on this site, so it is not bedrock, for sure." Due to the potential for movement, seismic expansion joints were specified. The gaps in the deck were as wide as 9 inches.

The owner of the complex was kept under wraps during construction phase, but the completed Under Armour distribution warehouse is now an area landmark. The roof encompasses 1,286,000 square feet, and the project had to be completed under a very tight schedule.

The general contractor on the project, FCL, reached out to Orndorff & Spaid during the design phase, and they recommended a TPO roof system manufactured by Johns Manville.

Harville shared his insights on the project with Roofing, along with members of the project team including Dane Grudzien, estimator; Carl Spraker, project manager, single ply; and Mike McKinney, project manager, sheet metal.

THE CLOCK IS TICKING

Work began in April 2017 with a deadline to finish by the end of July. "The schedule was what made this project difficult," notes Harville. "They had an end user set to come in and they were in an extreme hurry to get this thing done."

Harville and Spraker were confident the experienced team would be up to the task. "Once we got our bearings, we rock and rolled this job," Spraker says. "We had up to 40 employees on the site and worked six days a week."

The roof system installed over the structure's metal deck included two layers of 2.5-inch polyiso and a 60-mil TPO membrane. "This job was mechanically attached at 6 inches on center, with perimeter and corner enhancements as required by FM," notes Grudzien.

The roof installation began with $\boldsymbol{\alpha}$

10-man crew, and crews were added as the work ramped up. "We ended up with four 10-man crews, with the foreman on the first crew in charge the team," Spraker recalls. "We just did as much as we could every day and kept track of everything. We averaged 700 squares a day. One day we did 1,000 squares."

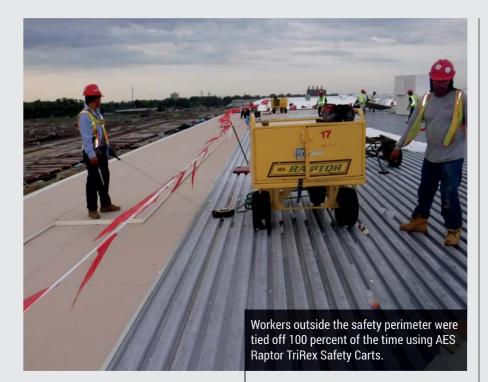
Crews worked on half of the building at a time, with falling back as needed to install flashings or strip in the gravel stop. "We started on one side of the building and went from end to end, following the steel contractor," says Spraker. "When we finished one side, we came all the way back to the end where they started and followed them down the opposite side."

The roof also incorporated 276 VELUX skylights to illuminate key areas of the facility. Logistics Lighting delivered them all in one shipment, as Orndorff & Spaid requested. The 4-foot-by-8-foot skylights were stored on site and loaded to the roof with a crane for installation after a plasma cutter was used to cut holes in the deck. Prefabricated curbs were installed and flashed. "I had a separate crew designated just to install skylights," Spraker notes

Safety precautions included perimeter warning lines, and workers outside that area were tied off 100 percent of the



The Under Armour distribution warehouse roof encompasses 1,286,000 square feet. This aerial photo of the work in progress was taken on June 2, 2017. By the end of the month, all of the exposed decking was dried in.



time, as they were when the skylights were installed. AES Raptor TriRex Safety Carts were used as anchor points.

Safety is always crucial, notes Harville, and the company makes it a priority on every project. "Our safety parameters go above and beyond standard state or federal mandating," he notes.

METAL WORK

The scope of work included large external gutters, downspouts and edge metal. According to McKinney, the sheet metal application was pretty straightforward. "There was just a lot of it—long, straight runs down two sides," he says. "The coping was installed on the parapets on the shorter ends."

Gutters were installed after the roof system was in place. "The roof wasn't 100 percent complete, but once areas of the roof were installed and the walls were painted white, we could begin to install the gutters," says McKinney. "After work was completed on one side, crews moved to the other side."

The large gutter featured internal and external hangers, alternating 36 inches on center. All the metal was fabricated in house, and the exterior hangers were powder coated to match the steel.

Once the external hangers were installed, the gutter sections were lowered

into place and secured by crew members in a man lift. "Once you had your hangers up, you could just lower the gutter over the side and into the external hangers," McKinney explains. "We put the internal hangers into place after that. After the drip edge is installed, the single-ply crews come back and flash the drip edge into the roof system."

Installation of the downspouts had to wait until the walls were painted. One wrinkle was the change in color of the downspouts. About two-thirds of the way up the wall, the paint scheme went from black to white, and the building owner wanted the downspouts to change colors to match. "We reverse-engineered it," notes McKinney. "We measured from the paint line up and put in a 30-foot section of downspouts there, because we put our bands at the joints and we didn't want to have the bands too close together in the middle of the wall."

TALENTED TEAM

The project was completed on budget — and a month early. FCL hosted a barbecue to celebrate. "FCL had a big cookout for the contractors with a steak dinner for everyone," notes Harville. "They really went over and above on that."

The Orndorff & Spaid team credits the

effort of all companies involved for the success of the project. "The steel contractor was phenomenal, and FCL did an excellent job of coordinating everything," Spraker says.

The manufacturer also did an excellent job, notes Harville, who commended the work of Melissa Duvall, the JM sales rep on the project, and Barney Conway, the field rep, who visited the site at least once a week. "JM did a good job keeping us well stocked with material and getting us deliveries when we needed them," Harville notes.

The team members at Orndorff & Spaid believe their confidence comes from experience and knowing that most of the variables are under control. "A lot of that has to do with the equipment we can bring to bear when we need to," Harville states. "We control the logistics all the way through. Most companies are going to rent a crane or hire trucking — we do all of that. We have our own lifts, we have our own cranes, we do all of our flatbed trucking. We bring a unique process to the table. Beyond that, and our project managers are well versed at doing this. It's not our first rodeo."

Under Armour Distribution Warehouse

Baltimore, Maryland

TEAM

ARCHITECT: MacGregor Associates
Architects, Atlanta,
www.macgregorassoc.com
GENERAL CONTRACTOR: FCL Builders,
Chicago, www.fclbuilders.com
ROOFING CONTRACTOR: Orndorff
& Spaid Roofing Inc., Beltsville,
Maryland, www.osroofing.com

MATERIALS

com

MEMBRANE: 60-mil TPO, Johns Manville, <u>www.jm.com</u> INSULATION: Two layers of 2.5-inch ENRGY 3 Polyisocyanurate, Johns Manville SKYLIGHTS: Dynamic Dome Skylights Model 4896, VELUX, <u>www.veluxusa.</u>

PHOTO: ORNDORFF & SPAID ROOFING INC.





Second Life

New Roof Helps Maintenance Facility Live on as Transportation Museum

transportation museum located along the Bay Bridge Trail in Oakland's Gateway Park required roofing with a classic look plus the benefits

of modern materials to protect its exhibits far into the future.

Built in Oakland, California, in the 1930s as a maintenance facility for electric-powered cable cars and train cars, the Interurban Electric Railway Bridge Yard Shop (IERBYS) was transformed into a transportation museum for the Oakland to San Francisco Bay Bridge that opened in 2013.

Due to the IERBYS being a historic landmark, the installing contractor

62 Roofing | JULY | AUGUST 2018 PHOTO: CERTAINTEED



- Westech Roofing of Richmond, California - was required to have the building exterior match the same look the building presented when it was first constructed, as documented by historic photos of the building available through the Library of Congress.

CLASSIC LOOK, MODERN MATERIALS

The original roof was a hot-process built-up roof, and considerations were given to try to match that look by installing a hot asphalt roof system. However, because of factors such as roof access, wind from the bay, and number of times the kettle would need to be moved to access the structure's 17 separate roof decks, the decision was made to use a different application method.

The contractor chose CertainTeed's Flintlastic SA self-adhered modified bitumen system along with SmartFlash liquid flashing to overcome the project's challenges and replicate the look that was required by the client. The three-ply system consists of Flintlastic SA Nailbase, Flintlastic SA Midply and Flintlastic SA Cap FR Capsheet.

Another challenge for the Bay Bridge Museum was completing the roof flashing. On each of the numerous roof decks there were locations where the roofing needed to be flashed to the siding on the outside of the building. However, the siding is constructed of asbestos panels, which required the Westech Roofing team members to complete the roof flashing without disturbing the panels. In order to accomplish this task, they used CertainTeed's SmartFlash liquid flashing with excellent results.

Interurban Electric Railway Bridge Yard Shop

Oakland, California

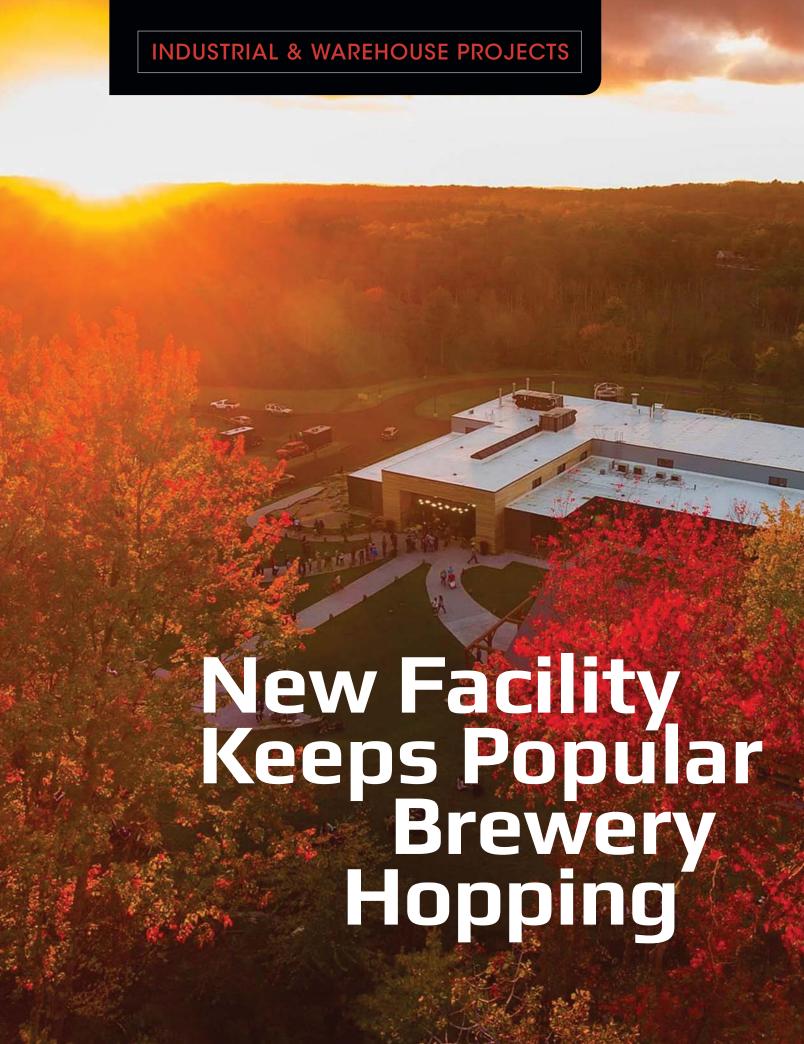
TEAM

ARCHITECT: Einwiller Kuehl Inc., Oakland, California, <u>www.</u> <u>einwillerkuehl.com</u> ROOFING CONTRACTOR: Westech Roofing, Richmond, California, <u>www.westechroofing.com</u>

MATERIALS

MODIFIED BITUMEN BASE PLY: Flintlastic SA Nailbase, CertainTeed, www.certainteed.com
MODIFIED BITUMEN MID PLY: Flintlastic SA Midply, CertainTeed
MODIFIED BITUMEN CAP SHEET:
Flintlastic SA Cap FR Capsheet,
CertainTeed
LIQUID FLASHING: SmartFlash,
CertainTeed





tanding in line for hours for one case of canned beer might seem foolish to some people, but to fans of Tree House Brewing — which was recently named one of the country's Top 15 Craft Breweries by Forbes magazine — it is well worth it. Tree House Brewing began humbly enough in 2011 in a barn in Brimfield, Massachusetts. And yes, there was a tree house on the property.

Since then, the brewery has grown so much in popularity that it required a bigger facility. So in July of 2017, Tree House opened a 51,200-square-foot brewery on 68 acres in Charlton, Massachusetts. On opening day, the new facility consistently had 1,000 customers waiting for hours to purchase Tree House's ales, IPAs and stouts. Many of the patrons traveled from out of state and some arrived at 6 a.m., six hours before the doors opened.

It's been said that the key to Tree House Brewing's success is meticulous attention to details such as temperatures, additives and the water used in the brewing. It only made sense that the same attention to detail would be utilized when selecting a roofing system for the new facility.

MEETING THE BAR

The roof that Tree House Brewing selected to cover its new brewery is Sika Roofing's Sarnafil EnergySmart PVC membrane installed with the Sarnafil RhinoBond System. "We like Sarnafil because it is easy to use, easy to specify and an industry leader," says Peter Webster, designer/project manager at Austin Design in Brattleboro, Vermont. "The light colored, reflective roof also offers energy savings, and our past experience with the Sarnafil roof shows it is a great product."

The fact that the Sarnafil system is easy to install was an important factor, considering the time crunch of the project. "This was a 'hurry up' project — we weren't done with the design when the steel structure went up," Webster explains.

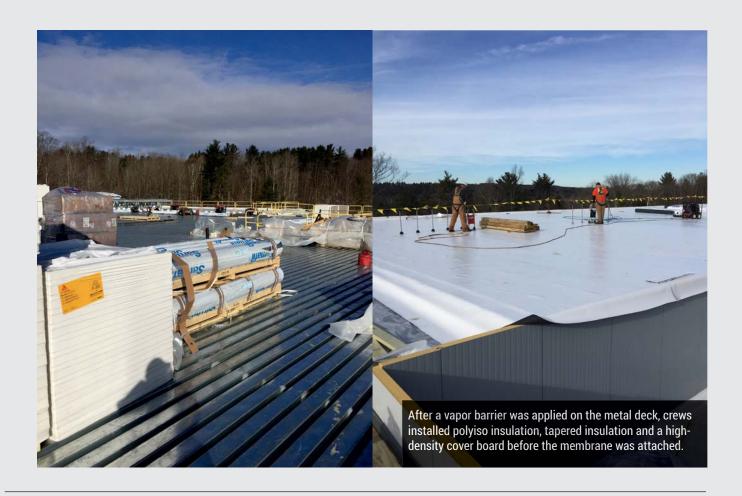
The Sarnafil RhinoBond System uses advanced induction welding technology to bond the membrane directly to specially coated plates used to secure the insulation to the deck, all without penetrating the roofing membrane.

In addition, the Sarnafil RhinoBond System can be used in temperatures as low as zero degrees Fahrenheit (-18°C), making it an ideal application method for winter projects.





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"Much of the installation was during the winter," states Robert Luukko, president of Kidd-Luukko Corporation in Worcester, Massachusetts, the roofing contractor on the project.

"Not only did Kidd-Luukko have to deal with cold temperatures, but the site is on top of a hill so there were high winds," says Frank Quigley, president and owner of F.D. Quigley & Associates of Wilbraham, Massachusetts, the construction manager on the job. And of course, since it was winter they needed to make the building watertight as quickly as possible.

"Fortunately, Kidd-Luukko was able to seal the building before we were hit by some big snowstorms in February," Webster says.

Other challenges included installing a 42-foot by 8-foot skylight and working around gables where the low roof wrapped around the corners. "Kidd-Luukko employees were very professional, well managed and well organized," Quigley states. "I'd be happy to use them again."

"CAN-DO" ATTITUDE

"Bob Luukko and his team had a 'cando' attitude that really helped move the project along," Webster comments. In fact. Kidd-Luukko was able to complete the installation ahead of the allotted eight-month time frame, Luukko notes, adding that teamwork was key. "We had weekly meetings with a great group of guys involved with the project where we would discuss how we were going to come in on time and on budget with this installation," he says. Sika Roofing representatives also played a role in meeting the deadline. "We had multiple visits from the Sika technician, which really kept the project moving forward," Luukko remarks.

Today, both the roof and the brewery are doing great. "We've had no problems with the roof at all," Webster says. Luukko adds, "This project went so well that we are receiving a lot of interest in installing Sarnafil roofs on other projects."

At the new facility, Tree House Brewing will be able to produce 40,000 barrels a year — compared to 12,000 barrels at their former facility in Monson, Massachusetts — and they plan to eventually expand the capacity to 180,000 barrels a year. That's news that should make thirsty Tree House beer fans very, very happy.



Tree House Brewing Company

Charlton, Massachusetts

TEAN

ARCHITECT: Austin Design, Brattleboro, Vermont, <u>www.</u> <u>austindesign.biz</u>

CONSTRUCTION MANAGER: F.D. Quigley & Associates, Wilbraham, Massachusetts, <u>www.fdquig.com</u>

ROOFING CONTRACTOR: Kidd-Luukko Corporation, Worcester, Massachusetts, <u>www.kidd-luukko.</u> <u>com</u>

MATERIALS

ROOF MEMBRANE: Sarnafil 60 Mil EnergySmart White PVC membrane, Sika Sarnafil, https://usa.sarnafil. sika.com

INSULATION: Sarnatherm Poly-Iso Insulation and Sarnatherm Coated Glass Tapered Insulation, Sika Sarnafil

ROOF BOARD: Sarnatherm High Density Poly-Iso roof board with coated glass facers, Sika Sarnafil

ATTACHMENT SYSTEM: Sarnafil RhinoBond System, Sika Sarnafil





hat do Landshark
Lager, Stella Artois,
3 Amigos Tequila,
Nesquik, and Sunny
Delight have in common? All are products
distributed by Arizona-based Hensley
Beverage Company. And all are favorites of Rain Man Roofing, the contractor that repaired a 100,000-square-foot warehouse roof at Hensley's
Tucson location.

Hensley Beverage Company began in 1955 when Jim Hensley, starting with just 15 employees, delivered 73,000 cases of ice-cold Anheuser-Busch beer to thirsty Phoenix residents. Fast-forward to 2018 and Hensley is among the largest family-owned and -operated beverage distribution firms in the United States.

Today, under the leadership of CEO Robert Delgado, President Andrew McCain and Chairman of the Board Cindy McCain, Hensley Beverage Company is a 30-million-case wholesaler. Cindy McCain is the daughter of company founder Jim Hensley and wife of U.S. Sen. John McCain (R-Arizona). Andrew McCain is the senator's son from a previous marriage.

The company operates a service fleet of more than 1,100 delivery vehicles and employs more than 1,200 people. Delivery now extends beyond Phoenix into every corner of Arizona. Trucks regularly deliver over 2,500 different beverages to thirsty desert dwellers, including domestic, imported, and craft beers, spirits, wine and non-alcoholic beverages

of all sorts.

Beverages like these have to be refrigerated in a climate-controlled distribution warehouse while they are being stored. Some kegs need to be stored at 34 to 38 degrees Fahrenheit. Other products can get by at higher temperatures ranging from 45 to 60 degrees.

But the warehouse can't control the environment efficiently with a leaky roof. That's where Rain Man Roofing owner Mark Hughes came in.

Rain Man Roofing, founded in 2010, is one of the highest rated roofing specialists in both Arizona and California. In 2011, Rain Man became a BBB Accredited Business with an A+ rating, which it has consistently maintained. With more than 25 years of experience in the roofing industry, Rain Man is



well known for inspecting every roofing solution at both the beginning and end of a job — and providing detailed status reports throughout the entire process.

RAIN MAN TO THE RESCUE

In early 2018, Hensley's VP of Fleet and Facilities Anthony Keffer contacted Hughes about roof issues at Hensley's Tucson facility. Hughes' roofers had, in September 2017, successfully stopped a leaking roof at another Hensley building in Flagstaff with a simple and affordable restoration solution, so Keffer asked Hughes to take a look at the Tucson site.

Several attempts to fix the roof inhouse had failed to solve the problem. But Hughes and Rain Man, along with Erin Easter of Icynene-Lapolla, suggested a re-roof using a roof system of sprayed-in-place polyurethane foam and an acrylic elastomeric protective coating. Hensley accepted the proposal and work on the nearly 100,000-square-foot warehouse roof began.

Hensley inherited the 20-plusyear-old, low-sloped roof of the Tucson distribution facility in January 2016 when the company acquired Anheuser-Busch InBev wholesaler Golden Eagle Distributors Inc. The roof itself consisted of a UV-coated built-up, smooth-surfaced modified roof system over lightweight concrete. The old roof also included a cardboard separator installed between the concrete and a corrugated metal roof

By 2018, the laps in the roof's membrane no longer functioned properly and roof system failure became increasingly frequent. The lap failures, most likely caused by improper installation and deterioration from constant UV exposure, caused obvious openings in the membrane. Rain Man's inspectors noticed these problems, as well as related failures in the expansion joints, and worked to come up with a viable solution.

THE REPAIR PROPOSAL

Together, Hughes and Easter proposed installing a spray-in-place polyurethane foam roof system over the existing system. The proposal covers the north end of the building (the 100,000-square-foot portion of the roof), where the majority of the controlled environment warehouse (CEW) is located. Hensley's budget required that the southern portion of the building be repaired later; this second stage was tentatively set for August 2018.

The answer to the lap problems was to broom and blow the roof, which entailed cleaning the roof of debris and smoothing out the plies to ensure contact with adhesives. Lapolla Thermo-Prime Acrylic Roof Primer was to be applied to the roof, followed by a 1-inch layer of spray polyurethane foam (FOAM-LOKI LPA 2800-4G) on top of the primer. Finally, a double-pass application of acrylic elastomeric Thermo-Flex 750 coating would finish the job.

Scheduled to start in April 2018, work was expected to take three weeks to complete and would require two foam rigs and eight full-time roofers with Rain Man's David Caballero as foreman. Hensley would provide the roofers with a covered

staging area (normally used as a patio for side-loaded delivery vehicles), where the crew could store equipment and roofing materials.

The staging area would allow Rain Man to shield its supplies and equipment from the high winds and cold weather. Because the job took place in April, when cold temperatures are common in Tucson, the spray foam would be stored under the patio cover. The colder spray foam gets, the longer it takes to warm it up so it can be used effectively.

The finished product was designed to take advantage of the insulating properties of the original roof, and the new "cool roof" monolithic system overlaying the old one would add R-value to the warehouse. The lightweight concrete separator would be retained so the spray foam wouldn't fill the low spots in the corrugated metal roof deck, which would be a waste of materials.

ROOF SYSTEM INSTALLATION

Rain Man Roofing began the project with a pre-job inspection to discuss the application process of the new roof, go over safety and logistical concerns and keep the team at Hensley in the loop. Hughes prides himself on keeping his clients informed of each step in the roofing process.

After the details of the roof application were ironed out, the roofers set up their safety precautions. The Hensley building's low-slope roof did not pose any unusual safety precautions, but Tucson regularly experiences strong winds that make roofing jobs more dangerous. Bright light also presented a danger to the roofers' eyes, especially after the white acrylic coating was applied. The light reflected off the roof from the intense Arizona sun can be blinding. Hughes and Caballero made sure that their roofers took appropriate measures against the wind and the blinding light.

During the project, safety meetings were held every morning before work to discuss any danger areas that might present themselves that day. The crew also had to ensure each day that the

surrounding area was protected from overspray. Sometimes this involved moving company vehicles away from the building.

Once they climbed up onto the roof, the roofers removed and properly disposed of 830 linear feet of expansion joint. After new expansion joints were mechanically fastened to the existing metal deck, the roof was blown and pressure washed free of dirt and debris. Polyurethane foam requires a completely clean surface to ensure a proper bond.

Thermo-Prime was applied to the prepped roof at a rate of one-quarter gallon per 100 square feet. Next, a 1-inch thick layer of polyurethane spray foam was applied over the entire existing roof system. The foam was also used to form all penetration flashings as needed.

Finally, the white acrylic protective coating was applied evenly to the roof in two passes. Each pass used 1.5 gallons per 100 square feet, adding up to

three gallons total as described in the manufacturer's specifications and 10year limited warranty requirements.

WHEN ALL'S SAID AND DONE

After three weeks of hard work, high winds and bright sun, Rain Man completed Hensley's new monolithic roof system. The new roof, designed to have zero seams and zero breaks between flashings and the roof system, will now stand up to the harsh desert climate and add a minimum of an R-6 insulation value to the controlled environment warehouse.

The Hensley Beverage Company is thrilled with its new roof and ready to contract Mark Hughes and Rain Man Roofing for more work in the future, starting with the southern part of the Tucson facility in August.

Hensley's Anthony Keffer was also kind enough to provide beverages non-alcoholic, of course — direct from the warehouse to the roofers working in the hot sun. And in the evenings, they were treated to some Bud Light to celebrate a job well done. R

Hensley Beverage Company

Tucson, Arizona

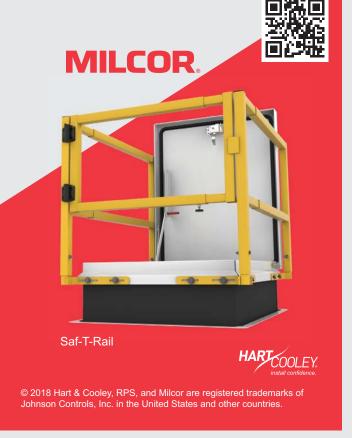
TEAM

ROOFING CONTRACTOR: Rain Man Roofing, Phoenix, Arizona, www. rainmanroofing.com **ROOFING MATERIALS DISTRIBUTOR:** Icynene-Lapolla, Houston, Texas, and Mississauga, Ontario, Canada, www.icynene-lapolla.com

MATERIALS

PRIMER: Thermo-Prime Acrylic Roof Primer, Lapolla, <u>www.lapolla.com</u> SPRAY POLYURETHANE FOAM: FOAM-LOK 2800-4G, Lapolla **ACRYLIC ELASTOMERIC COATING:** Thermo-Flex 750, Lapolla





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oodman, an international commercial and industrial property group, approached Donald B. Smith Inc. of DBS Roofing in November 2017 to support the roofing of the company's new Logistics Center in central Pennsylvania.

Founded in 1948, DBS Roofing is a second-generation, privately held company whose principles of quality and workmanship have earned the team countless awards. Among those honors include the Firestone Master Contractor recognition, the Baltimore Builder's Exchange "Craftsman of the

Year Award" and numerous industry publication recognitions for notable projects.

The Logistics Center roof was 1,010,000 square feet and was established on a very aggressive timeline that spanned through the tough Northeast winter months. The initial specifications of the job called for a mechanically fastened TPO roof system, which was going to be challenging with the size and timeline of the project. Additionally, the condensation levels in central Pennsylvania are not ideal for mechanically fastened solutions, as it would require applying a vapor barrier and foam around all perimeters, exceeding the original budget and schedule.

The Goodman Logistics Center

Carlisle, Pennsylvania

TEAM

ROOFING CONTRACTOR: Donald B. Smith Roofing Inc., Hanover, Pennsylvania, http://www.dbsroofing.com

GENERAL CONTRACTOR: ARCO Design/ Build Northeast, King Of Prussia, Pennsylvania, http://arcodbi.com

MATERIALS

MEMBRANE: UltraPly TPO SA with Secure Bond Technology, Firestone Building Products, www. firestonebpco.com

INSULATION: 2.5-inch ISO, Firestone Building Products

To save time and keep the project moving forward during the unfavorable winter conditions, DBS Roofing elected to use one of the company's favorite "box world" solutions — Firestone Building Products (FSBP) UltraPly TPO SA with Secure Bond Technology.

The TPO roofing system is comprised of a self-adhering membrane with factory applied, pressure sensitive adhesive and technology designed to ensure uniform adhesion coverage across the entire membrane. According to the manufacturer, the system can be installed in weather as cold as 20 degrees Fahrenheit.

"Commercial roofing in central Pennsylvania can be very challenging during the winter season, but Firestone UltraPly TPO SA allows our business to continue working through those conditions and prosper," says Donnie Sanders, president of construction, DBS Roofing. "Being able to apply the Firestone TPO SA at 20 degrees resulted in a successful year for us."

The Goodman Logistics Center roofing project began on November 1, 2017 and was completed on time March 1, 2018.



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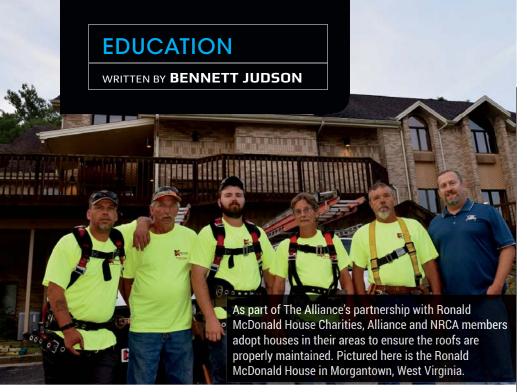
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The Alliance — Full of Passion, Energy and Drive

The Roofing Industry Alliance for Progress Is Advancing its Mission on Multiple Fronts

In 1970, the National Roofing Foundation (Foundation) was formed as the National Roofing Contractors Association's (NRCA's) educational and research foundation. In 1996 the Roofing Industry Alliance for Progress (The Alliance) was created within the Foundation as a forum for leaders from all segments of the industry to address current and future issues and to create a permanent endowment fund. The Alliance continues to be a diverse, thoughtful and dedicated forum of roofing contractors, manufacturers, distributors, service providers and industry professionals united to shape, improve and advance the roofing industry.

The Alliance meets twice a year to conduct member business; hear updates on current projects and programs; analyze and select new projects that are proposed for funding; hear speakers from within and outside the industry; and to network with fellow Alliance members.

The Alliance currently has 165 members. This group of committed leaders has contributed over \$13 million to the Alliance's endowment fund to help

preserve and enhance the U.S. roofing industry's success by funding industry research, providing timely and forward-thinking industry responses to major economic and technological issues, and helping to promote professionalism and increasing awareness about career opportunities within the roofing industry.

To date, the Alliance has allocated a little over \$5.3 million in funding to 46 different projects, programs and studies to help better the industry.

The Alliance has four areas of focus: philanthropy; education; workforce and training; and technology and research.

PHILANTHROPY

The Alliance's philanthropic efforts include:

The Helping Our Own Program, which includes reaching out to the roofing community and its members and helping fund efforts dedicated to good works and charitable giving. Through a nomination process, The Alliance can recognize and identify the challenges associated with these life-changing events and

- help create sustainable solutions for individuals or families in need. Although The Alliance may not be able to solve all the problems rendered during a time of crisis, collectively, we can make a real difference in the lives of families who may fall victim to tragedy.
- The Most Valuable Player Awards (MVP) Program provides an opportunity for companies to nominate their most outstanding roofing field workers or warehouse workers who not only excel within their companies but go above and beyond to make a difference in their communities. Since the program's inception, 632 employees have been nominated and 234 winners and finalists have been selected. A maximum of 10 winners are selected by members of the Alliance's MVP Task Force. The winners receive an expense-paid trip to NRCA's annual convention and are recognized at NRCA's Industry Awards Ceremony and Cocktail Reception. Details for the 2018-19 MVP Program will be available in September 2018.
- The Gold Circle Awards program recognizes Alliance and NRCA member firms for their outstanding contributions to the roofing industry through outstanding workmanship, innovative solutions and safety preparedness and performance. Winners, selected by the Alliance's Gold Circle Awards Committee, are also recognized at NRCA's Industry Awards Ceremony.
- The Alliance's newest initiative is a partnership with Ronald McDonald House Charities (RMHC). RMHC is operated with the support of McDonald's Corp., headquartered in Chicago. Each of their 165 standalone houses is independently owned and operated, and all are established as 501(c)(3) corporations. The core purpose of each house is to provide a home for family members of children who are being treated at a hospital. The houses provide private sleeping rooms, food and pride themselves

on offering opportunities for families to interact as they go through their difficult times.

Alliance and NRCA members adopting houses in their areas are asked to conduct annual roof inspections, ensure the roofs are properly maintained and perform emergency roof repairs when needed. Roof replacements will be managed as individual projects, and, when appropriate, several contractors may be asked to participate. We'll reach out to our manufacturer and distributor members to see if they can assist with donated products and materials. In addition to providing roof maintenance, there are a number of volunteer opportunities for the members' employees. Volunteers are welcome to prepare meals, bake special treats, clean, paint, etc.

Currently 90 out of the 165 standalone houses have been adopted. Alliance President Rod Petrick issued a challenge to Alliance and NRCA members that he would like to see all 165 houses adopted by the Fall, 2018 Alliance meeting.

EDUCATION

On the education front, the Alliance partners with Construction Management Schools, provides scholarships and is a Diamond sponsor of National Women in Roofing.

We're working with construction management schools across the country to (1) raise awareness of our industry among students and faculty; (2) to encourage the schools to integrate more roofing-specific materials into their course curricula; and (3) to encourage students to consider our industry as a viable career option.

A great way to reach construction management students is through design competitions. We've had four so far and we're currently working on our fifth. The competition challenges the students' roofing knowledge, construction management skills, time management, organizational and presentation skills. The finalist teams and faculty come to the convention to give their oral presentations. While there, they

also opportunities to meet members and to learn more about our industry by attending the educational sessions and the expo.

The next step in our partnership with construction management schools is to find ways to connect with faculty. Our plan is to do this through a research project recently approved at the April,

2018 Alliance member meeting, "A Study of the U.S. Roofing Industry and Its Workforce." This demographic study will quantify the economic impact of the roofing industry and measure the size, age, racial background and gender of the workforce. Tit also will identify the number of roof contracting, manufacturing and distribution companies



that exist in the U.S. market and the type of work they do. This comprehensive study will provide real data for us as we plan our future.

The Alliance awards \$55,000 annually in scholarship funds through the Melvin Kruger Endowed Scholarship Program, which is open to employees and family members of NRCA member firms who are pursuing careers in the roofing or building construction industries. Since the program's inception, a total of \$790,000 has been awarded to 125 students.

The Alliance is also a Diamond sponsor for National Women in Roofing, which is dedicated to educating, mentoring and supporting women in the various roles they fill within the roofing industry.

WORKFORCE AND TRAINING

The Alliance supports several workforce and training initiatives. Previously the Alliance partnered with Bilingual America on a cultural and leadership training program for Alliance-member firms that employee Latino workers. And, more recently, the Alliance provided funding to help with the development of NRCA's ProCertification Series.

TECHNOLOGY AND RESEARCH

On the technology and research front, the Alliance funded:

- NRCA's EnergyWise online calculator. Originally funding was provided to help develop the program; later funding was approved to provide program updates.
- A study to better understand the moisture release in concrete roof decks. A final report will be available this fall.
- NRCA's Silica Objective Data Collection Study.

Over the next 12 months. The Alliance will be working with an outside marketing and communications firm to ramp up marketing efforts, making the sure the industry knows who The Alliance is and is aware of all that the Alliance is doing. Hopefully as we create more awareness, more project funding requests will be generated. And, of course, we work to continue to grow the Alliance with new members, but equally important - we want to make sure our current members stay actively engaged and involved.

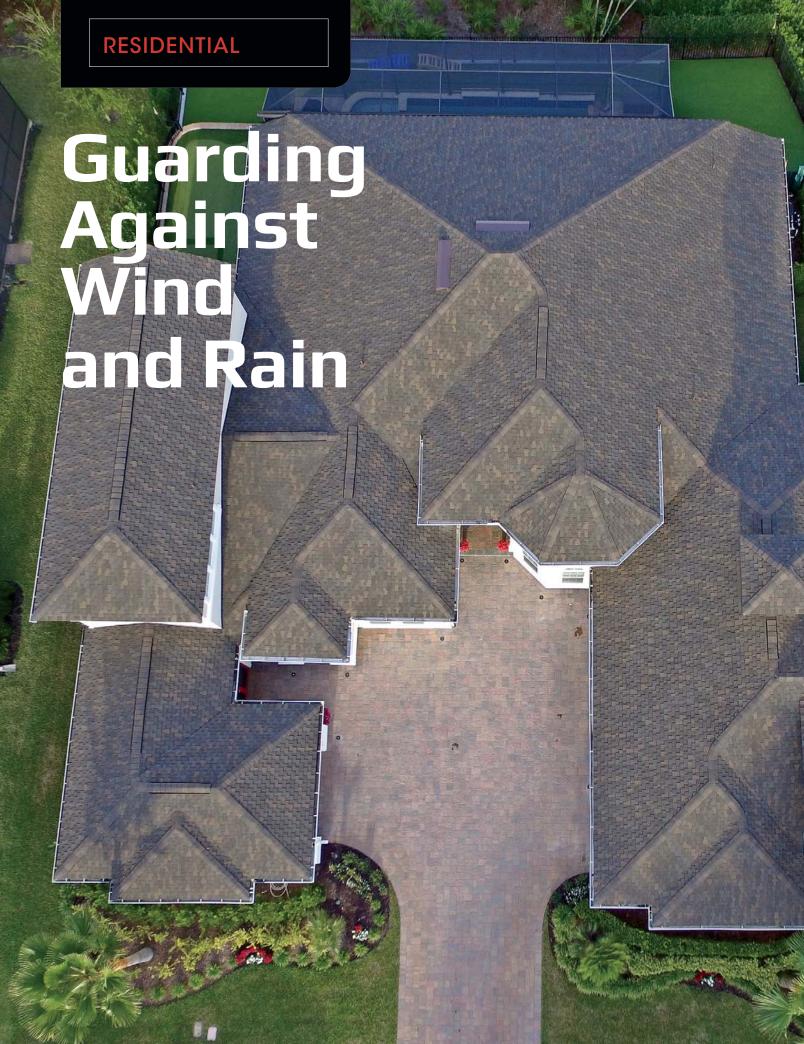
Member involvement is key. The Alliance can only continue in its efforts if members remain actively involved every step of the way. It will be exciting to see what the new year brings under the leadership of Alliance President Rod Petrick. Rod's passion, energy and drive are contagious. As president, he will see to it that The Alliance continues to be imaginative, intelligent and bold so that working together we can help The Alliance reach its full potential!

For more information on The Alliance, visit<u>www.roofingindustryalliance.net.</u> R



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Against the
Elements While
Raising Curb
Appeal



ith the sunshine state regularly experiencing a beautiful and warm subtropical climate, it's no surprise that Florida ranks second in the United States for tourism, ranking only behind California. However, actually living in this paradise has challenges of its own - extreme humidity, powerful winds and torrential rains can test the limits of any roofing system. To keep pace with Florida's erratic weather conditions, proper roof design, installation and maintenance are paramount. The Topsail Residence, a private estate in Ponte Vedra Beach, is a testament to how selecting the right roofing system makes a world of difference.

Previously, the homeowners had an extensive addition on their property, which consisted of adding a new two-story section to the home. A short time after remodel, the roof began to leak, causing widespread damage as well as unsightly water spots throughout the home.

The homeowners sought the expertise of Pillar to Post Home Inspectors, who discovered issues with the roof. They quickly recognized such frequent and substantial leaking required immediate attention before other, bigger problems occurred. So, they suggested the homeowners contact a roofing contractor for a

further assessment.

"After inspection, the problem immediately became apparent," says Sean Shapiro, CEO of Reliant Roofing, the Jacksonville, Florida-based company hired to install the new roof. "We found torn shingles, signs of extensive foot and ladder traffic, and leaks."

The roofing system appeared to lack some of the key components required for weather resilience and durability, according to Shapiro. "In some areas, there was no flashing installed whatsoever, allowing rainwater the perfect leak point to pour into the home," Shapiro notes. "The problem was just as bad where the second story met the roof below. The water was free to run through every nook and cranny. Every aspect of a proper installation of a roofing system is important, especially something as essential as flashing."

The contiguous U.S. average annual rainfall is 32.1 inches, according to the National Oceanic and Atmospheric Administration. Jacksonville received 65.91 inches of rainfall in 2017 – more than double the contiguous national average, according to the Florida Department of Agriculture and Consumer Services. Living only 22 miles southeast of the city, the homeowners needed a roofing system that would help to protect them against Florida's high winds and frequent rainstorms. Reliant had the solution – a new asphalt shingle roof.



"The homeowners didn't feel comfortable just patching the leaks. They wanted protection against future leaks and the area's common threats: high winds and stormy weather," Shapiro says. "Therefore, we recommended installing a completely new roofing system with designer asphalt shingles."

Reliant began by tearing off the shingles on both the older and newer sections of the roof, bringing in two full teams to tackle all 10,600 square feet. Having dealt with numerous highwind conditions on other roofing projects, Reliant chose GAF Grand Canyon Lifetime Designer Shingles in the color Stone Wood to provide the homeowners with a durable, long-lasting shingle, a key component of a beautiful new asphalt roofing system.

"When it storms in Florida, it storms," added Shapiro. "We wanted to install a system that could withstand torrential downpours and high winds.



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"When it storms in Florida, it storms. We wanted to install a system that could withstand torrential downpours and high winds."

Sean Shapiro, Reliant Roofing

Additionally, it was hard to overlook the durability shingles provided at an affordable cost."

GAF Timbertex Premium Ridge Caps were installed on the hips and ridges to provide leak protection with extra dimensions to complement the roof. Reliant hand sealed every hip and ridge cap shingle and used GAF StormGuard Self-Adhering Leak Barrier to help protect the roof deck. Crews also installed custom counterflashing to address any potential defects in the stucco. Thanks to Reliant's craftsmanship and the shingles' ease of installation, the homeowners received a beautiful new asphalt roofing system in just five days.

The new asphalt roof will not only help to protect the homeowners against the elements and restore their comfort of living, but also provide them incredible curb appeal for years to come.

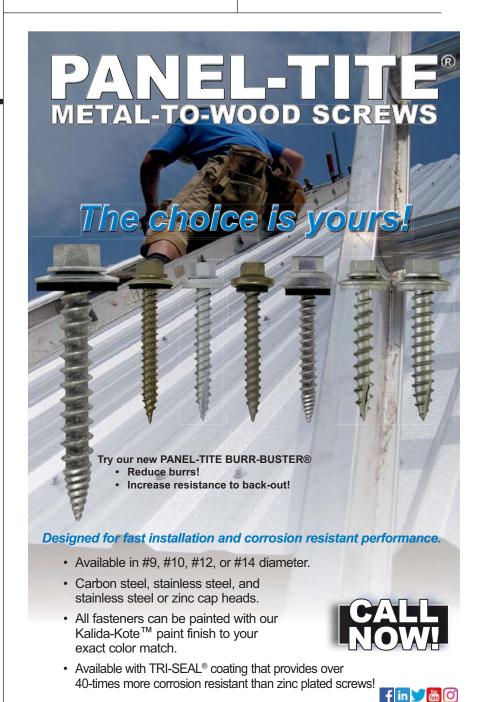
For their work on the Topsail Residence project, Reliant Roofing received the Quality Asphalt Roofing Case-Study (QARC) Silver Award from the Asphalt Roofing Manufacturers Association (ARMA).

Each year, ARMA seeks the most beautiful, affordable and reliable asphalt roofing systems in North America. The Topsail Residence showcases how asphalt roofing provides durability and reliability in the face of harsh weather, while also providing aesthetically stunning designs.

ARMA is now accepting low and steep-slope asphalt roofing projects completed in 2018 for its 2019 Awards Program. Roofing professionals may submit multiple submissions, and there is no fee to enter. The program recognizes projects that exhibit innovation, performance and beauty, and which lead the way in roofing breakthroughs, such as advanced weather protection,

green roofing or unique system design. The submission deadline is December 31, 2018.

For more information about asphalt roofing systems or to learn more about ARMA's Awards Program, visit www.asphaltroofing.org.



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Adler Roof Vac	(866) 766-3822	www.adlervac.com	22	16
Advanced Architectural Sheet Metal	(231) 861-0050	www.AdvArchSM.com	66	54
American Hydrotech	(312) 337-4998	www.HydrotechUSA.com	63, 65, 67	52, 53, 5
Aztec Washer	(858) 513-4350	www.AztecWasher.com	80	63
Building Products Development	(866) 766-3254	www.BPDusa.com	25	19
Carlisle SynTec Systems	(800) 479-6832	www.CarlisleSyntec.com	21	15
Chem Link	(800) 826-1681	www.Chemlink.com	23	17
DaVinci Roofscapes	(800) 328-4624	www.DaVinciRoofscapes.com	2	1
Dryer Jack	(561) 743-8696	www.DryerJack.com	75	59
Dupont Tyvek	(800) 44-TYVEK	www.Dupont.com	3	2
Dynamic Fastener	(800) 821-5448	www.DynamicFastener.com	15	11
EagleView	(585) 444-2576	www.Eagleview,com	33	35
EPDM Coatings	(610) 289-1949	www.EPDMCoatings.com	46	43
E-Z Gutter	(800) 748-7736	www.E-Zgutter.com	47	44
GAF	(973) 628-3000	www.GAF.com	84	66
Georgia-Pacific	(800) 225-6119	www.BuildGP.com	6	5
Green Link Engineering	(888) 672-9897	www.Greenlinkengineering.com	51	47
GSSI	(800) 288-9489	www.GSSISealants.com	4	3
Hart and Cooley	(800) 624-8642	www.HartandCooleyinc.com	70	56
K & M Sheet Metal		www.KMSheetMetal.com	73	58
	(919) 544-8887		35	
KM Coatings	(602) 253-1168 (877) 904-1002	www.KMCoatingsMFG.com	71	36 57
Lifetime Tool		www.LifetimeTool.com		
LM Curbs	(800) 284-1412	www.LMCurbs.com	52	49
Marathon Drains	(800) 824-8424	www.MarathonDrains.com	20	14
MB Technology	(559) 233-2181	www.MBTechnology.com	29	29
Metalcon	(857) 255-3343	www.Metalcon.com	53	50
Metal Plus LLC	(860) 379-1327	www.MetalPlusLLC.com	43	41
MFM Building Products	(740) 622-2645	www.MFMBP.com	37	38
Mule-Hide Products Co. Inc.	(800) 786-1492	www.MuleHide.com	76	60
NB Handy	(434) 847-2498	www.NBHandy.com	45	42
Owens Corning	(800) GET-PINK	www.OwensCorning.com	39	39
Peak Metal Products	(919) 256-2270	www.PeakMetal.com	52	48
Petersen	(888) 942-2636	www.PAC-CLAD.com	5	4
Polyglass	(954) 233-1239	www.Polyglass.us	17	12
Progressive Materials	(812) 944-7803	www.PMSilicone.com	9	6
RAS Systems	(770) 487-7300	www.RAS-Systems.US	31	34
Retrofit Conference	(919) 641-6321	www.RetrofitConference.com	77	61
RK Hydrovac	(800) 762-8361	www.RKHydrovac.com	83	65
Roof Hugger	(800) 771-1711	www.RoofHugger.com	25	19
Royal Adhesives	(517) 841-7108	www.RoyalAdhesives.com	41	40
Safety Hoist	(877) 99-HOIST	www.SafetyHoistCompany.com	36	37
Snojax	(717) 458-7880	www.Snoblox.com	14	10
SofSurfaces	(800) 263-2363	www.SofSurfaces.com	27	24
Soprema	(330) 331-3062	www.Soprema.us	11	8
Standing Seam Roof Anchor	(863) 703-4522	www.FallPD.com	24	18
Swenson Shear	(877) 588-8748	www.SwensonShear.com	61	51
System Components	(425) 392-5150	www.SystemComponents.net	10	7
Triad Corrugated Metal	(866) 625-9727	www.TriadMetalRoof.com	50	46
Triangle Fastener	(800) 486-1832	www.TriangleFastener.com	81	64
Uniflex	(888) 321-3539	www.UniflexRoof.com	49	45
Versico	(800) 992-7663	www.Versico.com	19	13
Zimmerman Metals	(303) 294-0180	www.ZimmermanMetals.com	13	9

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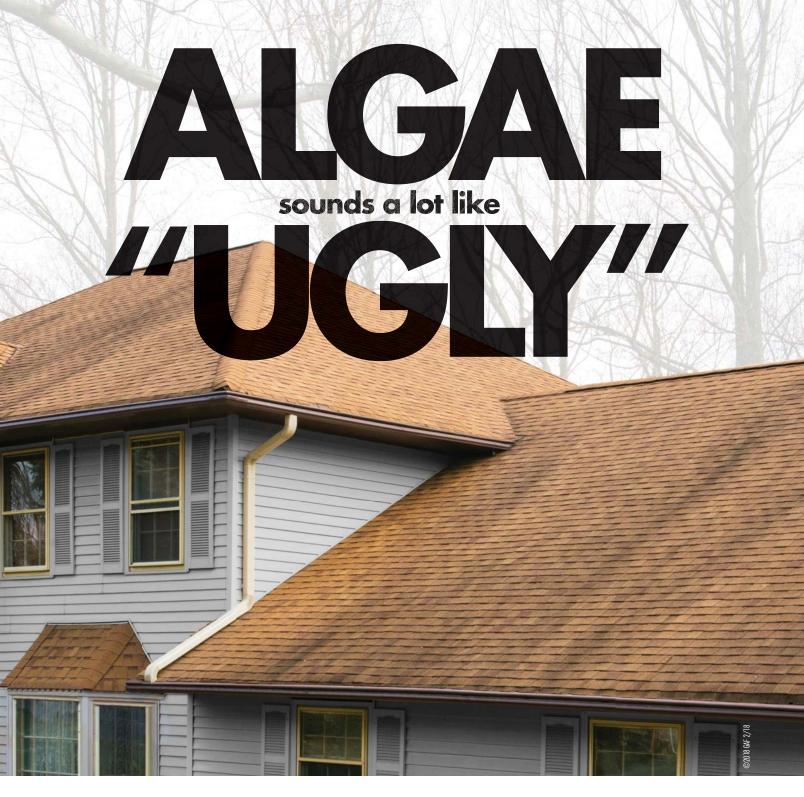
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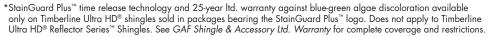


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