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More than 22,000 workers on 2,200 jobsites from 340 organizations participated in NUCA's June 2021 Trench Safety Stand Down Week. The event is sponsored by NUCA and the Safety Ambassadors Club.

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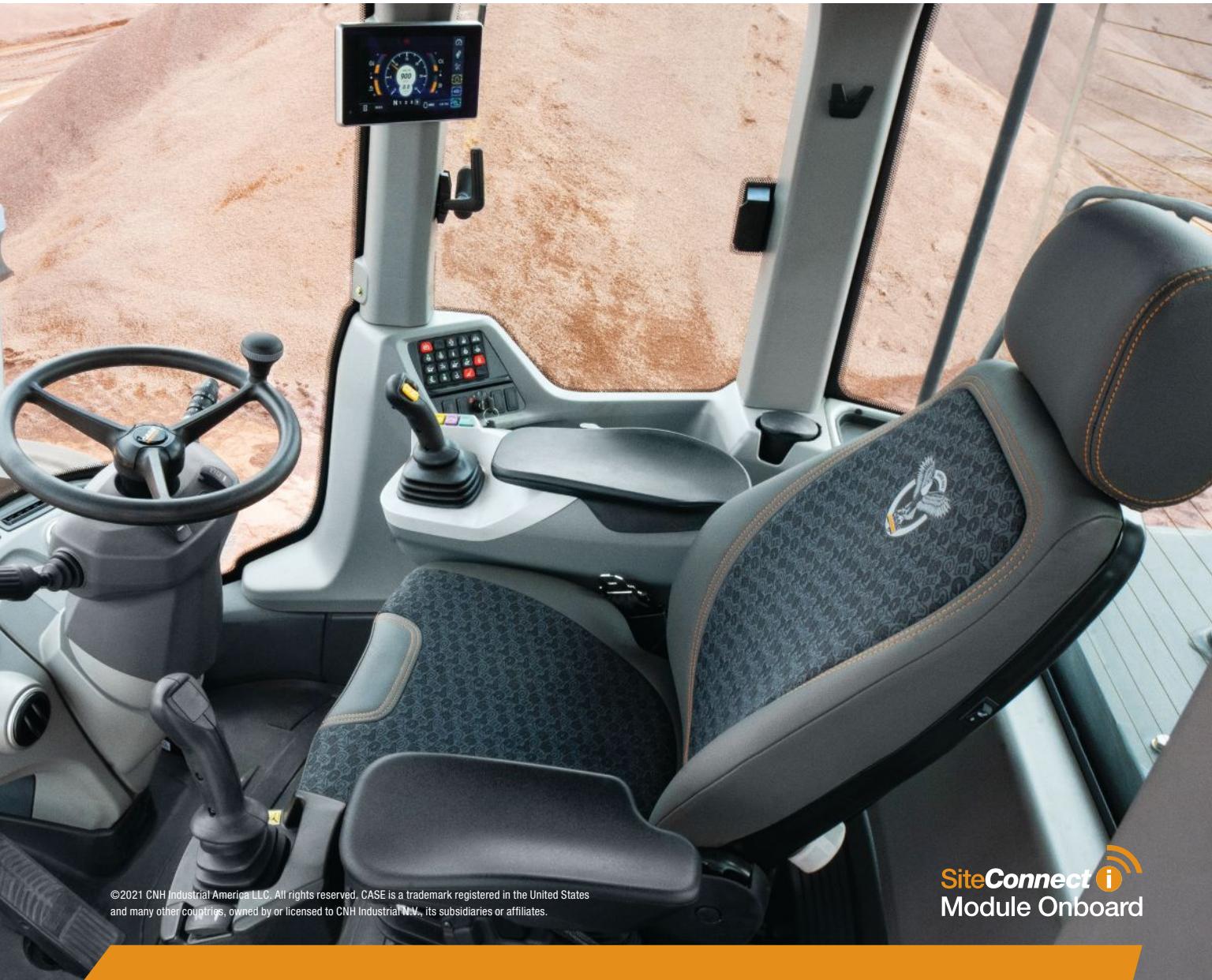
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NUCA Chairman's Message

Participation Equals Success



As I write this, we're almost at the finish line. The \$1.2 trillion core infrastructure bill currently being considered by Congress contains historic levels of funding for the kind of construction projects we are proud to build.

That astounding \$55 billion for water infrastructure will dig a lot of trenches and pour a lot of concrete. And the additional \$65 billion for broadband will help more companies find new projects modernizing local fiber-optics systems. And the \$110 billion for new highways, roads, and bridges will mean a better bottom line for those involved in highway construction. This \$1.2 trillion bill contains a historic level of resources for water infrastructure and broadband projects, something NUCA has been working for the last 12 years to achieve. It is almost within reach.

Yet, while our lawmakers engage in political games and last-minute debates over this bill, our association remains focused on the next steps. We are confident those much-needed resources will flow into the industry, but that's only the first part of the equation. Once the funding arrives, what then?

Our industry was already facing labor shortages before the pandemic, and experts are projecting a continued shortfall in our trades for the next several years, if not longer. When Congress finishes with infrastructure, it needs to turn its attention to workforce development issues to find the employees to build these projects. That demand will be a top message in this fall's Summit.

We've achieved a lot in the last two years as an association. And what makes this possible is your participation in NUCA and your local chapters. Many of you responded this summer to our Muster advocacy alerts and wrote your lawmakers about the core infrastructure bill. With your help, we achieved one of our spring Summit goals: renewal of the nation's surface transportation law, which will help with your long-range project planning.

Participation is also spreading the message and growing our membership. Many of us took the NUCA+1 membership program to heart, encouraging just one industry colleague to join NUCA. Last year, we achieved a healthy 6% growth, and with your help WE WILL surpass that number in 2021.

Participation can also be more direct. Our NUCA committees are stronger this year, and I am enthusiastic about our new Chapter Development committee and its potential for association growth. Just this year, we've seen two new chapters start up in Texas, and we're looking at two more in other states. And Arizona UCA rejoined NUCA this year, further expanding our strength in numbers.

Participation means a stronger NUCA: together, we will continue to achieve real victories like the core infrastructure bill. More members mean more clout.

We can't yet celebrate these additional resources being available, but we've all worked very hard together. We've hammered the point home with our elected officials through our advocacy efforts year after year that infrastructure is the foundation for a stronger economy. Now that our combined hard work has yielded results, are we done? Or should we consider the best ways to ensure our industry's longevity for future generations? I put to you that this year's victory will be seen as proof that a stronger NUCA means a stronger industry.

Our fall Washington Summit and Board meeting is scheduled to take place Nov. 2-3 in Washington, D.C. I hope to see you in Washington to finish the job and support your construction business and our essential industry.

Sincerely yours,
Lauren Atwell
NUCA Chairman of the Board / Petticoat-Schmitt Civil Contractors, Inc.

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Rep. Hinson

Visits Boomerang Facility in Iowa

Iowa's U.S. Representative Ashley Hinson paid a visit to NUCA member Boomerang Corp.'s facility in Anamosa, Iowa, on July 23. Hinson talked with staff about the lingering effects of the pandemic and its impacts on the construction industry, as well as infrastructure funding legislation pending in Washington. Hinson toured the facility, pausing for photos, and then climbed aboard an excavator for a quick lesson in safe digging!

Boomerang, located in eastern Iowa, started out in 1998 as a single-person operation, and has since grown into a company of more than 150 people. The company specializes in demolition, grading, utility work and excavation.



Rep. Hinson with NUCA of Iowa Executive Director Andy Fox (right).



Rep. Hinson talks about issues facing the construction industry at Boomerang's new headquarters.

Rep. Hinson gets a quick lesson on an excavator.

NUCA Announces Two New Hires



The National Utility Contractors Association (NUCA) recently announced two new staff members: George Hamilton and Mike Flowers Jr. Hamilton will lead the association's membership and chapter development programs, while Flowers lead the association's renowned safety, education and training programs.

Before joining NUCA, Hamilton led the membership department for the International Association of Business Communicators (IABC) and served CFRE International as their marketing and membership manager. Hamilton's extensive background in association membership and marketing will serve the membership goals of the association. NUCA expanded its membership last year by 6%, and is expecting increased growth this year as utility construction businesses expand their post-pandemic operations and projects.

Prior to that, Hamilton worked in multiple positions for the American College of Nurse-Midwives between 2001 and 2013, including the last five years as Director of Membership. Under Hamilton's leadership of the membership team, ACNM experienced nearly 10% growth in overall membership, an 8.5% increase in member retention, and completed a successful transition of its' component organization structure and processes.

Hamilton also takes over the NUCA chapter development duties from Ken Sommers, who left earlier this summer. Hamilton holds a bachelor's degree in political science from Guilford College in Greensboro, North Carolina, as well as a Marketing for Nonprofits certificate from the University of Richmond School of Professional and Continuing Studies.

"George Hamilton's experience in membership and component chapter development will help our 32 state and local chapters identify those industry businesses which will benefit from a NUCA membership," said NUCA CEO Doug Carlson. "Congress is about to pass a landmark core infrastructure bill, with billions of dollars going to water infrastructure improvements

and new broadband construction. More of our industry's business leaders will discover the best way to take advantage of this infrastructure windfall is to engage the incredible value a NUCA membership can deliver

to their employees, their business goals, and their financial success.

"As director of membership development, George will help NUCA and its chapters identify many more of these business ex-

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ecutives and connect them with the value of NUCA membership."

With more than 20 years of experience, Flower's position as director of safety, education, and training will clearly articulate NUCA's overall vision, objectives, strategies, policies, and procedures to enhance the association's safety culture.

Before coming to NUCA, Flowers provided training leadership at JLG Industries in McConnellsburg, Pennsylvania. Until 2019, he served as director of training for 12 years with the Frederick County (Maryland) Sheriff's Office. Flowers was in charge of all training for the department, managed the department's training academy, developed training and lesson plans, and maintained

accredited status for the program from OSHA, the state's fire marshal's office, and other state and national organizations. He coordinated all aspects of two law enforcement academies each year, and scheduled in-service, specialized, and recertification training for the department's staff.

Flowers can also draw upon his eight years in the U.S. Marine Corps as a platoon commander. His leadership included overseas deployment in several active combat theaters, and other homeland security duties. He served as the instructor for several training activities, and designed, organized, and supervised a wide scale of rescue training programs specific to his military missions.

Flowers takes over the NUCA safety and education department from Carl Vasquez, who left earlier this summer. Flowers holds a B.S. in criminal justice from Purdue University, and obtained numerous certifications in specialized law enforcement programs since leaving the military in 2005.

"Safety for our industry's employees is a core value at NUCA," said NUCA CEO Doug Carlson. "Mike's extensive background in training and project management will allow NUCA to take our existing safety and training programs and expand them for our membership. Mike has the experience, leadership, and conviction needed to maintain our industry's extremely high standards for safety."

John Deere, Hitachi to End Joint Venture Agreements



John Deere (NYSE: DE) on Aug. 19 announced it has agreed with Hitachi Construction Machinery to end the Deere-Hitachi joint venture manufacturing and marketing agreements. John Deere and Hitachi will enter into new license and supply agreements, which will enable John Deere to continue to source, manufacture, and distribute the current lineup of Deere-branded excavators in the Americas.

As a result of the new agreements, the following changes will go into effect on Feb. 28, 2022, contingent upon regulatory approval.

- John Deere will acquire the Deere-Hitachi joint-venture factories in Kernersville, NC; Indaiatuba, Brazil; and Langley, British Columbia, Canada.
- John Deere will continue to manufacture Deere-branded construction and forestry excavators currently produced at the three Deere-Hitachi factories. These locations will discontinue production of Hitachi-branded excavators. John Deere will continue to offer a full portfolio of excavators through a supply agreement with Hitachi.
- John Deere's marketing arrangement for Hitachi-branded construction excavators and mining equipment in the Americas will end; Hitachi will assume distribution and support for these products.

"For many years, John Deere and Hitachi enjoyed a mutually successful partnership in the Americas," said John Stone, president, John Deere Construction & Forestry Division and Power Systems. "As we turn the page to a new chapter of Deere-designed excavators, we remain committed to supporting our customers of today and tomorrow."

"Looking to the future, John Deere will build on our legacy of quality and productivity and accelerate development of industry-leading technology and machinery that answers the fundamental need for smarter, safer, and more sustainable construction so our customers can shape tomorrow's world," Stone continued.

John Deere and Hitachi began a supply relationship in the early 1960s; then in 1988 the companies started the Deere-Hitachi manufacturing joint venture to produce excavators in Kernersville, NC. In 1998, Deere-Hitachi expanded the relationship to include the production of forestry swing machines at Deere-Hitachi Specialty Products in Langley, BC. In 2001, John Deere and Hitachi combined their marketing and distribution efforts in the Americas. In 2011, excavator manufacturing was expanded with the addition of the Deere-Hitachi Brazil factory in Indaiatuba, Brazil.

The agreement is subject to the receipt of certain required regulatory approvals as well as certain other customary closing conditions.

Inaugural Bob Westphal Memorial Scholarship -Winners Announced-

Four individuals have been awarded the inaugural Bob Westphal Memorial Scholarship. Benjamin Media and Continuum Capital announced that Gillian Dahn of Austin, Texas; John Kraft of Ponchatoula, Louisiana; Timothy Sparks of Buckeye, West Virginia; and Nick Swank of Medina, Ohio, have each been awarded \$2,500 in the first year of the program.

The Bob Westphal Memorial Scholarship was established by Benjamin Media Inc., publisher of North American Oil & Gas Pipelines and Utility Contractor, and Continuum Capital, in cooperation with SkillsUSA, and was officially announced during the 2020 Pipeline Leadership Conference.

The scholarship program was created in recognition of the impact of the late Robert H. Westphal on the oil and gas pipeline industry, and is aimed at assisting students interested in pursuing a career in energy construction.

This scholarship honors Westphal, formerly with Michels, who committed a lifetime of leadership in pipeline construction. He gave back to the industry in many ways, including leadership positions with industry associations and in working with labor organizations. His contribution to the pipeline industry will be recognized by this scholarship that will encourage young people to pursue a career in pipelines.

The four scholarship winners were chosen by a selection committee, and each applicant is pursuing different careers within the energy industry.

Gillian Dahn is double majoring in Business Management and Construction Engineering at Louisiana Tech, in Ruston, Louisiana. She said she is

drawn to energy construction as a means to preserve U.S. energy independence.

"The U.S. economy's strength is tightly linked to the construction industry, specifically energy construction," Dahn said. "I want to not only be a part of that but a driving force in building the critical infrastruc-

ture that keeps America the land of the free."

Dahn said she is "very honored" to have been selected for the Bob Westphal Memorial Scholarship.

"I also hope that this brings more recognition to this scholarship and awareness to the energy industry," she added.

She is looking forward to the upcoming school year.

"I am really excited because all of my classes this coming year are very hands on and will provide learning opportunities outside of the classroom," Dahn said. "I have discovered in the construction field that it is important to cover all aspects of the field and my classes this coming year will help provide that."



John Kraft is also studying at Louisiana Tech and is pursuing an advanced degree in Engineering Materials with a concentration in Infrastructure Systems. He wants to follow in his family's footsteps in the energy industry, as his great-great grandfather worked in pipeline construction after returning from serving in World War I. Two of Kraft's great grandfathers also worked in oil and gas, one with Trunkline Gas Co. and the other for Gulf Interstate Gas Co. Both of his grandfathers continued this tradition in south Louisiana by working in Shell and Exxon mobile refineries. Kraft's father and two uncles have also made careers in south Louisiana refineries.

Kraft said he is "excited and honored" to receive this scholarship, and added, "I also feel responsible since this scholarship was set up in memory of a man that made a great impact on the industry that I should also try my best to do the same."

He looks forward to getting back to his studies.

"This year I am looking forward to returning fully to my research after all of the delays from the past year," he said. "With more things returning to normal I can hopefully finish my Doctorate in this academic year and get to work."



Timothy Sparks is pursuing an Associate's Degree as an Electrical Utility Technician Line Worker at Pierpont Community and Technical College in Fairmont, West Virginia. He said he is excited to learn about the "possibilities of where energy will go in the future," adding that he's interested in clean energy solutions and the creation of jobs.

"I want to pursue a career in the energy industry because I have always been interested in the field of electricity," he said. "Power has always been something I want to do for a living and continue to learn more about."

Sparks said he feels "honored about being awarded" the Bob Westphal Memorial Scholarship.

"In the energy industry I hope to have an impact by being known as a reliable worker," he said. "I hope to have people know I'm always there to help."



Nick Swank is pursuing a Construction Management degree at Kent State University in Kent, Ohio. He said he has always had a strong interest in heavy equipment and its growing technology. He sees "enormous opportunities" in the oil and gas industry, sees trenchless technology as a eco-friendly means expanding infrastructure and energy independence.

"I cannot express my gratitude enough for giving myself and three other students this award," Swank said. "I am looking forward to being back on campus this fall to truly enjoy in-person learning and receive the best education experience I can."

The Bob Westphal Memorial Scholarship will be presented annually over the next five years, starting in 2021. Applications can be submitted from anyone pursing an education at a technical/trade school, community college or university. The award for an individual will be for one year.

Further details are available at skillsusa.org/bob-westphal.



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"The U.S. economy's strength is tightly linked to the construction industry, specifically energy construction," Dahn said. "I want to not only be a part of that but a driving force in building the critical infrastruc-

NUCA Mourns the Loss of New Jersey's Joe Walsh



The chief executive officer of the National Utility Contractors Association (NUCA), Doug Carlson, issued the following statement on the loss of NUCA Board of Directors member, NUCA of New Jersey President, and J. Fletcher Creamer & Sons' CEO Joe Walsh:

"Our industry runs on great personalities of born leaders, and all those who met Joe knew he was destined to lead successful organizations. NUCA of New Jersey would not exist without his determination and leadership. And his drive and tenacity shown across in his executive positions at J. Fletcher Creamer & Sons significantly increased the company's reach across the mid-Atlantic region. Joe was a regular guy, too, and always welcomed at NUCA's events over the last few decades, sharing a good laugh with industry colleagues and friends. He just joined our Board earlier this year and was bringing

his leadership style to the national association. We will deeply miss Joe, and we share the industry's condolences and sorrow of this terrible loss with his family."

Walsh, 61, passed away on Aug. 2.

According to the J. Fletcher Creamer website, Walsh was named chief executive officer of J. Fletcher Creamer & Son, Inc. in July 2020 having previously served as Creamer's chief operating officer and president. He joined the company in 1995. As President, Walsh helped accelerate growth for Creamer, taking annual revenues from about \$50 million to more than \$500 million.

Walsh graduated from Northeastern University with a Bachelor of Science in Civil Engineering. He has a strong background in marine, heavy, highway construction, as well as various disciplines of utility work.



Core & Main Signs Agreement to Acquire L & M Bag & Supply Co.

Core & Main LP, a leading specialized distributor of water, wastewater, storm drainage and fire protection products, and related services, announced that it has entered into a definitive agreement to acquire substantially all of the assets of L & M Bag & Supply Co. Inc. and certain of its affiliates. The acquisition will mark Core & Main's 13th transaction since becoming an independent company in August 2017.

"L & M is an exceptional company with a strong history in geotextiles and geosynthetics, and a well-developed erosion control materials manufacturing operation. This strategic opportunity will allow us to enhance Core & Main's erosion control expertise to further serve our customers nationwide," said Steve LeClair, chief executive officer of Core & Main.

Headquartered in Willacoochee, Georgia, L & M Bag &

Supply Co. Inc., is a specialized supplier of geotextile fabrics and geogrids, as well as silt fences, turbidity barriers and safety fences, weed control fabric, and sod staples. Founded in 1992, L & M also manufactures a variety of blanket and wattle products through U.S. Erosion Control Products, Inc., an entity included in the transaction. These products assist in minimizing soil erosion and runoff at construction sites.

"Over the past three decades, we have built L & M into one of the nation's leading suppliers in erosion control products," said Quentin McMillan, chief executive officer of L & M Supply & Bag Co. Inc. "By combining forces with Core & Main, we will have a larger reach for our products, enhance Core & Main's geotextile and erosion control product lines, and provide our dedicated team with greater developmental opportunities in a larger organization."

HCSS Launches Management Consulting Team

HCSS' new Management Consulting Team helps utilities and utility contractors improve and manage their operations by providing HCSS integrated software, data management, and business solutions tailored to the unique challenges and strategies of utilities.

HCSS, a trusted leader in estimating, project management, and fleet management software, has already worked with many large utilities and contractors to provide integrated data architecture, reporting, and advanced analytics. The company helps clients gain business insights with digital solutions to collect, track, and report on business-critical data, and improve efficiency and data-integrity through process digitization, automations, and integrations.

The management consulting team will create tailored solutions that maximize ROI for even more utility industry clients using its combined 30+ years of relevant experience:

- James Wolf is a certified cost engineering professional with extensive experience deploying technology to support capital projects and construction operations.

- Michael Shore spent his professional career working directly with enterprise customers to modernize how they plan and deliver construction projects.

- Phil Baranowski, HCSS' Director of Enterprise Development, brings a diverse background in construction, consulting, capital program and portfolio management, and software implementation and governance.

HCSS integrates with broader IT environments to help facilitate long-term partnerships with its customers. To help customers eliminate duplicate data entry and leverage HCSS integrated software solutions to manage information directly from the field, HCSS works with ERPs including SAP, Oracle, and Dynamics. HCSS software is SOC 2 compliant and exceeds requirements related to information security, integration, and reporting.

For more information about HCSS Enterprise management consulting practice and the integrated software solutions, visit <https://www.hcss-enterprise.com/consulting/>.

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Caterpillar Expands

Cat Command Remote-Control Operation to Excavator Line

New Cat Command for Excavating provides remote-control operation for select Cat excavators. Removing the operator from the machine in potentially hazardous operating environments, Command for Excavating enhances safe machine operation, while reducing operator fatigue to increase productivity. Six Cat excavators spanning the 20 to 40 metric ton class sizes – Cat 320, 323, 326, 330, 336 and 340 models – can now be equipped with either line-of-sight or non-line-of-sight remote operating configurations.

Cat excavators are made Command-ready through a dealer-installed field kit for new or existing fleet machines. Providing excellent visibility, the kit features multiple cameras for non-line-of-site operation from the Command station that offer a view of the area surrounding the machine plus the ability to stream on-site video feeds. Alongside the cameras, indicator lights, microphone, wireless receiver, and antenna are all mounted on top of the cab to minimize the risk of damage.

Deeply integrated with the excavator's electronics, Command

controls allow users to experience the same machine response as if they were operating from inside the cab, allowing a high level of productivity to be maintained from a safe distance. Machine technology features such as Grade Assist, Swing Assist and E-Fence can also be set, activated and deactivated remotely without the need to be set manually from inside the cab. Excavators are efficiently switched between remote and manual operation via a ground-level switch.

With users comfortably controlling dig, lift and tracking functions from a safe location, Command for Excavating enables production to restart immediately following disruptive processes, such as blasting in quarry applications. It also enhances safety and improves machine productivity on a range of projects like operating in unstable underfoot conditions, brownfields, shore work, demolition and site decommissioning, and stevedoring.

More information about Cat Command for Excavating can be found by contacting the local Cat dealer or visiting: <https://www.cat.com/commandforexcavating>.



DCA Holds 60th Annual Convention in Orlando

DCA president Ben Nelson addresses convention attendees.



The Distribution Contractors Association (DCA) held its 60th Annual Convention July 27-31 in Grande Lakes (Orlando), Florida. The COVID-19 pandemic delayed the event from February to this summer. Turnout was amazing with more than 380 attendees that included more than 60 first timers. DCA's membership continues to be quite strong with 92 contractor members and 129 associate members.

The meeting continued the tradition of the annual education auction with Ritchie Bros. again participating as the auctioneers. The auction raised more than \$560,000, which was amazing considering all that is going on regarding COVID-19.

All the standing committees met with noteworthy highlights. A Strategic Vision Committee was established to set a strategy for the next 3 to 5 years for DCA. Considering the current situation in the gas industry, the Government Relations Committee continues to participate in an ad hoc coalition working at a state-level to support "fuel choice" legislation and oppose restrictive measures that would

limit access to natural gas through mandated electrification.

One of the numerous programs at the convention included Build-a-Bike. The attendees built approximately 70 bikes that were donated to local organizations: After-School All Stars and Latino Leadership. About 20 to 24 kids came to the convention to pick up a bike and take it home. The remaining bikes were shipped to the organizations. It is very difficult to buy a bike in this economy, so this was very generous of DCA.

Ben Nelson, Michels Pacific Energy, continued as the 2021 DCA president. Likewise, the Board of Directors all kept their positions. It was decided to keep everybody in place considering what has transpired with the COVID-19 situation.

Going forward, the DCA plans to return to its regular event schedule, barring any new surprises from COVID-19. The Fall Meeting will be held Oct. 27-29, at the Four Seasons in Denver, Colorado. The next DCA Annual Convention is scheduled for Feb. 28 to March 5, 2022. For updates regarding the events, visit dcaweb.org.

An advertisement for AMERICAN Flow Control. The top half features a white car in the foreground and a red car in the background, both blurred to suggest motion. The text "HIGH TORQUES BELONG UNDER THE HOOD" is displayed in a yellow box. The word "ALPHA™" is written in large, bold, yellow letters across the center. Below this, the text "THE LOW-TORQUE, SINGLE-BOLT SOLUTION TO SAVE YOU TIME AND MONEY" is displayed in white. The bottom left shows a yellow fire hydrant and a red valve assembly. The bottom right contains a paragraph of text and the AMERICAN Flow Control logo. The bottom navigation bar includes links for DUCTILE IRON PIPE, FLOW CONTROL, INTERNATIONAL, SPIRALWELD PIPE, and STEEL PIPE.

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Recruiting the Workforce of Tomorrow



Jesse Walz

Workforce development has long been recognized as a need by NUCA and its members and chapters. For starters, the construction industry has suffered a bit of an identity crisis. Construction jobs are not typically viewed desirable – particularly underground construction jobs – despite the fact that these jobs are in demand and high-paying.

With the need for workers already high, the global pandemic further complicates the situation. And, with Congress promoting infrastructure construction, an increase in potential work would create an additional need for new workers to enter to the industry. Pending legislation could provide \$1 trillion-plus for infrastructure projects in the coming years.

Workforce Development Chapter Grant

The NUCA Workforce Development Committee Chapter Grant award is given annually to one NUCA Chapter that has actively promoted workforce development, training, and education within the utility construction industry. The \$5,000 award can fund the chapter scholarship program and workforce development activities. As part of the criteria, the awards committee will be looking at which chapter actively engaged in promoting industry career opportunities. All chapter submissions will be on display during the NUCA 2022 Annual Convention, and the winning chapter will be recognized during the gala event Saturday, March 5, 2022 in San Antonio, Texas.

For information, visit: nuca.com/workforcedevchaptergrant

According to a March 2021 report by the Associated Builders and Contractors, construction companies will need to add anywhere from 430,000 to 1 million new workers in 2021, depending on the growth model. The report also stated that every \$1 billion in extra construction spending generates an average of 5,700 construction jobs.

To get a handle on what NUCA is doing to address the situation, we spoke with Jesse Walz, project manager for Omaha-based L.G. Roloff Construction Co. Inc. Walz has been active in the NUCA of Nebraska chapter and recently took over as the chairman for the NUCA National Workforce Development Committee.

How long has workforce development been an issue in the utility construction industry?

It has always been an issue. I started in the industry more than 15 years ago and we have always struggled to get people, but it has gotten worse as time has gone on. It is

hard, physical work that is not attractive to most people. It is difficult to convince someone that spending all day working in a ditch getting covered with dirt is a good gig.

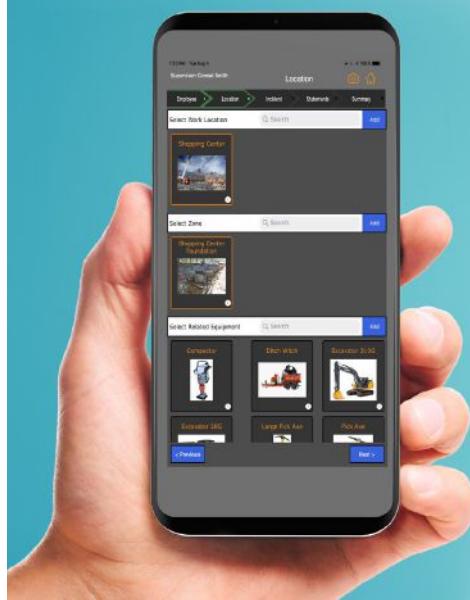
How is the shortage of workers currently affecting the industry?

At L.G. Roloff, we are short a few people but we are probably at an advantage because we have a large pool of labor to draw from in the Omaha area compared to contractors in more rural areas. If we could find more people now, we could be adding crews and growing instead of maintaining the status quo and trying to do the best we can with what we have. Another consequence is that perhaps we are working our core people harder, and you run the risk of burning them out.

In other parts of the state, things are different. There was a case in western Nebraska where a contractor had to shut down a crew because he couldn't find help. So, even though we are looking at

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a potential increase in funding coupled with a huge demand, he is actually having to downsize. We also recently had a subcontractor withdraw because he lost three-fourths of his workforce in three weeks. He had a job posting for two months and got one application.

So even if an increase in funding is available, the question is: how are we going to build the work? We just don't have the people right now.

Before joining the national workforce development committee, you were involved on the state level, What types of initiatives did the Nebraska chapter take?

Our main object was to re-brand the construction industry to address the stigma that contractors were ditchdiggers or dirty construction workers. We wanted to change the perception of teachers, counselors, parents and the students – basically everyone.

One big step we took was getting involved with the Nebraska Construction Industry Council, which developed a webpage with information for the different types of people we were trying to target. We knew students were a focal point, and we provided things like wage information, videos of actual jobsites, discussions on the advantages of going straight into the workforce and having on-the-job training vs. having tuition and possible loans that you have to pay back. The council opened avenues to get in front of educators in the classroom by expanding our reach of contacts. If you don't know the right person to contact, sometimes cutting through the bureaucracy can be very challenging.

What is the NUCA National workforce committee working on?

In our strategic plan we have broken down our activities into four main areas.

The first area is to develop a relationship with Skills USA at the national level. We felt that the type of young people who would be members of Skills USA would be the same type of people that our industry would be looking for, so trying to focus in on them would be a good place

to start. With COVID over the past year-plus, a lot of the events have been cancelled or virtual, so it has been difficult to make progress on that front.

Next, we want to find a way where we can easily share workforce development ideas and strategies across the chapters and with the national office. Currently, each chapter kind of does its own thing, and maybe the information gets passed along, maybe not. So, we thought rather than trying to reinvent the wheel everywhere, we could compile information in one central location that we can all pull from. We have developed a task force that is identifying what information needs to be shared, then we'll begin to gather the content itself.

The third item is to provide a scholarship that would reflect and support industry workforce needs. We were able to roll out the Workforce Development Chapter Grant Award earlier this year. It will be given annually to one NUCA chapter that has actively promoted workforce development training and education within our

industry. The grant can be used to fund more outreach programs or award a student scholarship. Applications are being accepted until Oct. 31. The award will be presented at the 2022 NUCA Convention & Exhibit in San Antonio.

The last item on our strategic plan is create messaging promoting the variety of career paths in the underground utility construction industry. That has been the last area to be addressed, and we hope to make headway soon.

What results are you seeing from workforce development initiatives?

Success of workforce development is a little difficult to track. Also, some of the initiatives are a little too new to have results yet, but we are hopeful that we will start to see some of the fruit of labor soon.

There are also two issues to deal with. Most of our initiatives we address in the committee deal with the long-term need, the future workforce or next generation of workers. But there is also an immediate need. We need people tomorrow.

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Doosan Infracore North America's new -7 Series wheel loaders are available with standard and optional technology features that can boost machine performance.



Technology Advancements *IMPROVE* Wheel Loader Performance, Productivity

How Contractors Can Benefit From Technology Enhancements

By Rachel Ori, Strategic Communications, on behalf of Doosan Infracore North America LLC

Today's wheel loaders feature new technology that can enhance machine performance, uptime protection and operator productivity.

As wheel loader manufacturers move beyond Tier 4 advancements, these companies are investing in new models, machine features and technology. In recent years, manufacturers added new technologies, and these new features are a key selling point with customers.

For decades, wheel loaders have been a staple on construction jobsites for lifting and carrying dirt and debris, and loading trucks. That remains true for today's jobsites; however, the machines have greater performance, visibility and precise joysticks — adding up to more productivity and operator satisfaction.

Wheel loader technology is constantly evolving, from improvements in the pro-

duction of parts and attachments to automation to higher quality cameras, sensors and touch screens in the cab. There are also new attachment options available for enhanced productivity. Because of these technological changes, today's wheel loaders offer more safety features and increased operator comfort.

Manufacturers have invested in technology updates in wheel loaders in the last couple of years. Read about a few of the most popular developments.

Engine, Fuel and Hydraulic Systems

To help reduce fuel consumption, sensors in the wheel loader's diesel engine can now tell the fuel system how much diesel it requires based on engine load. The hydraulic system can communicate with the engine and optimize hydraulic oil flow to meet the demands of what an operator is

lifting. Reduced fuel consumption directly impacts your company's bottom line.

Fleet managers and contractors can more easily monitor their machines' performance and fuel consumption with the help of telematics management systems. Whether they access it from a desktop computer or a smartphone, a plethora of data is available at their fingertips. Should any of the machine's key systems experience an issue, owners and their equipment dealers can be alerted simultaneously. This shortens the time required to respond to issues and resolve them. For example, should a wheel loader experience a fault code, the machine alerts not only the operator but the owner and the dealer. The dealer can use a telematics system to see the fault code, the machine location and what parts the service technician may need to fix the issue. Telematics is also a

useful tool for preventive maintenance, such as seeing when fluids and filters need to be changed.

An Eye Toward Automation

Wireless technology is continuously improving, paving the way for more advanced machine telematics, remote control and automation. Machine components can relay information to each other, as mentioned above with the hydraulic system and the engine, with a centralized control system. With these improvements, the construction industry is trending toward full equipment automation. Companies such as Doosan Infracore are already working toward increased machine automation through its Concept-X platform. Demonstrating it for the first time in November 2019, the company used technology to show autonomous construction equipment, including wheel loaders, working on a sample jobsite. Someday, common wheel loader tasks such as traditional V-shape loading patterns may be performed autonomously.

Safety Features

From larger windows to enhanced rear cameras, operator safety is at the forefront of wheel loader innovation. Operators can access the camera view from the conveniently located LCD monitor in the cab. Operators can leave the view on the monitor for situations that require working around other machines, people or obstacles.

Some manufacturers now offer sensors that alert the wheel loader operator when their machine may get too close to objects. An audible alert tells the wheel loader operator that they need to stop and assess their situation. This can reduce damage to the wheel loader as well as structures or other machines working in the area.

New Models Take the Spotlight

Doosan Infracore North America launched its new -7 Series wheel loaders earlier this year. The next-generation wheel loaders are available with standard and optional technology features that can boost machine performance. For example, the machine automatically adjusts the wheel loader's engine output in real time to help save fuel.

Another new technology is the exclusive Doosan Transparent Bucket option, which can be retrofitted into existing wheel loader, and uses two cameras to provide visibility to previous blind spots. Using two cameras, one mounted on the frame and another on the cab, the system also features object detection. Operators can use the new option to enhance their visibility to the area in front of the wheel loader bucket, minimizing the risk of making contact with another object.

The new optional Doosan Smart Load weighing system is ideal for job applications that require accurate information about the weight of the material in the wheel loader bucket. All menus and settings are integrated in the Doosan Smart Touch screen.

Another emerging technology in wheel loaders is real-time operator feedback. A new feature called the Smart Guidance System tracks operators' driving habits and provides personalized tips on the touch screen display for how they might improve their operating techniques.

Why These Technology Changes Are Occurring

Manufacturers make technology updates with the needs of customers and dealers in mind. It's important for dealers to encourage their customers to offer feedback on their machines. If a want or a concern with a machine is never brought up, then how can it be addressed or modified?

Customers and dealers working in the construction industry are looking for ways to increase their productivity and machine uptime protection. As technology advances, it is incorporated into construction equipment like wheel loaders. It's good for the customer, the dealer and the manufacturer — everybody wins.

The technological improvements being made are necessary not only for brands to set themselves apart from the competition, but for their own long-term success. A forward-thinking approach is key for permanence in the construction industry.

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Providing Safe Water for All:



How One Nonprofit is Leveraging Trenching Technology to Bring Clean and Affordable Water to Africa

Water4 is making strides in combatting the water crisis with Ditch Witch Equipment

With the help of a Ditch Witch RT45 trencher, Water4 is building sustainable water infrastructure in Africa.

According to the World Health Organization, over 2.1 billion people worldwide do not have access to safe water at home – and 40% of those people live in Sub-Saharan Africa. This lack of a basic utility has led to millions of dollars of philanthropy from private and public Western organizations. While traditional water charity focuses on providing a source of fresh water, one Oklahoma-based nonprofit is working to eradicate the water crisis by creating sustainable infrastructure.

Water4 has provided clean water to 1.6 million people since 2008 and is working to solve the water crisis by establishing and facilitating water infrastructure across Africa. This infrastructure is modeled after utility systems in the United States. There is a water well, underground pipelines that distribute water to homes, schools and clinics and – just like in more established parts of the world – there is a charge for the water used.

"Traditional water charity has been focused on westerners digging a well for a village, taking photos and leaving. But we found that the well eventually breaks,

and the village goes back to being without fresh water again because the villagers don't consider the well their own," said Dick Greenly, founder and CEO of Water4. "The only way that the water crisis will be resolved is by having villages invested in their own system – and that means we need to create infrastructure and have people pay their own way to keep the infrastructure running."

Impactful Beginnings

Water4 was born out of a philanthropic endeavor of another company owned by Greenly and his wife, Teri. PumpsOK is an Oklahoma-based wholesale supplier of water pumps. In 2005, PumpsOK installed the first solar pump in mainland China and brought running water to rural villages that hadn't had access to that technology in their 10,000-year history.

After the pump installation success, the Greenly's received an outpouring of support and financial donations. Eager to combine their philanthropic endeavors with their business backgrounds, they channeled the funds into creating Water4. They found a simple, by-hand well-digging

system that was much cheaper than standard machine-dug wells and combined it with their own affordable hand-pump, which happened to come from a Leonardo da Vinci design. From there, they trained workers in Africa on how to install and maintain the wells.

Water4 then branded their water system NUMA – which means "spirit" in Greek – and began to operate their established utilities as a clean water business. They determine the most easily affordable price for water in each area they go to and then set the water price at that level.

"We did comprehensive surveys and found that, overwhelmingly, these villages not only want to pay for their water, they insist on it. It's a point of pride for them to have a water system they can take care of," Greenly said. "Many of these places are too impoverished to invest in creating infrastructure, so that's where we come in. We can help villagers build it, teach them how to run it and keep the water flowing."

Going the Distance

Today, Water4 is operating over 1,000 utilities across 13 different countries in Af-

rica and is getting water to over 350,000 people per day. Their growth has been exponential – their initial budget in 2008 was \$80,000 compared to their 2021 budget of \$10 million. And they are the largest provider of water to health clinics in the country of Ghana.

However, their goal is much more ambitious – Water4 wants to install infrastructure and clean water country by country until the water crisis is defeated across Africa. In addition to funding and obtaining buy-in from local villages, accomplishing this goal will require a sizeable trenching task. Water4 is set to trench and install water pipeline across a quarter million miles of the African landscape.

In Sierra Leone alone, Water4 will need to trench up to 200 miles to install the required number of water lines.

Since the beginning, the primary method of trenching and installing pipeline for Water4 has been through manual digging. Water4 partners with over 500 African businesses and contractors across the

continent to install, maintain and operate their water utility systems. This year Water4 is set to use the first powered trencher in the company's history – the Ditch Witch RT45 ride-on trencher, which was donated to Water4 by Travis Wilkey, CEO of Ditch Witch of North Carolina. The RT45 arrived in Sierra Leone in spring of 2021.

"It was an amazingly generous act from Ditch Witch and Travis, and one that will completely change our process and accelerate our ability to provide clean water," Greenly said. "In the past, we'd hire a dozen people to spend three weeks digging a half-mile ditch. Ground conditions are full of hard clay, so those digs can be grueling. With the RT45 on the ground, we'll be able to finish that same job in one morning."

The RT45 will serve as a force-multiplier as well. "With faster production time, we'll be able to expand our reach," Greenly said.

A System for Success

The RT45 will allow Water4 to provide water to entire districts of African coun-

tries, a goal that was unattainable when hand digging was the primary method of installation, but a goal that will set up Africa to have infrastructure similar to Western counties.

"Setting up infrastructure and having people pay for their own water is the only way the water crisis will be solved. When your water is broken in the United States, you don't call up four friends to fix it, you call the city and they take care of it. That is how we can achieve true water sustainability in Africa," Greenly said.

Now that the RT45 is on-site, Water4's goal is to provide universal access to water across 15 countries in Africa by 2030. That will bring access to clean, affordable water to over 7 million people.

"We're here to end the water crisis. We know we can't do it ourselves – we'll need to depend on the help of others like Ditch Witch – but we can be a guide for how to get it done now and in the future."

This article was contributed by Ditch Witch.

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Vac Safety on the HDD Jobsite

Here Are Some Common Mistakes and How to Avoid Them

By Ashley Stuart

Traditional methods of excavation to locate underground utilities can be dangerous to the environment, as well as equipment operators. Utilizing dedicated hydro excavation equipment has proven to be the best method for locating, as operators are able to physically see all underground infrastructure that may be in the path of their project.

With the growth of hydro excavation and despite training and guidelines being

set in place, accidents still occur. Experienced operators are constantly mindful of jobsite hazards and have shared a list of common mistakes and how they can be avoided, reducing the number of jobsite accidents.

Parking Too Close to the Dig Site:

When vacuum excavating or horizontal directional drilling (HDD), be sure to park heavy machinery a safe distance. Often times, the ground fails due to overall

weight and vibration of truck, which can cause the truck, the operator, or both to fall into the hole. For reasons like this, the size and weight of the excavation unit are often important factors to consider before even setting out to begin work. Making sure you have the right equipment for the job and environment is key to efficient worksite safety, which is why most manufacturers, such as RAMVAC, offer various machines of different sizes and capabilities because they understand that there is no



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such thing as a true “one-size-fits-all” solution in utility locating.

Lack of a Spotter:

Not using a spotter can lead to striking overhead obstacles with the vacuum boom. Hitting powerlines can send voltage to the chassis, damaging computers or worse, electrocuting operators. Know your overhead clearance so as not to hit a bridge or powerlines when working the vacuum excavator boom. Utilizing a wireless remote for boom operation allows operators to keep their eyes on the boom while moving, ensuring complete visibility whenever the boom is in motion.



Using Broken or Worn Tools:

Operators who are pressed for time may feel compelled to use inadequate tools to save time or cut corners. This should always be discouraged, as using tools and equipment for unintended purposes, or continuing to use tools that are worn down and broken increases risk of equipment failure, jeopardizing the safety of the operators and others. Regular inspection and replacement of tools and equipment goes a long way to ensuring operators well-being and productivity. Reputable, licensed online parts dealers like www.sewershop.com offer repair parts and replacement accessories to keep operators in action with safe and affordable solutions.

Experienced Operator Complacency:

Skilled or veteran operators may find themselves becoming more relaxed as they grow familiar with the machine or jobs. Complacency causes accidents, and lax expectations can cause operators to miss vital steps or ignore potential hazards. Operators who are careful and mindful of their surroundings are less apt to damage utilities, equipment, or harm others on accident.

Ignoring the Limitations and Capabilities of Your Equipment:

Understanding the maximum capacities and functions of your machine is key to success and preventing accidents. For example, a common issue is operators overloading the debris tanks, causing the entire truck to be overweight on the

road. Manufacturers, such as RAMVAC, understand that operators may often have their attention divided at jobsites, offering equipment features like an audible debris tank level which sound an audible alarm when the debris tank has reached a set capacity, which allows operators to ensure they are maintaining a legal load weight without having to distract them from the task at hand. On the other side of the spectrum, while some operators overestimate their machines, underestimating the power behind them can be even more dangerous; you must make sure the suction does not get a hold of you. Avoid going into holes that are too deep without proper shoring or a trench box. Being mindful of the capacity, dimensions, and capabilities of your machine is vital to operate under safe conditions.

Not Having Proper PPE:

Each job has different requirements and hazards. While it might be common sense to wear high-vis clothing, gloves, glasses and hard hats, it is a life risking chance to not have a gas detector on jobs where it is required. Always ensure you know what equipment and tools are necessary, and have the correct PPE required for the job you are doing.

Leaving the Jobsite in a Hurry:

Operators should be certain to clean up the jobsite and prepare their vehicle for transportation. For example, ensuring the boom is in the cradle prior to driving

down the road to avoid hitting overhead items is one of the many things each operator should do to protect themselves and their equipment. Rushing to leave jobsites can also lead to things like losing tools, remotes, and other accessories that can be hazardous to others, as well as expensive to replace.

Lack of Winterization Procedures:

As the weather turns colder and temperatures drop below freezing, it is vital to winterize your vacuum excavator every day during cold weather applications. If this is not done every day prior to leaving the truck for the night, water components can freeze (even in an enclosed building), causing major damage and high replacement costs. Certain manufacturers, such as RAMVAC, offer built-in antifreeze recirculation systems to offer additional protection to vulnerable water systems for both overnight or long-term storage and traveling between job sites.

At the end of the day, mistakes and accidents happen because operators often feel stressed for time and increased efficiency but having the right machine and an understanding of basic safety can make all the difference.

Ashley Stuart is marketing manager at Sewer Equipment/RAMVAC, a NNUCA Sustaining National Partner. This article originally appeared in the June 2021 issue of Trenchless Technology magazine.

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2021 Fall Washington Summit:

CONGRESS SEEKS YOUR EXPERT KNOWLEDGE

It's been the most productive year in Congress for infrastructure issue in decades. However, the job isn't yet closed out, so we need the industry's experts to make one final push this November.

And this time, we're going to Washington and our first industry visit to Capitol Hill since 2019. NUCA's leadership is urging our members to join us on November 2-3 in Washington, D.C. for NUCA's Fall Washington Summit.

In early August, our industry witnessed the Senate approving a \$1.2 trillion core infrastructure bill (H.R. 3684) that if signed into law by the president will allocate an astounding \$55 billion to replace and rebuild water distribution systems and remove harmful lead service lines. The same bill also included another \$65 billion to install modern broadband infrastructure such as high-speed fiber optic cables. It also included \$110 billion for highway and bridge projects, and billions more for airports, railroads, and ports.

These are real projects made of concrete and steel, and NUCA and our industry has been seeking this level of resources for over a decade. We're happy to report that we're closer to the finish line than ever before—but we're not over it yet.

Let's not miss this once-in-many-decades opportunity for growth and improvements.

Nothing in Washington is a done deal until it crosses the president's oak Resolute desk and is signed into law. And with a bill this size, nothing is assured. We've already seen the U.S. House play politics with this core infrastructure bill all summer long, so we're going to keep making the case to our lawmakers that this is a bill that deserves the bipartisan, broad support, like it received in the Senate's 69-30 vote on August 10.

Our job this fall will be to also lobby our lawmakers to promote federal and state workforce development programs. We will soon have the resources for hundreds of new projects, but will our industry have the manpower to staff these projects next year and in the years ahead? The U.S. construction industry is already affected by labor shortages, and every contractor has been wondering where their next employees are going to be coming from. We're also going to remind lawmakers to not make the situation worse



by mandating project labor agreements (PLAs) for public works projects. That mandate would significantly reduce the number of companies and their employees available to work on jobsites.

Members of Congress want to hear from the experts in their communities on building or repairing water and wastewater lines, or what it will take to place faster broadband lines into your community. NUCA members are the community infrastructure experts, so we want as many NUCA members as possible in Washington on November 3 to lend us your knowledge and voices.

And a fall NUCA Washington Summit might just be the perfect time for you to make your case to lawmakers that local and national infrastructure projects in their districts and states are the way forward for your community's economy and business growth.

Summit registration is now open, along with hotel information. You can find all registration information and the schedule for the November Washington Summit on our dedicated Summit webpages, www.nuca.com/Summit and WeDigAmerica.com.



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2021 Trench Safe

With the pandemic have far-reaching effects well into this year, NUCA'S June 2021 Trench Safety Stand Down Week, sponsored by NUCA and the Safety Ambassadors Club, was still quite remarkable. More than 22,000 workers on 2,200 jobsites from 340 organizations participated this year.

Thank you to everyone who took the time to conduct safe stand-downs by holding pro-bono safety training across the country, including holding Toolbox Talks, training sessions, and more. Your participation speaks volumes about your commitment to employee safety, especially this year. And most importantly, together you have undoubtedly saved lives!

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Airfield Etc., Inc.	Boyle & Fogarty Construction Co., Inc.	Cornerstone Excavating	EAGLE EXCAVATION	Gene S. McMurrin
AJ Johns, Inc.	Brasfield & Gorrie, LLC.	Crescent Constructors, Inc.	Eagle Excavation, Inc.	GENERAL EXCAVATING
Albanese Brothers, Inc.	BT Construction, Inc.	Crisdel Group, Inc.	Easton Utilities	Golden Triangle Construction
Albanese D&S, Inc.	Buchanan Construction	Cruz-In the Keys Construction, LLC	EBF Enterprises LLC	Goodfellow
Alex E. Paris Contracting Co., Inc.	Buffalo Gap I&E Commercial Div 41	CW & Sons Infrastructure, Inc	Efficient Energy Group	Grade Line LLC
Allegiance Contracting Group	Buffalo Gap I&E Industrial Div 40	D&M Civil, Inc.	Elder Corporation	Graham Construction
Allied Construction Group, Inc.	Burgess Civil LLC	D'Allessandro Corp.	Elder Technical Rescue Services LLC	Gray and Son Inc
AllTerrain Paving & Construction LLC	Byrd Underground, LLC.	Dallas 1 Construction & Development	Emery & Sons Construction	Gregori Construction, Inc.
Ansco & Associates, LLC	C.C. Construction	Danielson Incorporated	Emery Sapp and Sons	GRod Construction LLC.
Aqualine Utility, Inc.	C.T.Purcell, Inc. Excavating & Grading	Dave Schmitt Construction	Equix	Grooms & Pollard
ARANDA INDUSTRIES, LLC.	CalPac Guam	Davids Hydro Vac Inc	Erickson Hall Construction	GS Construction Inc
Aristeo Construction	CCB INC	DDM Construction	ESCO	H+M Industrial EPC
Atlantic Testing Laboratories	CDOT	DeFelcie Corp	Evans & Associates Utility Services, LLC	Halbrook Excavating
Atlas Excavating, Inc.	CENTERLINE, INC.	DeJean Companies	Excel Construction	Hardison-Downey Construction, Inc
B. Frank Joy LLC	Cheyenne Construction	DFW Services	Fann Contracting Inc	Havens Construction Company, Inc
B.R.S., Inc.	City of Amarillo	Directional Services Inc	FED Corp.	Hawkins Construction Company
BA Construction	City of Keller	Dirt Work Grading & Construction Inc	Feehey Brothers Utility Services	HEI Civil
Badger Daylighting Corp.	City of Omaha Sewer Bridges	Diversified Underground, Inc.	Fehlinger Construction Group, LLC.	Heimes
Baker Group	City of Rockville	Doetsch Environmental Services	Ferguson Trenching Company	Henkels & McCoy, Inc.
Baltazar Contractors, Inc.	City of Weatherford		Fields Excavating inc.	Heritage Fence Company



Safety Stand Down

Hilti's Electrical Contracting
Horizontal Boring & Tunneling Co.
Howard County Public Works Department
HRGM Corporation
Humphrey & Samarang, LLC
Hurst Excavating
I&E Construction
IHC Scott
InfraSource Services LLC
Integrity General Engineering Contractors, Inc.
Iowa Pipe And Grading, LLC
Iowa Trenchless
ITS Maintenance, LLC
Ivy H. Smith
J&K Contracting
J&S Construction
J. Derenzo Co.
J. Fletcher Creamer & Son, Inc.
J.W. Harris Contractors, Inc.
Jacobs Construction
James W Fowler
JB Holland Construction
JMT
Johansen Construction Company
John Burns Const Co of Tx
JR Hayes Corporation
JUDDS BROS CONSTRUCTION CO
Kelly White & Associates Insurance
Keys Contracting Services, Inc.
Kiewit Infrastructure Co - C70 Drainage Group
Kinetic Industry
Klaasmeyer Construction Company, Inc.
Kolb Grading
Kukurin Contracting, Inc.
KUNK
L.G. Roloff Construction

Lauzon Contracting
LDB Pipelines
Leeward Construction, Inc.
Legacy 6 Inc
Lehigh Construction
Lenny Hoffman Excavating
Liberty Excavators, Inc.
Lund Construction Co.
M Betters Construction
M&L Construction Inc
M.E. Collins Contracting LLC
Magnum Contracting LLC
Markham Contracting
Martin Cement
Martin Contracting
McCain Bros. Excavating, LLC
McCarty and Company Construction LLC
McClam & Associates Inc.
McLendon Enterprises, Inc.
Metro Equipment Corporation
Michael F. Ronca and Sons Inc.
Midstate Site Development
Minger Construction
Missouri American Water
MJ Scully & Co., Inc.
Moffat Pipe, Inc.
National Trench Safety
NC 811
NCDOL
North Country Heavy Equipment School
Northwest General Contractors Inc.
National Trench Safety
NUCARI
OE Construction Corporation
Ontrack Construction LLC
Oscar Renda Contracting
P. Gioioso & Sons, Inc.
Pacific Utility Installation, Inc.

PCI CONSTRUCTION
PCI UTILITIES
Penro Construction Co.
People Service Inc
Perry Engineering Co., Inc.
Petticoat Schmitt Civil Contractors, Inc.
Phoenix industrial
Pioneer Construction Company, Inc.
Pivetta Brothers Construction
Polk Mechanical
Portland Utilities Construction Co., LLC
Princeton Plasma Physics Laboratory
Progressive Structures
Puget Paving & Construction
R.H. White Construction
Rasch Construction
Rathje Construction
Rawso Constructors
Razorback Boring, Inc.
Redford Construction, Inc.
Reilly Construction
Reynar Construction
Reynolds Construction LLC
RGB Mechanical Contractors, Inc.
Ricciardi Bros Inc
RJV Construction Corporation
Robert B. Our Co.
RockTec, Inc.
Rogers Corporation
Rohaley & Sons Plumbing Contractors, Inc.
RP Constructors
RP Iannuccillo and Sons Const Co
RP Weddell & Sons
RSG Landscaping and Lawn Care, Inc.
Rutjens Construction Inc
RVJ Construction
Safety Juan LLC
SAI Construction

Samet Corp.
Sawcross Inc.
SBR Underground, LLC
SC Rossi & Company, Inc.
SCE, LLC
Schlouch Inc.
Sean Negus Construction
Security Shoring & Steel Plates, Inc.
SFI Compliance
Sitecrafters of Florida
S.J. Louis Construction, Inc.
Slack & Co. Contracting, Inc.
Slayden
Sound Transit Construction Safety
South West Light Rail Transit
SOUTHWEST GAS
SpawGlass
Spencer Construction
Stocks General Contractors, LLC
Suburban Sanitation Service, Inc.
Sullivan Eastern, Inc.
Sunbelt Rentals Shoring Solutions
Sunbelt Rentals, Inc.
Sunland Construction, Inc.
Sunland Kori Group
Sunstate Equipment Trench Safety
Superior Car Wash & Detail
T B Landmark Construction
T.A. LOVING COMPANY
TAB Construction
Tascon Corporation
TB Landmark Construction
TC Construction Company, Inc.
Team Fishel
The Driller LLC
The Ruhlin Company
The Whiting-Turner Contracting Company
Thompson Construction

Timec
TIS
Titan Trenching
Trench Plate Rental
Trench-Ade
TRICO Companies, LLC
TSI Mechanical
Tulsa Civil Contractors, LLC
Umbro & Sons Construction Corp.
Underdawg Safety Consultation Services, LLC
United Rentals Trench Safety
UofSC
Vallencourt Construction
Vallencourt Inc.
Valley Corp
VanKirk Brothers Contracting
Vieth Construction Corp.
Village of Wilmette
Vincentini
Vinton Construction Company
Viridian Enterprises, Inc.
Vrana Construction
Vrba Construction Inc
WW GAY MECHANICAL CONTRACTOR INC
W.L. French Excavating Corp
Wade Works LLC Oilfield Services
Waco Construction
Walters-Morgan Construction, Inc.
Watson Civil Construction, Inc.
Wellesley Department of Public Works
WES Construction Corp.
Westwind Contracting, Inc.
Williams Contracting
Woodruff & Sons Inc.
Xcel
Y-COM

2021 Trench Safe



1 Barbco

4 CW Sons - South Capitol

7 Havens Construction

2 Brasfield & Gorrie LLC

5 Emery Sapp and Sons

3 CW Sons - Rockville

6 GRod Construction

Utility Stand Down



Thank you to everyone who took the time to conduct safe stand-downs!

8 Hurst Excavating
11 Site Rite
14 TB Landmark

9 Kukurin Contracting
12 Sunbelt Rentals
15 UCANE Contractors

10 Mark One Electric
13 TA Loving
16 CW Sons - Forestville Yard

Water System Expansion to Springfield, TN-Contract 3 24-in. Water Pipeline



1.



2.



3.



4.

1. Cleary Construction installed approximately 20 miles of 24-in. ductile iron water pipeline from Guthrie, Kentucky, to Springfield, Tennessee.
2. Residents were handled with care and efficiency, ensuring that their property was restored to original condition and inconvenienced the least amount possible.
3. The mass quantity of ductile iron pipe was supplied by Core & Main and manufactured by McWane Ductile.
4. Cleary hit production goals of up to approximately 3,600 lf feet of the 24-in. ductile iron pipe installed per day.

Editor's Note: In each issue, *Utility Contractor* will profile NUCA's Top Job winners. These projects present the association's best and most innovative work that keep our country's utility networks operating at peak performance. To nominate your project for Top Jobs, visit: nuca.com/topjobs

The Water System Expansion Project for the Logan-Todd Regional Water Commission, backed by the U.S. Department of Agriculture through a \$26.5 million grant as part of its Water and Waste Disposal Loan Program, has been described as the first interstate agreement of its kind between two neighboring states, Kentucky and Tennessee. The cooperative project allowed a water commission located in Guthrie, Kentucky, to supply drinking water to the City of Springfield, Tennessee. It included construction of a 2 million gallon water storage tank and pumping station, an addition to the existing pumping station at the Guthrie plant, as well as the large diameter pipeline it would take to connect it all.

NUCA member Cleary Construction Inc. of Tompkinsville, Kentucky, constructed the Contract 3 – 24-in. Water Pipeline, boasting an almost \$10 million price tag. The pipeline stretched nearly 20 miles and consisted of installation of nearly 100,000 lf of 24-in. DIP waterline from the Logan-Todd Regional Water Commission's treatment plant located in Guthrie, Kentucky, to the Mt. Deason Water Tank located in Springfield, Tennessee. The project also included other appurtenances such as associated valves, fittings, tie-ins, disinfection, testing, bore-and-jack casings, concrete and asphalt paving, site cleanup and restoration, and erosion and sedimentation control generally along US Highway 41 in Todd County, Kentucky, Montgomery County, Tennessee, and Robertson County, Tennessee.

There were several key coordination points of this project that were critical to its success. Due to two other coordinating contracts for a tank and treatment plant that were running concurrently to the line portion, Cleary had to synchronize with the other contracts for the final chlorination

of the water line. Due to the length of the project, there were two water municipalities that the project tied in to, and therefore different parties involved. Cleary developed good working relationships with all parties involved.

One of the most difficult tasks was the procurement and scheduling of material. 100,000 lf of pipe required a very large number of deliveries. Coordination and storage of this material was paramount to ensuring a timely and successful project. During the initial material order, Cleary had multiple phone conversations and meetings between its supplier, Core and Main, and the pipe manufacturer, McWane Ductile. Both Core and Main and McWane Ductile noted this was a historic project for them, according to Cleary Construction.

Another obstacle during the project was installing the pipeline across the Red River. It was determined that a jack and bore would be the most effective method, so Cleary installed approximately 200 lf of 36-in. steel casing under the river. In order to install the bore pits, Cleary had to effectively remove the rock on a steep grade. Cleary did this by the mechanical hoe ram method to avoid blasting near sensitive ecological areas. There were also crossings under the CSX railroad and multiple State Highways.

Cleary Construction Inc. worked with several trusted suppliers and subcontractors on this project. The mass quantity of ductile iron pipe was supplied by Core & Main and manufactured by McWane Ductile. The bore contractor, Down TA Earth Inc. of Science Hill, Kentucky, performed the multiple crossings under roads, railroads and the river.

The Water System Expansion Project supplies 2.3 million gallons of treated water daily to some 14,000 residents of Robertson County, Tennessee. The project was highly publicized in the area due to the impact it would have on the sheer number of residents. Cleary opted to place multiple crews on the project to minimize the amount of time the residents were burdened with construction. Timelines were met when Cleary

hit production goals of up to approximately 3,600 lf feet of the 24-in. ductile iron pipe installed per day. Residents were handled with care and efficiency, ensuring that their property was restored to original condition and inconvenienced the least amount possible - The Cleary Way.

"The funding for this project was a loan from USDA Rural Development, which requires lots of oversight from multiple agencies," wrote Kyle Kenner, System Manager for Logan-Todd Regional Water Commission. "Cleary's management team did lots of planning and laid out a very detailed attack plan from the start of the project.

"The construction crews they sent to do the work were always ready for the day's challenges and kept in good communication with LTRWC. There were a few things that had to change along the way, just like all projects, but Cleary always had a solution and kept moving forward. Very few change orders were required for the 20-mile long project and it was completed on time.

"If were to do it over again I would strongly recommend Cleary Construction for the job."

Project at-a-Glance

Project Name:

Water System Expansion to Springfield, TN-Contract 3 24-in. Water Pipeline

Project Owner:

Logan-Todd Regional Water Commission

Location:

Todd County, Kentucky, Montgomery County, Tennessee, and Robertson County, Tennessee

Contractor:

Cleary Construction Inc., Tompkinsville, KY

Subcontractors/Suppliers:

Down TA Earth Inc. (bore and jack); Core and Main (pipe supplier); McWane Ductile (pipe manufacturer)

Senate Passes Historic Water & Broadband Infrastructure Act

America's Utility Contractors Are Ready To Start Digging

[Editor's update: On Aug. 24, the House passed an agreement to hold a vote on its bipartisan \$1.2 trillion core infrastructure bill (titled the "Infrastructure Investment & Jobs Act," or IIJA) no later than Sept. 27, days before the surface transportation bill is set to expire on Sept. 30. This bill contains \$55 billion for water infrastructure and lead pipe replacement, plus another \$65 billion to install modern broadband infrastructure. It also contains \$300 billion for highway projects over the next five years. As of press time, this bill faces an uncertain fate, as this House agreement is non-binding. The bill may face other difficulties as progressive House Democrats also demand a vote on their much more contentious \$3.5 trillion "social infrastructure" bill that has no GOP support.]



The U.S. Senate delivered on August 10 a long-sought National Utility Contractors Association (NUCA) legislative goal with its 69-30 vote to pass the Infrastructure Investment and Jobs Act (H.R. 3684).

"This bill is a significant milestone for our nation. The infrastructure bill delivers historic levels of funding for water infrastructure and lead pipe service line replacement. This is welcome news for

thousands of American communities and millions of our citizens. \$55 billion to replace obsolete water distribution systems and remove harmful lead pipes, plus another \$65 billion to install modern broadband infrastructure, is an extraordinary achievement and the Senate should be thanked for their hard work. This bill is a big win for NUCA members," said NUCA CEO Doug Carlson.

This \$1.2 trillion bill and its \$550 billion in new spending also

reauthorized federal surface transportation programs for the next five years. Industry members use this long-term authorization schedule to efficiently plan and finance the highway projects they are contracted to build by state and local jurisdictions.

Carlson thanked the members of the U.S. Senate who made a down-payment on fixing America's leaking and outdated water systems. NUCA is grateful for the work of Senate Environment and Public Works Committee leadership to shepherd this long-awaited legislation through the Senate. Our industry extends a special thanks to Chairman Carper and Ranking Member Capito, and subcommittee Chairman Duckworth and Ranking Member Lummis for their support and enthusiasm. Clean water and sanitary wastewater requirements are universal and bipartisan.

Passage of increased water system infrastructure investment has been a long-standing legislative goal of NUCA. The bill authorizes \$35 billion for water projects, including \$14.7 billion for the Clean Water State Revolving Fund (CWSRF) and \$14.7 billion for the Drinking Water State Revolving Fund (DWSRF) over five years. This is a significant increase from prior appropriations for these funds.

NUCA has advocated for and supported this process from the very beginning, and the passage of this Senate bill is the biggest increase in funding our industry has seen in years. The act is a significant milestone in the effort to reauthorize water funding that has been moving forward across several Congressional sessions. The Clean Water State Revolving Fund, which has been appropriated for but never reauthorized since its establishment in 1987, is the primary funding mechanism for water quality projects.

Other sections of the Senate's \$1.2 trillion version of H.R. 3684 which could affect NUCA members and their future project schedules include:

- \$110 billion for new highways, roads and bridges
- \$73 billion for power infrastructure improvements
- \$7 billion for Army Corps of Engineers infrastructure priorities
- \$2 billion for Bureau of Reclamation water infrastructure facilities
- \$25 billion for airport improvements, including better drainage systems
- \$17 billion for ports and waterway modernization
- \$7.5 billion for electric vehicle charging infrastructure
- \$11 billion for highway safety programs

NUCA and other trade organizations were able to keep the anti-business PRO Act out of this version of the legislation, which must be seen as a victory for the industry. This Senate bill also reforms certain permitting processes used by the construction industry,

such as improvements to the FAST-41 law to expand its permanent reach into more federal projects to ensure they are completed on-time and under budget.

This bipartisan, revenue-neutral bill is a long-overdue investment in our nation's infrastructure that will help ensure millions of Americans have access to clean and healthy drinking water and modern communications. It will deliver an economic boost to our industry and the American economy once the full effect of its resources is realized in the years ahead. Finally, this bill will also create hundreds of thousands of new jobs in the decade ahead, not only in our industry but in others who depend on better transportation and infrastructure for their business model success.

The bill now goes to the U.S. House for action. NUCA remains hopeful the House will take quick action on this legislation when it returns in September.

"NUCA applauds the Senate for this welcome step towards fulfilling the promises that new infrastructure projects can deliver for our nation and our economy. Our members are eager to begin building more of a better America. Speaker Pelosi, we're ready to start our backhoes and begin digging—let's get this bill passed and send it to the President," exclaimed Carlson.



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Employee Safety Training and Orientation

Excavation/trenching work is inherently dangerous. Prior to starting work at a jobsite, employees must be informed of the potential hazards that may exist in their work environment. In addition to knowing how to recognize hazards, they need to know how to avoid unsafe conditions. OSHA and State safety regulations require employers to train and educate workers to recognize and protect themselves from hazardous conditions. How can an employer expect their people to work safely if they are not aware of what constitutes an unsafe condition and/or what conditions exist?

Even though one job may seem similar to the next, conditions can often vary. While the previous jobsite may have been located where there was little traffic, the next one could be on a very busy street. Conditions will be different from site to site. Your crews need to be reminded about and prepared to work safety amidst changing conditions.

You might have heard employers, managers, foremen, and crew leaders say that safety is “just a matter of common sense.” When it comes to the unique hazards found around underground construction jobsites, that’s not always the case. Everyone in the industry should at minimum be provided with a safety orientation so they are aware of the hazards commonly found at jobsites involving excavations.

Utility construction contractors are struggling to find and retain skilled people to fill crews. This has created a need to hire workers who do not have all the skills and safety training necessary for the underground construction industry. In addition, the underground construction industry has experienced an influx of people who speak Spanish, presenting training challenges for employers without Spanish-speaking trainers.

The concentration of Spanish-speaking workers who perform excavation and trenching activities are not limited to the South and U.S. – Mexico border states. Today we are seeing a significant number of

Spanish-speaking crews in the mid-Atlantic, mid-western, and western states, and the trend northward is expected to continue. Due to this growing population, there is an increased need for safety training in both English and Spanish.

Statistics show that most accidents occur within the first six months of employment. Safety professionals believe that orientations are necessary to help ensure the safety of a new employee, especially workers who are new to the industry. However, new yet experienced employees should not be excluded from training. Companies should design orientations around the assumption that new hires have no safety training.

To address the above issues, the NUCA Foundation developed an Excavation Safety Orientation Program, which is available from NUCA. The simple program is provided in both English and Spanish, flexible, and easy to use. The entire orientation takes approximately 1½ hours to complete. Although the program was designed as a self-study, interactive, computer-based program, it can easily be used by an instructor in a classroom environment.

Overcoming the language barrier is not enough. The literacy level of those entering the utility construction market has created a growing training challenge. The orientation program has been designed so that people at all levels can understand the message, even if they cannot read. The program has addressed this problem by using pictures and video clips accompanied by audio in English or Spanish to convey the necessary information.

In the utility construction industry, the goal of a safety orientation is to reduce the number of injuries and fatalities resulting from cave-ins, falling materials, being struck-by materials and equipment, confined space entry, and other common hazards found around the average trench site. This program is a valuable orienta-

tion tool and a good way to ensure that all workers are educated about possible hazards and how to avoid or prevent them.

Program Content

- The Excavation Safety Orientation Program contains information about the following:
- Employer and employee rights and responsibilities
- Personal protective equipment
- Entering and exiting the excavation safely
- Slips, trips, and falls
- Working near the edge of a trench
- Cave-ins and protective systems
- Rigging, lifting, and material handling
- Working near traffic
- Existing utilities
- Jobsite drainage
- Confined-space entry, and
- Personal safety.

Even though we completed the sixth annual NUCA Trench Safety Stand Down this year, there is still a lot to be done to prevent our people from placing their lives on the line. Employers need to provide the equipment to ensure that their people are protected and the employees need to understand that they are not expected to enter into any unprotected trench for any reason – even short-term entry for a minute or two can result in an injury or fatality.

By focusing on all employees engaged in excavation activity – not just the foreman or competent person – the orientation program is designed to help contractors reach everyone. The program can be ordered from NUCA’s website.

NUCA members have always had the attitude that “We Dig Safely” and expect our workers to go home to their families at the end of every workday. Let’s continue to ensure that workers are our most important asset by educating them to work safely.

This article was written by **NUCA staff**.

Atkore Fiberglass Conduit Solutions



Atkore's FRE Composites fiberglass conduit is a cost-efficient solution for many below- and above-ground applications. Compared to other conduit materials, fiberglass conduit is lighter weight, more durable, easier to install, and competitively priced making fiberglass conduit a preferred solution for many applications.

Fiberglass conduit provides better protection against corrosion, toxicity, and burn throughs when compared to other conduit materials. Fiberglass conduit is suited for temperatures between -40°F and +230°F and has a low coefficient of friction for easier wire-pulling. Additionally, on projects involving longer and harder wire pulls, fiberglass elbows reduce or eliminate damage to wires due to costly rope burn-through. FRE Composite's fiberglass electrical conduit and elbows can provide a 500-pound pullout strength when equipped with patented TriSeal joints. TriSeal joints eliminate the need for adhesive which significantly reduces installation time. Web: frecompositesinc.com

McElroy TracStar iSeries Pipe Fusion

McElroy's newest line of fusion machines builds on the TracStar's rugged, self-contained tracked vehicle while adding industry changing technology for an improved user experience. The use of intelligent software has improved the machine systems to allow three levels of operator control, ranging from manual to fully automatic. It's all powered by the new FusionGuide Control System.

Other advancements include a Controlled Area Network (CAN) bus system for better machine diagnostics, smart keypads to guide users through the processes, and updated paddle levers for precise carriage control. The new control system provides information from user prompts and system status to built-in service reminders and troubleshooting information.

The iSeries is available in 630i, 900i and 1200i, and features a redesigned cowling that allows operators to fuse large tees and elbows without removing the carriage from the vehicle. An integrated DataLogger 7 tablet documents the entire fusion process. Web: mcelroy.com



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SafetyWORKS



2020 NUCA Safety Award 0 to 100K Manhours: **Midstate Site Development**

By Robert Baylor, NUCA Director of Communications

SafetyWORKS is a new column highlighting NUCA's William H. Feather Safety Awards winners. If you would like to be considered for these prestigious NUCA 2021 awards, please submit your entry by the end of December 2021.

Award details can be found at nuca.com/safetyawards.

This Connecticut NUCA contractor member sometimes tells clients that their company's initials have another meaning: Managed Safety Discipline!

NUCA proudly recognized Midstate Site Development (MSD) this year for its long-standing commitment to employee safety,

awarding the Connecticut company one of the three coveted 2020 NUCA Safety Awards. This full-service site contractor's stated goal is to promote a culture of safe work at all times with their employees, no matter what job they perform.

Safety runs deep at Midstate, through its employees and its leadership. Midstate's owner Glenn Korner provides the necessary resources to all of its employees to achieve safe work, and empowers them to make this happen. These resources start with safety training, the right tools, and effective leadership.

"Human nature is the biggest threat to safety," said Korner in an interview about his company's excellent safety record. "You have

to have a culture of safety where everyone is onboard, and you have the right safety equipment on the job." Korner insists that everyone one of his employees has access to the right safety gear on every one of his jobsites.

Safety begins at the top and works its way down through the ranks. "Midstate has a safety committee comprised of a foreman, laborer, and operator. They share employee ideas about what we could be doing better to improve safety. We also have a safety incentive program that rewards employees for sticking to our safety policies and staying accident-free," explained Korner.

Midstate's Safety Management Team delivers more than 25 years of construc-



tion safety experience and a full-time safety officer to MSD'S workforce. The company's safety team provides state-of-the-art OSHA and environmental training programs to their employees. The company also lends out its safety officer to other small contractors for training and advises smaller companies that have a poor safety record.

A written safety program has been part of Midstate since it was founded 20 years ago. 15 of Korner's employees have attended a NUCA Excavation Safety & Competent Person Training Program. The company also has a Defensive Driving Program and a written fleet safety program. And Midstate has participated in NUCA's annual Trench Safety Stand Down each June since it began in 2016.

Korner also expects his company-owned equipment to be safely operated, and designed and manufactured with employee and jobsite safety in its design. His company owns Volvo excavators because he is confident that this company's equipment provides a level of safe operation to his employees and others on the jobsite, such as rear cameras and folding cab steps. Volvo makes up the majority of the company front-end loaders, while NUCA National Partner Caterpillar equipment makes up all of his fleet of 13 bulldozers, four rollers, and two backhoes. The average age of the company's machines is less than five years.

This commitment to safety shows in Midstate's statistics. There were zero worker comp claims in 2020, and no injuries from vehicle accidents because there were no accidents. In the last three years, there have been no reportable OSHA 300 log incidents, either.

That is an impressive safety record which shows what a company's strong commitment to employee and jobsite safety can achieve. NUCA hopes every one of its members can achieve a similar outstanding record.

Midstate Site Development, LLC
75 West Dudley Town Rd.
Bloomfield, Connecticut 06002
Phone: 860-242-1283
Web: www.msdct.com

Midstate's Safety Checklist:

- Midstate believes their company's biggest asset is their employees. Nothing is more important than their safety and continued well-being. Midstate and their families rely on this commitment.
There can be no compromise.
- Commitment to safety starts with company leadership and is the life blood of their safety program. Company leaders must set an example and support a company's safety program 100%. There are no excuses for unsafe shortcuts on any jobsite.
- Trust and communications improve employee attitudes towards safety and can be the key to fostering a culture of safety commitment. Midstate recognizes the importance of personal responsibility for safety and performance.
- Employees know they are a vital part of Midstate's safety culture. This simple message is reinforced daily, weekly, and monthly by the company and each employee's peers. They can be rewarded with paid time-off for safety accomplishments.
- Midstate's safety program ranks among the industry's best and is supported by regular company safety activities including: 1) a comprehensive new employee orientation and mentoring program, 2) a daily crew pre-task planning meeting, 3) weekly toolbox safety meetings, 4) a job hazard analysis, 5) site-specific hazard training, 6) monthly roundtable safety meetings, and 7) bi-weekly Safety Committee meetings.
- Midstate uses state-of-the-art Topcon GPS automation to reduce the exposure of their employees in and around the equipment during the workday.
- For recent events, Midstate developed a silica safety program, a civil unrest protocol, and a Covid-19 policy for its operations and employees.



Is Your Company's Information Ready For The Industry's Buyer's Guide?

Utility Contractor's next issue is the annual NUCA Buyer's Guide. Make sure your contact information is up-to-date and accurate to help potential business find your company.

Log in to your NUCA member's account at nuca.com and update your online profile **before October 31, 2021**.

If you need assistance logging into your account, please contact NUCA's membership department at 703-358-9300 or by email at nuca@nuca.com.



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