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Safety impacts your business in important ways

Bob Schenkel, MRCA President

embership has its privileges. Your MRCA membership has that and value, too. In this MR issue I wish to share with you a membership value that is perhaps a bit underestimated, but can impact your business in important ways. Several years ago the MRCA's Operation and Safety Committee embarked on the task of creating a review of contractors' individual safety programs, resulting in the MRCA Safety Recognition Program. I recall the discussions were lengthy, as reviews had to be unbiased, protect and not divulge the contractor's name in the review process and return the Committee's review with helpful critiques of how to improve the contractor's safety programs.

As contractors, we all have safety programs, designed to ensure our employees have a safe place to work. In the unfortunate event that your program or any aspect of your program, falls under the investigative eye of OSHA for any reason, are you sure your program has the necessary elements that will withstand such scrutiny and help protect your company? If your program is not specifically designed for your company, you may have issues. "Boiler plate" programs may not be your best bet! How often do you review your safety program? We don't need to be safety experts, but we do need to find the experts and implement the safety education (and protection) we can gain from them.

The MRCA's Safety recognition program is not a total review of the contractor's safety program. It is a sampling of 8 – 10 questions, some with multiple parts, about certain aspects of your program, i.e., Personal Protection Equipment (PPE), Heat Stress Program, etc.

For example, within the PPE portion of your program, do you include the following:

- Do you require daily inspections of harnesses and lanyards before each use of any PPE that is to be worn by the employee?
- Does your safety director demonstrate to new hires how to fit and wear their harnesses? Does your safety director have the new hires put on and adjust their own harnesses a few times to ensure they are doing it correctly?
- How often do you or your safety director inspect harnesses and lanyards?

All submitted programs, once received by our Association office, are sent to our legal counsel, Mr. Gary Auman, Esq., at the offices of Dunlevey, Mahan & Furry. The name of the submitting contractor is cleansed from all documents and then the program is assigned a number. The identities of the submitting contractors are not revealed at any time to the grading committee members. Answers to the questions are graded by each committee member and then the scores are calculated to establish the average score.

Working with Gary Auman, the Operation and Safety committee created these criteria. In 2014, the first year this program was offered, the MRCA received 25 applications. Of these 25 submissions, 9 were Bronze recipients, 8 were Silver and 6 were Gold recipients. Last year the Operations and Safety Committee received 35 applications. Of these, 4 were Bronze recipients, 9 were Silver recipients and 13 were Gold recipients and one achieved the first Platinum award.

All contractors that submitted an application received a review letter along with their certificate, explaining and outlining how their program can be improved. Even if you do not achieve a recognition level the first year you apply, you will receive comments that will assist you in improving your program so you can receive recognition the next time you apply. I believe the contractors who have participated have found the letters very helpful in strengthening their individual programs. I have had conversations with other participating contractors who have found this program truly beneficial.

You will find the application for this year's Safety Recognition Program at mrca.org. With the launch of the MRCA Elite Contractor Program (MERC) at MRCA's 2015 Conference, achieving a minimum of Bronze recognition is a requirement to the MRCA Elite Contractor program. Whether or not you plan to achieve MERC certification, the review of your safety program provides your company a tremendous member value. I urge you to take advantage of this value today!

Be safe, stay safe,

Bob Schenkel CL Schust Company, Fort Wayne, IN rschenkel@clschust.com



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For more information, call: 800-897-9719 www.amerisafe.com **Gary's Corner**



t the conclusion of my last article I promised to begin providing a list of "must haves" for a roofing contractor's safety program – and I will get there. But, several matters have come to my attention that I want to touch upon before we get to safety programs. First, OSHA has just published its "Top Ten" list of citations issued for 2015.

OSHA Top Ten List

OSHA Has released the top ten standards violated in 2015. They are in order:

Fall Protection Hazard Communication Scaffolding Respiratory Protection Lockout/Tagout Powered Industrial Trucks Ladders Electrical Wiring Machine Guarding General Requirements Electrical Equipment General Requirements

You will note from the list that many of the standards impact construction. Several impact the roofing industry specifically. We are covered by the fall protection, hazard communication, scaffolding, and ladder standards. Of the other standards, we may be impacted by respiratory protection and powered industrial trucks. Yes, electrical safety standards also have impacts on us, but the electrical standards on the top ten list are limited to general industry electrical standards. This does not mean that we do not have compliance obligations regarding electrical safety, but only that the general industry standards had enough enforcement action to get them on the top ten list.

By far, the heaviest penalties were issued for fall protection violations – more than double the total fines issued in the next closest standard. Of the 7,372 citations issued for fall protection violations, 4,071 were issued in residential fall protection situations - Steep roof contractors be AWARE! The next four fall protection violations were: unprotected sides and edges; roofing work on low-slope roofs; steep roofs; and protection from holes and skylights. There is no doubt that the roofing profession is by far the most visible from an OSHA inspection standpoint. You absolutely MUST have a tightly drawn fall protection program in our business and one which you do repeat training and about which you are vigilant from an enforcement perspective. I continue to see reports of citations issued to roofing contractors in the Midwest and east with six figure fines. If you increase those amounts by 82%, which will occur after August 1st, the cost of non-compliance and taking safety too lightly may start to impact your bottom line from multiple perspectives!

I know that more and more general contractors and owners are, for whatever reasons, taking a hard look at the safety and OSHA compliance records of prospective subcontractors. I am currently defending a case for a small general contractor/subcontractor. The fines are not too high, but one violation deals with an alleged excavation violation and OSHA has dug its heels in on keeping it as a serious violation. My client has told me that even without a final order they are getting questions from prospective customers and general contractors about the citation.

G By far the heaviest penalties were issued for fall protection violations"

Safety Programs

Beyond the above, the only new information from OSHA is that the agency projects finalizing the new silica standard and the electronic reporting standard before President Obama leaves office. Also, Dr. Michaels, the current Administrator of OSHA has stated that after President Obama leaves office he will leave OSHA and return to his career as a college professor. He has stated that he intends to take this step even if a Democrat is elected President.

it should be apparent to you that an effective safety program is one of the most essential tools in your tool box"

This brings us back to safety programs. As you can see, at least four of the 2015 top ten relate directly
you do. On the one hand you may find on have a Platinum level safety program and the safety program

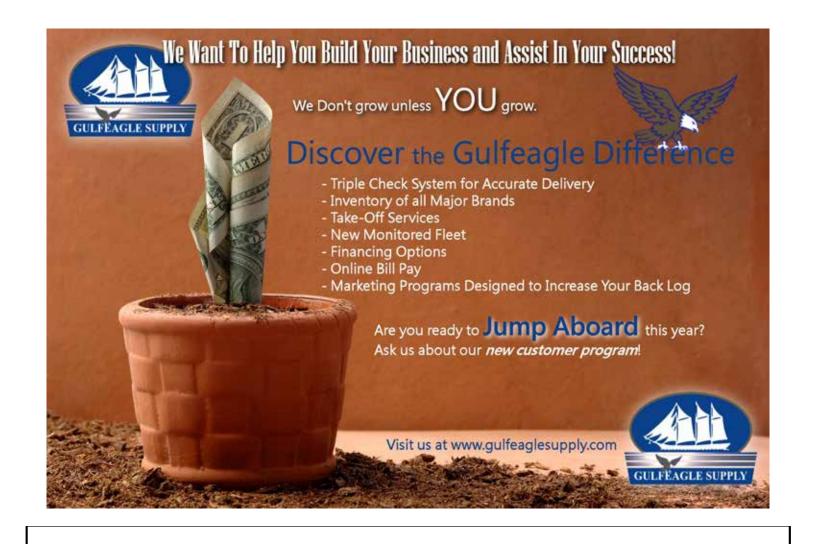
can see, at least four of the 2015 top ten relate directly to our industry. When you combine that with the visibility roofing contractors have, the continuous efforts by OSHA to police fall protection issues, the significant increase in fines that take effect in about five months and the history of roofing contractors with OSHA it should be apparent to you that an effective safety program is one of the most essential tools in your tool box.

I must emphasize the word EFFECTIVE in describing a safety program. This is not some off the shelf program that you picked up at your local office supply or construction materials supply store. It cannot be some program you downloaded from a safety oriented website and filled in the blanks with your company name. This has to be a safety program that you designed for your company. This has to be something that you will look at every day and not permit to accumulate dust on a bookcase in your office.

I will make this challenge to you – submit an application for the 2016 MRCA Safety Recognition Program this spring. Let a group of safety individuals and MRCA's general counsel grade your ten components of your program anonymously. See how you do. On the one hand you may find out that you have a Platinum level safety program and your work will be finished. On the one hand you may find out that the program you have is not as good as you thought it was and you still have work to do. The report, because it comes from counsel under our legal services plan, is confidential to you and no one on the grading committee will ever be able to put your company name with your application. And this year you have the added benefit of having completed the first step to achieving Elite Contractor status.

So we have established that you need a safety program designed for your company. Something that covers all of the potential hazards that your employees face as well as provisions to identify new and unanticipated hazards on a particular jobsite and steps to neutralize them. Your program should begin by anticipating working safety into the bidding process for every job. This is the first step in making safety part of your business model and it is where I will end for this issue. We will pick up here in the next issue, barring any unsettling news from OSHA.

Take advantage of a great MRCA member benefit-complimentary legal advice on OSHA-related issues from MRCA Legal Counsel Gary Auman. Contact Gary at GWA@dmfdayton.com.





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6 THINGS ABOUT MARK GWALTNEY OF DIAMOND EVERLEY

- Opened Diamond Roofing with his brother, Rick, in 1979, in Dodge City, KS. They expanded the business to Lawrence, in 1988, and purchased Everley Roofing in 1990, to become Diamond-Everley Roofing Contractors, as we know them today.
- Proud father of three grown and successful children, two daughters who work in the medical and wellness fields, and a son who works in the family business. He also has three beautiful grandchildren.
- Mark unwinds on the weekends in his yard, gardening and ground-keeping.
- A dedicated fisherman, Mark enjoys taking annual trips to Canada to fish for walleye and pike. He also likes salt water fishing in places like St. Thomas and Key West.
- A huge sports fan, Mark has a sport for every season, including his hometown collegiate football team, Kansas University Jayhawks. Go Jayhawks!
- Mark is a supporter of Habitat for Humanity. An employee of his company received the first Habitat for Humanity home built in Lawrence, KS, with a roof donated by Diamond-Everley. Seeing the difference it made in the employee's life, Mark and his company have since donated four more roofs to Habitat for Humanity home recipients in the Lawrence area.



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Course for Presidents RUN YOUR BUSINESS, DON'T LET IT RUN YOU



As the owner, CEO, or president of an organization, it's your job to ensure the organization is adaptable, efficient, sustainable, and profitable. That's easier said than done.

Many business owners get so involved in the day-to-day operations of the business, they never have time to focus on what's really important: Growing the business and preparing for the future. This day-to-day approach can be dangerous because when business leaders are too focused on the short term they can't see or plan for what is out in front of them, such as changes in the business environment, until it's too late.

What's the answer? Professional management

Professional management is a proven system that enables business owners to focus on:

- Establishing and influencing the future Direction of the organization by clarifying the strategic direction and ensuring your own leadership meets the future needs of the organization.
- Aligning the Operations to that future desired state. It involves the continuous alignment of the business structure and developing people so they can help drive toward the desired future state.
- And establishing the Controls through a strong culture and performance management that allow your organization to hold each other accountable to the vision, values and objectives.

Aileron's flagship two-day Course for Presidents program focuses on the fundamentals of Professional management, including Aileron's DOC (Direction, Operation, and Control) structure.

Focusing on these areas can help you simplify and control your business, gain operational clarity, and organizational discipline. It will also help position your company for longterm success, reduce your stress, and create more free time.

During the program, you'll also interact with business owners, CEOs, and presidents who are facing the same issues and challenges that you face. You will also participate in a self-assessment to help you understand your company's strong and weak areas. This will help you develop your action plan.

After completing the program, you'll be able to apply new knowledge of the Professional Management System to identify areas of improvement in yourself and your organization.



Aileron's Professional Management System



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WHO SHOULD REGISTER?

This program is exclusively for business owners, presidents, and CEOs of privately held organizations. Typically, participants have 10 or more employees and are between \$1-20 million in sales.

MRCA is Partnering with Aileron to Offer this New Member Benefit!



For more information, visit our website at www.aileron.org or contact Valerie Dahlberg at (800) 497-6722 or vdahlberg@mrca.org



T&R Update

Project Management Systems

Randy Adams, T&R Chair

ob sites today are much different than they were a generation ago. Managing project schedules, safety, and the flow of information is critical as we build successful, sustainable, and collaborative relationships within the construction community. There are many project management software systems available for specialty trade contractors, helping us lead and manage our field teams towards quality and productive installations.

Let's consider three operational areas impacting our crews each day.

Safety

Exposure to risk is something contractors deal with every day. And every day, complacency may creep in to attitudes, and mitigating injuries may become challenging. Utilizing technology is a way to build a culture of safety in to our employee's minds. Starting each day with a Job Hazard Analysis (JHA), discussing the specific job needs for that day, and then utilizing a tablet for employees to sign off on the JHA provides benefits for the crew and the leadership team. The use of software to review hazardous job conditions rallies the team around a beneficial goal, and minimizes the use of paper. The JHA can be uploaded from the office by the appropriate team member for use in the field. Secondly, it captures every crew member's signature, aiding accountability and understanding. And then, it becomes a part of the job record.

Site Specific Safety Plans and SDS Sheets may also be contained within the tablet, providing easy access and retrieval as the crew needs the information.

Specifications and Drawings

Tablets are also a quick and easy way to store and retrieve plans, details, and specifications. The field crew will easily be able to review submittals pertinent to the criteria necessary to building the roof system. Facilitating a productive discussion with the various stakeholders on a job site is a worthwhile goal. Protective cases for tablets effectively provide for safe, weatherproof usage for the field workers.

Timekeeping

There are many software programs that may be used to capture the field crews time. These systems effectively remove questions, or bad memories (didn't I work last Tuesday?), from members of the team, permitting discussions to occur around the important issues of building the roofing system. These systems integrate with accounting software, permitting efficient processing of the payroll function.

After all this information is accumulated and distributed, we then need to file it away in a file cabinet. Database systems permit large amounts of storage, nearly instant retrieval, and may be accessed from anywhere. Databases permit leadership to manage the business efficiently, and in some cases will provide our customers with the ability to view project information in real time.

Building a world class organization, facilitating communication, enhancing the flow of job related information to the field are important tools technology permits us to accomplish, and sets us apart in an increasingly commoditized industry.

Randy Adams R. Adams Roofing Co., Inc. randy_a@radamsroofing.com

ARE YOU?



ELITE ROOFING CONTRACTOR PROGRAM

FIND OUT IF YOU QUALIFY APPLY TODAY! Contact valerie dahlberg at vdahlberg@mrca.org

Industry News

Allied Construction Industries Gene Demeter Safety Achievement Award

Allied Construction Industries (ACI), at its annual Safety Day on February 23, 2016, presented the Gene Demeter Safety Achievement Award to Gary W. Auman. Gary is a Shareholder of Dunlevey, Mahan & Furry, A Legal Professional Association of Dayton, Ohio.

Gary was recognized for his help in the defense of employers in workers' compensation and OSHA cases dating back to 1976. He defends OSHA cases nationally. Gary has also worked with OSHA in the development of safety and health standards. Even beyond his help to employers in understanding and



defending safety and health issues, Gary is a regular volunteer in safety related matters across the country in many industries. He is a strong proponent of safety in the workplace and his knowledge in safety related areas is sought by many industry trade associations.



New DOT Regulation

CDL Drivers need to be proactive when renewing their medical cards or it could be costly and time consuming. Being prepared will expedite the process of receiving a DOT medical card and eliminate the need and cost for a completely new DOT physical exam. Drivers need to be aware of the conditions that can prohibit certification. If any of these medical conditions may apply, drivers should be prepared to provide medical documentation that disqualifying conditions such as :high blood pressure, diabetes, hearing and vision deficits, cardiovascular disease and sleep apnea are under control. Allow yourself plenty of time to retrieve medical clearance from your primary care physician. DOT certified medical examiners will require medical documentation in order to clear CDL drivers to issue a new DOT medical card. If a short-term card (3 month, 6 month or 1 year) is issued, the medical examiner is required to perform a new DOT physical in order for a new medical card to be issued.

See more at: https://www.fmcsa.dot.gov/medical

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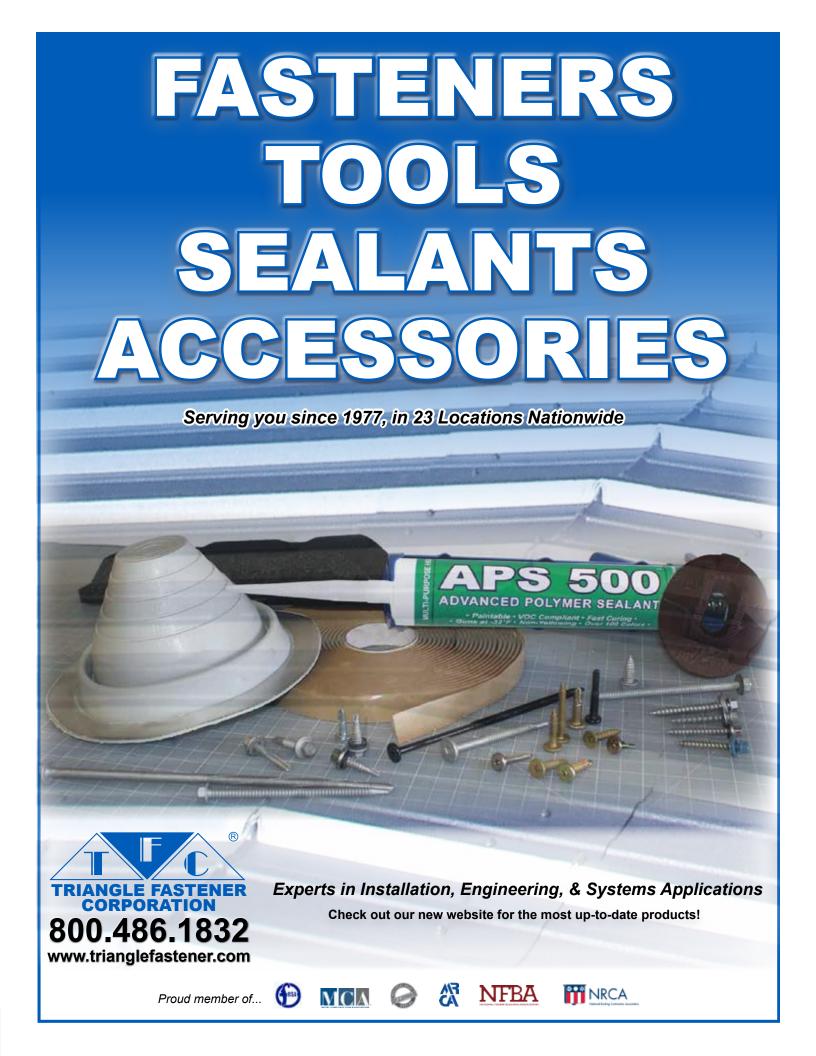
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Gary W. Auman

Dunlevey Mahan + Furry Attorneys



RCMA Presents Martin A. Davis Award, Elects New Board Officers at 2016 Annual Meeting

WASHINGTON, DC (February 25, 2016) – The Roof Coatings Manufacturers Association (RCMA) hosted more than 100 industry attendees at its 2016 Annual Meeting, February 15-16 in Orlando, Florida. The Association elected a new slate of officers to its Board of Directors and named Greg Johnson, Sherwin-Williams, the recipient of the 2015 RCMA Martin A. Davis Industry Leadership Award.

The Martin A. Davis Award, the highest honor bestowed by the RCMA, is presented annually to an individual, selected by his or her fellow RCMA members, who has exemplified outstanding service and made significant contributions to the roof coatings industry. The 31st award was presented to Mr. Johnson as this year's honoree on February 15 at the RCMA 2016 Annual Meeting at the Wyndham Orlando Resort International Drive. The first Martin A. Davis Award was presented in 1985, designed to honor and serve in memory of Davis, a visionary founding member of the RCMA who served both the Association and industry with distinction and exceptional service.

Mr. Johnson has been an active and integral member of the RCMA since 2008 and currently serves as the chairman of the RCMA Government Affairs Committee. "Very well-deserved honoree," commented John Ferraro, RCMA Executive Director. "Greg has faithfully been involved with the RCMA Government Affairs Committee. He is passionate about key advocacy issues and is a tremendous asset to the industry."

In addition to granting the Martin A. Davis Award, new

officers were elected to the RCMA Board of Directors for 2016.

The following officers were ratified by the membership to serve two-year terms:

- President: John Stubblefield, Polyglass USA
- Vice President: Jonathan Dietzel, SWT Group
- Vice President: Greg Hlavaty, Western Colloid

Secretary: Ed Buczek, Henry Company

Treasurer: Benjamin Borns, KST Coatings

The RCMA will next convene July 18-21, 2016 in Philadelphia, Pennsylvania, for the Association's biennial International Roof Coatings Conference (IRCC).

About RCMA

RCMA is the national trade association representing manufacturers of asphaltic and solar reflective roof coatings and the suppliers to the roof coatings industry. RCMA and the Reflective Roof Coatings Institute (RRCI) have merged into one industry association that continues to advance, promote, and expand the national and international market



for roof coatings through education, outreach, technical advancement, and advocacy.

MRCA News

MRCA Continues Its Aggressive Promotion of CERTA

The MRCA Board of Directors and T&R Committee recognize the importance of promoting torch application safety and has placed the marketing program for CERTA as a high priority.

In just over the past few months, MRCA has sponsored its CERTA booth at the Chicago Roofing Contractors Association Trade Show in January. Then moved on to have the CERTA booth at the IRE in Orlando in February. And most recently, exhibited the CERTA booth and held live CERTA Torch Safety demonstrations at the Ohio Roofing Contractors Association Working Trade Show in Columbus in March.

MRCA is involved with CERTA Applicator courses scheduled over the next 60 days, throughout the Midwest. Plans have already been finalized for MRCA to sponsor both CERTA Train-the Trainer and Applicators courses at the MRCA Annual Conference and EXPO scheduled in Columbus, Ohio on November 1 and 2, 2016.

MRCA CERTA Chairman, Greg Sprague, attended the most recent Asphalt Roofing Manufacturers Association Conference (ARMA) and spoke on CERTA, as well as other programs of the MRCA T&R Committee.

Information on CERTA can be found at both the MRCA and NRCA websites. Visit MRCA.org and NRCA.net



Asphalt Roofing Industry Names Top Installations in North America

The Asphalt Roofing Manufacturers Association (ARMA) recognizes a star-shaped home, resort complex and a library as winners of its 2016 awards program

WASHINGTON D.C. (February 8, 2016) - A star-shaped home, a PGA National Resort complex and a new library are winners of the Quality Asphalt Roofing Case Study (QARC) Awards, an annual program that seeks to recognize exceptional roofing projects in the United States and Canada.

The Asphalt Roofing Manufacturers Association (ARMA) selected the projects from among nearly 30 commercial and residential roofing projects submitted by contractors from the U.S. and Canada. This year's QARC program paid close attention to the way contractors utilized advances in technology and shingle design, and showcased asphalt's durability to install a high-performing roofing system.

The 2016 awards honored John Foster, a general contractor in Esparto, CA, with the Gold Award for his company's beautiful and unique installation on a starshaped home. The homeowners required a roofing system with a style that wouldn't get lost in the bold architecture. Designer asphalt shingles provided the necessary aesthetic to complement the home, while also protecting it from the windy, damp coastal environment it is subjected to.

The Silver Award was given to Advanced Roofing Inc. of Fort Lauderdale, FL, which was called upon to install a new low-slope asphalt roofing system on two buildings at the PGA National Resort and Spa in Palm Beach Gardens. The contractor chose an SBS-modified bitumen roofing system that delivered a pristine appearance while protecting the roof from harsh weather and heavy foot traffic.

Precision Roofing received the Bronze Award for the roof they installed on Northeast Regional Library in Aventura, FL. The new library required a high-performing, durable system that would protect the building for years to come. The contractor chose a hybrid built-up/SBS-modified bitumen roofing system because they had extensive experience with asphalt roofing's longevity and knew the system would meet the project's budget restrictions.

Asphalt roofing played a key role in each of these projects, providing the perfect aesthetic look while using multiple layers and components to protect the buildings.

"Each of the submissions we received this year illustrated the beauty and curb appeal that asphalt roofing can provide," said Reed Hitchcock, executive vice president of ARMA. "These winning projects were singled out for successfully using the unique qualities of their roofing materials to deliver superior protection for a building, whether from salty storms, high winds or other wear and About ARMA

tear."

The 2016 QARC recipients are:

Gold

Project Name: Star House **Company:** John Foster, General Contractor Esparto, CA

Project Description: This residential asphalt roofing system relied on PABCO **Roofing Products Premier**



Advantage Granite shingles to provide a beautiful design while protecting the home from high winds and a salty, damp coastal environment.

Silver

Project Name: Devonshire at PGA National Resort and Spa-**Court and Cove Buildings Company:** Advanced Roofing Inc. Fort Lauderdale, FL **Project Description:** A SOPREMA three-ply SBSmodified bitumen roofing



system with a base sheet and cap sheet was installed to protect the roof from the foot traffic and use of heavy equipment required to service the building's many air conditioning units.

Bronze

Project Name: Northeast Regional Library Company: Precision Roofing

Hialeah, FL Project Description: This GAF hybrid built-up/SBS-modified bitumen roofing system used

AC three plys of GAFGLAS® Ply 4 Ply Sheet and a Ruberoid® EnergyCap[™] 30 Granule FR membrane to offer protection and durability to a new library building.

The 2016 awards were judged by a panel of roofing industry experts, including leaders from multiple trade associations, architects and members of the media. The judges look for projects that use asphalt roofing technology to provide durability, value and curb appeal.

For more information about the QARC Awards program, please visit www.asphaltroofing.org.



ASPHALT ROOFING MANUFACTURERS ASSOCIATION

The Asphalt Roofing Manufacturers Association (ARMA) is the North American trade association representing the manufacturers and suppliers of bituminous-based residential and commercial fiberglass roofing products, roll roofing, built-up (BUR) roofing systems and modified bitumen roofing systems. ARMA will be celebrating its 100th anniversary throughout 2016. For more information about ARMA and its history, please visit www.asphaltroofing.org.

Great nnovations



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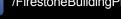
- Work with EPDM membrane applications
- · Bond 2x stronger than nearest competitive self-adhered membrane
- Improve installation speed (up to 5x faster than fully-adhered applications)
- · Comply with all state VOC regulations

For more information about Secure Bond Technology, visit:

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firestonebpco.com/securebond





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MRCA is Partnering with Beeline Purchasing LLC to Offer a New Member Benefit!

The Midwest Roofing Contractors Association has launched a Safety Marketplace through the Beeline Purchasing Program. MRCA members can buy safety products directly from manufacturers at considerable discounts - **up to 30% savings!**

To browse the catalog, go to http://www.beelinepurchasing.com/store/categorylist.cfm

To make a purchase, please contact Kevin Holden at Beeline Purchasing, 513-607-5955 or email him at kevin@beelinepurchasing.com

Benefits include:

- 10-30% savings over traditional methods of purchasing
- Multiply the buying power of the entire group (MRCA) for additional discounts
- First hand technical assistance and support from factory reps
- Independent and unbiased brokers
- Reduce middleman expenses
- Pass on manufacturer promotions



Over the past 5 years, I have saved thousands of dollars by purchasing my safety products from Beeline. They offer everything from hard hats and safety glasses to fall protection and other safety equipment that is shipped quickly and directly to my warehouse. In addition to being cost effective and convenient, Beeline provides you with your own personal broker, something you would not get dealing with a large distributor!"

Fred Horner President/CEO Advanced Industrial Roofing, Inc.





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North Texas Roofing Contractors Association Announces 2016 Board of Directors and Annual Award Winners

The North Texas Roofing Contractors Association (NTRCA), a regional association for residential and commercial roofing contractors, distributors, manufacturers and associates who maintain the highest industry standards, announces its new 2016 board of directors and the winners of two prestigious annual awards honoring those who have made significant contributions to the roofing industry in North Texas.

During this year's Awards Banquet, held February 6, winners of the "Associate of the Year" and "Industry Leader of the Year" awards were announced and recognized for their significant contributions to the North Texas roofing industry and for their exceptional service. Past winners meet annually to choose each year's new honorees.

The "Industry Leader of the Year" honor, the association's most prestigious recognition, was awarded to Judy Smith of Lon Smith Roofing. The "Associate of the Year" honor was awarded to John Gibson of C-CAP.

The 2016 NTRCA board members were also announced during the Awards Banquet.

The NTRCA board officers for 2016 are:

- Matt Hines, president & CEO of MRB • Contractors (2016 NTRCA board president)
- AJ Huckaby, owner at Springtree Roofing and Restoration • (past president)
- Holly Green, owner at Brettco Roofing (president-elect)
- Jo Ann Moreno, territory manager at GAF (treasurer) .

Other members of the 2016 NTRCA board of directors are:

- Gina Beakley, director of operations at Titan Contractors •
- Adam Buttorff, president at Renown Construction Inc.
- Charles Cross, Jr., commercial sales at Zenith Roofing .
- Darcy Dierking, territory manager at West End Roofing •
- Paul Duncan, president at Trinity Roofing and . Construction
- Mike Huddleston, owner of Mike Huddleston • Roofing Systems
- Bo Jackson, sales manager at Owens Corning
- Chad Lacefield, business partner at Venture . **Roofing Supply**
- Matt Moody, managing partner at ABC Supply .
- Bryan Pinder, territory manager at Southern . Shingles
- Dan Pitts, president at Pitts Roofing Company, Inc.
- Matt Skipper, president at RJ Reynolds & Co Roofing, Waterproofing, Sheetmetal

Additionally, the following four experts will serve

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as Ex Officio NTRCA board advisors in 2016:

- Mike Buttrey, MHBT - insurance expert
- Karen Ensley, Cutler Smith, PC attorney
- Nick Febo, ER Systems RCAT representative •
- Craig Rainey, Supreme Roofing -RCAT representative

"Our 2016 board of directors are committed to excellence and service in the roofing industry, and we are excited to welcome them to our organization, " said Karen Vermaire Fox, executive director of NTRCA and owner of Quindigo Management, a Dallas/ Fort Worth-based company that manages trade associations. "We look forward to their expertise and dedication in the coming year, as NTRCA continues to be the premier resource for roofing contractors working and doing business in North Texas."

During the evening, this year's NTRCA Golden Hammer award winners were also recognized. NTRCA's annual Golden Hammer Awards recognize outstanding roofing projects completed during the prior year. Entries are judged each year on logistical challenges, quality workmanship, uniqueness, difficulty, time constraints, innovative solutions and safety challenges.

Contractors selected to win this year's Golden Hammer Award for Community Service Projects were: Brettco Roofing for their work on the Sharon Thompson residence and Supreme Roofing for its work on Sunshine Village, a nonprofit organization.

Commercial Contractors winning a Golden Hammer Award this year were: Castro Roofing for its work on the SMU Owen Arts Center; KPost Company for its work on the AT&T Stadium Logo; and Supreme Roofing for its work on Baylor Scott & White Medical Center in Irving, Texas.

Residential Contractors awarded a Golden Hammer this year were: Buzz Roofing & Construction for its work on the Guinnup residence; Roofing Giant for its work on the Schmaltz residence; and Showtime Exteriors for its work on the Granger residence.

Scott Exteriors was awarded the 2nd Annual Green Roofing Golden Hammer Award for their work on a LEED high efficiency home with metal roofing, trim and siding.

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To learn more, visit www.ntrca.com.

Left to right Front row: Bo Jackson, Mike Buttrey, Karen Ensley, Holly Green, Gina Beakley, JoAnn Moreno, Nick Febo, Dan Pitts, Bryan Pinder

Middle row: Chad Lacefield, Charles Cross, Matt Hines, Craig Rainey, AJ Huckaby, Mike Huddleston, Paul Duncan

Back row: Kelly Kirkendoll, Karen Vermaire Fox, Darcy Dierking, Ronnie Crowley and Matt Moody (not pictured: Adam Buttorff and Matt Skipper)



NTRCA Associate of the

Year Award Winner -

John Gibson, C-CAP

NTRCA Industry Leader

of the Year Award Winner

- Judy Smith

Lon Smith Roofing

ORCA WORKING TRADE SHOW

On March 1, 2016, The Ohio Roofing Contractors Association held their first ever Working Trade Show in Columbus Ohio. The day was filled with demonstrations from manufacturers, suppliers and distributors. This action filled day gave contractors the opportunity to get a hands on experience. Visit ohioroofing.com for more information or facebook.com/OhioRoofingContractors

























Ekso Bionics' powered exosuit can reduce fatigue and strain

Wearable Technology in Construction

by Jeff Rubenstone • *Product News Editor Engineering News Record Magazine*

The future of wearable technology for the construction industry conjures up images of workers covered in clunky machinery—hydraulically powered exosuits multiplying the wearers' strength, while gleaming visors with information-dense heads-up displays block their vision. But companies looking to bring more wearable tech to the jobsite are focusing on getting their innovations into workers' existing gear to boost adoption. As a result, in the near future, construction workers may find that common assets, such as hardhats, safety vests and even the tools they carry, are being infused with new capabilities.

The Smart Hardhat

Packing advanced technology into the standard hardhat is the goal of California-based firm Daqri. The firm's Smart Helmet looks as if it were a traditional hardhat but features a clear visor that can display 3D visual overlays in the wearer's field of view. It also features a 360° wireless camera, allowing a full view



of the worker's surroundings. The system is capable of a form of augmented reality (AR), also called "mixed reality," in which images can be made to appear dynamically

on surfaces in the surrounding environment. Designed primarily for industrial work, the Daqri helmet also may aid construction workers on the jobsite. But with a price tag a few hundreds dollars above an ordinary hardhat's, it remains a premium item.

Still, major construction-equipment manufacturers expect these technologies to arrive in the industry in the near future. "We're looking at all sorts of wearables, mixed reality, geofencing, collision-detection systems," says George Taylor, a vice president at Caterpillar Inc. "Like the Daqri helmet—with that visor that can display an overlay of information mapped to what you're seeing—[there's a] lot of potential for things like that."

While Caterpillar has yet to unveil its own wearable tech, Taylor thinks AR may change how users work with equipment. "Unlike a virtual-reality [VR] system, mixed reality allows someone to be in their environment. [It] superimposes information, so they know what to touch and how to perform tasks," he says. "Just think about a technician's productivity: If you can improve it by 10%—and we think of that figure across our dealer network—the amount of relief that would give us is substantial. Because it's hard to find good technicians."

Building a Safer Safety Vest

Getting wearable tech into construction workers' existing wardrobe is easier than convincing them to put on another bit of gear. Safety vests are commonplace on jobsites, and technology firms are looking to bake their innovations into standard gear. For example, Red

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Point Positioning has been using GPS-enabled safety vests to track worker locations across crowded jobsites (ENR 10/19 p. 53). When

working within a geofenced jobsite, workers can be located to within 8 in. of precision.

Skanska USA ran trials of the

Red Point worker-location system on a Boston project, and the results impressed Tony Colonna, senior vice president at the firm. "We see that a GPS-type positioning system can monitor people relative to equipment or keep [them] out of danger zones," Colonna told ENR. "You can have real-time feedback and know how much real manpower is being delivered to different sites on the construction site."

Tightly controlled, sensor-laden jobsites can be made to work with wearables, but what about a construction setting that's a bit more chaotic, such as a busy highway project? Tom Martin, a Virginia Tech electrical and computer engineering professor, saw a chance to improve road-crew worker safety when the university undertook a study of semi-autonomous vehicles with the Virginia Dept. of Transportation.

Dedicated short-range communication (DSRC) systems allow newer vehicles to communicate with each other via radio signals. These systems are expected to form the backbone



of future semi-autonomous and autonomous vehicle systems. Martin and his graduate students wondered if that same technology could be adapted into a wearable version for construction workers. "Within five to 10 years, most cars on the road will have these DSRC systems, with GPS on the cars and radios able to communicate with other cars." he says. "We wanted to see if [we could] use it to give road workers a little advance warning."

The result is the InZoneAlert safety vest, which has the same DSRC system as the cars but rebuilt to a form factor that can be worn comfortably. Tests conducted by Martin's team have shown that workers and cars can be reliably alerted to each other's presence, presenting the possibility that driverless and semi-autonomous vehicles could one day be programmed to automatically avoid construction workers.

"We started with the safety vest, since we knew they were already required," recalls Martin. "We needed to fit into what the worker already wears, otherwise there will be less compliance."

Scattering wearables across the jobsite will yield smarter results, Martin says. "Instead of one big wearable, you need to be thinking of lots of little devices talking to each other," says Martin, who has been researching and developing wearable technology since the 1990s. "For construction, these technologies will have to be incorporated into what's on the jobsite. They're going to have to fit into the way people are already using their equipment and clothing."

A prototype of the InZoneAlert vest was put to the test on mock-ups of road construction sites, with

intelligent cars zooming by. "We were able to show with the initial feasibility study that a vehicle traveling 45 mph in a straight line could give a road worker five to six seconds of warning that a car was coming right at them," says Martin. Like any warning system, Martin and his team were concerned about false alarms desensitizing workers. "There were some minor inaccuracies, but, even with that, we were able to distinguish clearly between vehicles being in-lane, half a lane away or a lane away," he says. In early tests, the prototype vest performed with over 90% accuracy.

Martin originally developed the InZoneAlert feasibility study with graduate student Jason Forsythe, now a professor at York College in Pennsylvania. Martin now is working with graduate student Kristin Hines to develop the vest further. "Right now, we wouldn't deploy the vest since very few cars on the road use DSRC. But within five to 10 years, most cars on the road are going to have these systems. So, if we can establish the feasibility of the vest now, it can be ready by then," he says.

New Realities in Design Workflows

While VR and AR visors are still rare sights on the jobsite, the technology already is being deployed in the design phase. Architectural firms are finding uses for VR and AR headsets beyond impressing clients with virtual walkthroughs.

"It's something that we're actively involved in," says Alan Robles, associate at Gensler in charge of interactive design. "We're engaging the makers of these technologies, and we're using our own projects as test beds." Robles oversees the deployment of VR and AR tech within Gensler from the firm's Los Angeles office and is even employing it in the ongoing redesign of that office. "Our L.A. office is kind of a living lab, an experimentation environment. As we develop the next iteration of our office space, we're using VR tech to internally vet our perspectives and explore possible design changes."



According to Robles, VR also is being used by Gensler to design the Culver City Creative Campus in California. "This building will feature operable exterior glazed surfaces, and VR lets us evaluate how those systems will look and function." A Gensler team also is using VR in the renovation of the lobby of the U.S. Bank Tower in Los Angeles to examine alternative designs.

Gensler also has deployed its VR headsets among multiple users to explore design files together. "We've done experiments with videogame engines, [such as] Unity and Unreal, to test use cases for how we can implement them as part of projects. We've been able to develop a live collaborative environment, essentially a multiplayer game. People at separate locations log in with wearables like the Oculus Rift [VR headset], have live meetings in a virtual space and have different discussions about components of design, evaluating our physical experience of the design."

Major VR platforms such as the Oculus Rift or the HTC Vive are a hot target for tech firms hoping to build the software that will link VR to design and construction workflows. IrisVR is a New York City-based firm focused on getting the most commonly used design file formats compatible with these platforms. Architects and engineers will be able to load up their Revit files into the headset and refine their model from within. "This can be used as a design tool," says George Valdes, vice president of products at IrisVR. "You're not just looking at the model. It's a design review. You can do markups in VR, capture images from whatever you're looking at in VR and export that metadata back into your workflow."

Valdes admits the VR experience is still not perfect, but he says the real challenge is educating architects, engineers and other industry professionals about how far the technology has come in just a few years. "We're focusing on extracting 5D data from Revit and other kinds of files in order to optimize the geometry and make the overall VR experience as smooth as possible. But it's the interactivity that will take this beyond pretty walkthroughs."

Waiting for the Robot Power Suit

Powered exoskeletons, or "exosuits," have been in development for decades, with many prototypes shown off for military and medical uses. One current manufacturer is Ekso Bionics, which has a lightweight, powered harness that the firm has said could one day aid construction laborers in lifting heavy loads and reducing strain and risk of injuries. But that is still a potential application, as exoskeleton manufacturers such as Ekso primarily target their products to the health-care sector.

One tech firm is taking a different approach to getting exosuits onto the jobsite. "We decided to disrupt a large category in the construction industry," says Arron Acosta, CEO of Rise Robotics. His startup firm has been researching possible uses for its Cyclone Piston technology, a mechanically driven energy-storage system that Acosta helped to develop as a student. The lightweight, cable-driven piston originally was designed to store energy to power an exosuit for workers lifting heavy loads. But following the trend in wearables, Rise Robotics is looking to enhance an existing tool on the jobsite, rather than invent a new platform.

"We looked at the common tasks on the construction site to see where this technology could fit in, and we kept coming back to the general contractor's portable air compressor," says Acosta. "We applied our cycling-cable piston to air compression, and we've developed one that fills five times faster. Our pump-up time [to 125 psi] is 23 seconds, with a recovery time of seven seconds." Acosta also notes that preliminary testing has shown that the firm's piston-driven air compressor has a quieter operation than a traditional air compressor, generating only 61 db.

Acosta thinks replacing a standard piece of gear is his firm's Trojan Horse into the jobsite. "Right now, we're targeting nailing applications—pneumatic nailers for framing, flooring and finishing trim. We're hoping to niche ourselves into being the carpenter's best friend."

When it is introduced later this year, the finished product, known as the Robotic Air Compressor, will be light enough to be worn like a backpack. "We want to allow air tools to go fully cordless."

An air compressor light enough to sling on your back is technically wearable, but Acosta sees it as a first step toward fully powered suits. "We think that, by 2018, materials-handling exosuits will be worn by contractors and builders to pick up packs of concrete, loads of shingles really, for any heavy lifting. But, before then, we believe they occasionally will be wearing their air compressor, and that that may be able to later serve as the power plant for a wearable suit's pistons."

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NTRCA North Texas Roofing Contractors Association Homeowners Workshop April 27, 2016 11:30am -1:30pm www.ntrca.com/events/calendar



NTRCA North Texas Roofing Contractors Association Lunch & Learn: Selling to Building Owners May 11, 2016 11:30am -1:00pm International Bowling Museum Arlington Arlington, TX 76011 www.ntrca.com/events/calendar

NRCA CERTA Train-the Trainer Authorization May 19, 2016 Rosemont, IL www.nrca.net/store/detail/certa-train-the-trainerauthorization/1383



SIKA Corporation Presents Chicagoland 365 May 25, 2016 5:30pm - 7:00pm Palmer House downtown Chicago Chicago, IL Contact thomas.jay@us.sika.com NTRCA North Texas Roofin Golf Tournament June 7, 2016 11:30am -1:00pm Cowboys Golf Club Arlington, TX 76011 www.ntrca.com/events/calendar

SIKA Corporation Present Chicagoland 365 June 9, 2016 2:30pm - 7:00pm Drury Lane Theatre & Conferen Oakbrook, IL Contact thomas.jay@us.sika.c

WSRCA – Western State Association WRE - Western Roofing June 12-14, 2016 Paris Casino Las Vegas, NV www.wsrca.com

FRSA – Florida Roofing a Contractors Association 94th Annual Convention a Sheet Metal Expo June 16-18, 2016 Hyatt Regency Orlando & O Convention Center, Orlando, FL Orlando FL 32819 w w w.florid aroof.com/

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RCMA – Roof Coatings Manufacturers Association **International Roof Coatings Conference** July 18-21, 2016 Sonesta Hoel Philadelphia Philadelphia, PA http://goo.gl/M3SZov



ARCA – Arizona Roofing Contractors Association **46th Annual Convention & Trade Show October 6-8, 2016 Tucson Casino Del Sol** Tucson, AZ www.azroofing.org

RCAT – Roofing Contractors Association of Texas **41st Annual Conference & Trade Show** October 12 - 14, 2016 Gaylord Texan Resort & Conference Center Grapevine, TX http://roofingcontractors-texas.com/tradeshow/



ARCA

MetalCon October 26-28, 2016 Baltimore, Maryland www.metalcon.com



MRCA – Midwest Roofing Contractors Association 67th Annual Conference & Expo October 31-November 2, 2016 **Greater Columbus Convention Center** Columbus, OH www.mrca.org

www.mrca.org -Midwest Roofer 25

Express Releases New Roofing Torch For Sale in USA

The "Raptor" roofing torch is the first legitimate advance in roofing torch safety in 50 years

New York, NY, March 23, 2016– Guilbert Express Inc., a division of Paris, France based Guilbert Express SAS, the world's largest manufacturer of propane fired membrane welding, soldering and brazing equipment introduces the "Raptor" roofing torch in the US Market. The Raptor roofing torch has been in use in Europe for nearly 4 years and introduces several key features designed to facilitate the roof mechanic's safe use of the correct size torch burner for the substrate and to encourage work in ergonomically correct positions for improved worker performance and safety.

The single most important innovation of the Raptor torch is its piezo ignition progressive trigger. This trigger allows the user to light the torch and control the flame length with a squeeze of the handle. The torch immediately turns off (like a dead-man's switch) when the trigger is released, eliminating the need for a pilot flame and the potential for an accident if an unattended torch is overturned.

The tool features a built in quick connector in the handle to allow for quick changes from field to detail torches and interchangeable burners to allow the mechanic to down size burners as the mechanic encounters details that require greater flame control. The shorter burner heads encourage the mechanic to kneel rather than bend at the waist when working on roof details. The burners have a built in stand to keep the burner head from contacting the substrate when the torch is put down.

"Our guys love these torches and as a Roofing Company owner I believe the quality and features of the Raptor torch are well worth the investment. As a MRCA member and CERTA committee member I think this is a huge step forward in creating safer work environments through innovative solutions in the equipment that we use, it's one of the best ideas I've seen yet." Mark Langer, Langer Roofing

The Raptor torch kit comes complete with a Raptor handle, one 308K BTU burner for non-combustible substrates and indirect detail torching and one 102K BTU CERTA compliant burner for direct torching over combustible substrates, one 25' hose, one 60 PSI fixed POL regulator and one set of quick connectors for the hose and a field torch.

If you would like more information about this topic, please contact Christopher Paulin at 203.646.7546 or email at cpaulin@guilbert-express.com.



McElroy Metals offers white paper on successful hangar recover

BOSSIER CITY, La. March 15, 2016 – McElroy Metal has put together a white paper about a successful hangar recover for Southwest Airlines. McElroy Metal Recover Manager Charlie Smith, was onsite in Orlando within a week of the initial call from Southwest Airlines to gain an understanding of the problem and goals for the project.

McElroy Metal headed up the team that developed, engineered, manufactured and installed the best solution for a roof that was damaged by 30 years of tropical storms, including Hurricane Charley in 2004.

The 238T Symmetrical Standing Seam roofing system from McElroy Metal was installed on subpurlins from Roof Hugger. The 238T met the wind uplift requirements and the installation without a tear-off, offered the best chance for success with minimal interruption to the daily operation.

To download the white paper, go to

http://www.mcelroymetal.com/elements/files/CS001SouthwestCaseStudy-Web.pdf. http://www.mcelroymetal.com.



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