

JUNE 2021

# concrete openings

THE OFFICIAL MAGAZINE OF  CSDA

## Demolition Robots Crack Dallas Bank Vault

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*CSDA President*



It is an honor to be elected as the new President of CSDA. The CSDA has been the voice of the professional specialty cutting, coring, polishing and GPR scanning industry and defining these specialize niche trades since 1972.

I am humbled to serve as the President of the industry's top technical experts, innovators, safety professionals and highly skilled contractors. The drive behind this association is the multitudes of active committees that are expanding state of the art technology and techniques in all the many areas of our industry. The individual committees are staffed with volunteers that are committed to our industry and focus on the very details that continue to define us, including such areas as training (with a training center at St. Petersburg College), safety and documentation such as TST's, safety handbooks, online training courses, video training, standards, specifications, tolerances and industry best practices. We have committees that focus on benefits to membership. We have trade and industry specific committees to grow and strengthen key areas in our association such as the manufacturers, GPR scanning, polishing and the next generation. We have association-specific committees for convention, finance, election and long-range planning that continue to identify and address these ever-changing specialty trades. CSDA is an active participant in the International Association for

Concrete Drillers and Sawers (IACDS) and has developed tolerance and limitations documents in conjunction with IACDS. CSDA has from time to time been an active partner with OSHA as a safety resource and for creating best practice documents. We have outreach committees that focus on marketing our highly specialized niche industry to the greater construction trades and a committee that focuses on creating a tangible metric for GC's in partnering with one of our world-class specialty trade companies branded with an official CSDA Certification.

Prior to this recent election, I have been serving as the Chairman of the Standards and Specifications committee since 2005. I have been mentored by some of the best of the best in this industry as we formed cohesive teams in developing and vetting some of the documents we have on our website ([csda.org](http://csda.org)) that we openly share with the world in hopes of continually raising the bar and redefining state of the art in our industry.

As the new incoming President of CSDA, I am excited about the direction the CSDA is headed and I am truly thankful for the strong leadership from our outgoing president Matthew Finnigan and all the officers, Board of Directors, committee chairman and active members that help make the CSDA the voice of the professional specialty cutting, coring, polishing and GPR scanning industry.





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kellie@holesinc.com

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Echo GPR Services  
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National Concrete Cutting, Inc.  
matthewf@nationalconcretecuttinginc.com

Executive Director, Erin O'Brien  
Concrete Sawing & Drilling Association  
erin@csda.org

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(Terms expiring 2022)

Bill Fisher  
National Research Company  
bfisher@nationalresearchcompany.com

Donna Harris  
Concrete Renovation  
accounting@concreterenovation.com

Jeff Keeling  
Brokk, Inc.  
jeff.keeling@brokkinc.com

Ryan McBride  
Polished Concrete Consultants  
mcbride.ryan@me.com

David Perkins  
Hilti, Inc.  
david.perkins@hilti.com

Kevin Warnecke  
ICS, Blount Inc.  
kevin.warnecke@blount.com

## CSDA BOARD OF DIRECTORS

(Terms expiring 2023)

Brandon Bailey  
A-Core Concrete Specialists  
brandon@a-core.com

Tyrone Conner  
Austin Enterprise  
tconner@austin-enterprise.com

Greg Lipscomb  
Diamond Products Limited  
glipscomb@diamondproducts.com

Bruno Silla  
GSSI  
sillab@geophysical.com

Kristen Waters  
Greene Concrete Cutting, Inc.  
kristenw@greenesinc.com

Ronnie Wilhite  
Texas Cutting & Coring, LP  
ronnie@texascurbcut.com

## CONCRETE CASES



**Demolition Robots  
Crack Dallas  
Bank Vault**



**The Geisel House Project:  
Holes Incorporated's  
Role in Preserving History**



**Concrete Polishing  
Restores Luster  
to a Vintage  
Motorcycle Museum**



**CSDA Contractor  
Works Underwater  
to Prevent Future  
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#### CONCRETE OPENINGS MAGAZINE

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#### PUBLISHER

O'Brien International

#### EDITOR

Erin O'Brien

#### CONCRETE CASE CONTRIBUTORS

Maggie Christensen  
Kellie Kimball  
Hayley Long  
Doug Walker

#### EDITORIAL REVIEW COMMITTEE

Tim Beckman  
Pat Stepanski  
Doug Walker

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# Demolition Robots Crack Dallas Bank Vault

It's not exactly the sci-fi movie one would watch in theaters, where artificial intelligence robots make off with the bank vault and everything inside, but it is an enormous and interesting undertaking by skilled operators. Interstate Sawing & Demolition of West Bend, Wisconsin received a request from

General Contractor Txre Properties in Dallas, Texas about a massive vault that needed to be cut out of an active bank to convert the space into additional office space. Interstate was tasked with removing the 14-inch-thick concrete walls and ceiling of a 20-foot by 50-foot bank vault heavily laden with rebar. Whereas other contractors were quoting two months and over \$250,000 for this project, Interstate Sawing & Demolition believed they could get the job done in a week and for a fraction of that cost.



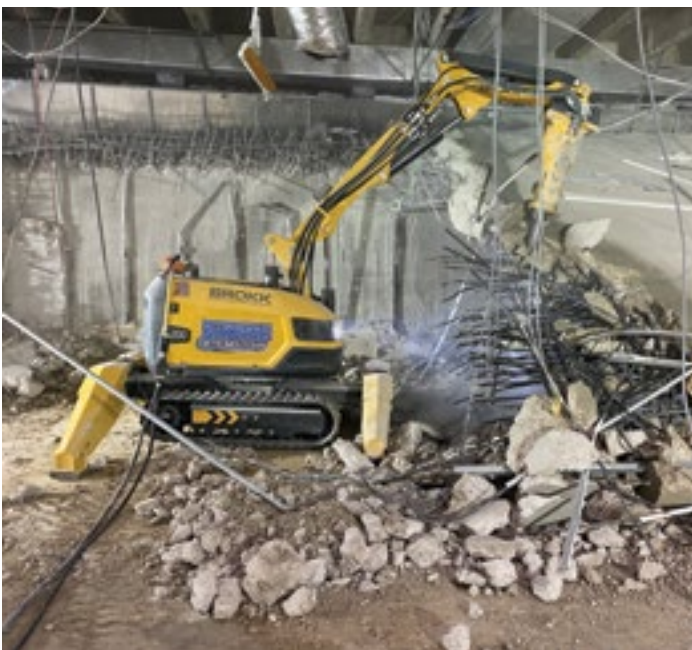












Interstate Sawing & Demolition began by loading their semitrucks and beginning the 1,000-mile journey from West Bend, Wisconsin to Dallas, Texas. At the bank, the windows and flooring were protected while Interstate used two Brokk 200 demolition robots with breaker attachments to remove the drywall and delaminate the rebar around the vault. As soon as the drywall was removed, they began breaking the concrete and separating the concrete from the steel rebar. This called for both Brokk 200 robots meticulously and strategically breaking the concrete from around the extensive rebar system surrounding the vault. Interstate broke the concrete and loaded the debris to be taken to proper dumpsters. Then, using a Brokk 110 with a shear attachment, the rebar was cut, removed and recycled. Hoppers were used to remove the remaining debris and the remaining exposed rebar was torched off 1 inch below the floor.



The Brokk 200 robots allowed Interstate to accomplish this colossal project in only one week with no downtime and reduced impact than would be had with traditional diamond saw cutting. The alternative method of saw cutting the concrete into small cubes for removal would have certainly taken operators upwards of two months and limited the bank's capacity to remain open during the renovation. Not to mention, cutting the entire vault into small cubes with a wall saw would cause much greater wear on the diamond blades, and therefore blade cost, because of the sprawling rebar system in the vault, which would make the project far more expensive. As this was an active bank, operators had to be sure to protect the glass that surrounded the vault's perimeters, as well as protecting the marble flooring as the tracking robots made their way in and out of the vault to remove the debris with Sherpa loaders. As with most demolition projects, dust and silica management was of the utmost importance. Interstate workers used HEPA filters and special interior water mist cannons to mediate the dust and silica during the vault removal.

In total, 346,000 pounds of concrete was removed from the bank vault and hauled away, as well as the immense amount of rebar that was recycled. Only two operators and four people assisting with cleanup were needed on this project because of the power of the machines. Interstate Sawing & Demolition was as thrilled as Txre Properties to finish the job in the predicted week span. Duke Long, President of Interstate Sawing & Demolition, said about the job, "Our process for concrete removal is second to none. We, as well as Txre Properties were extremely happy with the outcome and efficiency of







this project. When you combine Brokk robots, Sherpas and electric dump hoppers; you mechanize that hard labor, increase your profit margin and get the job done safely, all while impressing the hell out of your customer.”

Although it is not always possible, all contractors would like these tough jobs completed in a fraction of the time and for a fraction of the cost. CSDA contractors like Interstate Sawing & Demolition are fair, knowledgeable and always ready to solve those tricky problems. A full video of this impressive removal can be found on Interstate’s YouTube channel, or at [youtu.be/vwydOhzpibU](https://youtu.be/vwydOhzpibU).

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### COMPANY PROFILE

Interstate Sawing & Demolition has been the leader in concrete cutting, confined space robotic demo, confined space lifting solutions, electric interior excavating, grinding and scanning since it was founded in 1996. Their vast knowledge of concrete renovation and removal, innovative ideas, and continuing commitment to excellence has helped their customers save time and money on their projects. Owner Duke Long is a working owner who has over 37 plus years of on-the-job experience. His “working hard in the field” ethics helps solidify Interstate Sawing & Demolition’s teamwork philosophy. Duke’s unique “on the job” work approach has helped keep the company and their 48 employees on the leading edge of industry trends and technology. Interstate Sawing & Demolition and its employees take pride in their professional artistry and performance. Their fully-enclosed fleet of 25 service trucks are self-contained and mobile-ready, and their box trucks are entirely equipped to act just like an actual on-site workshop. Interstate Sawing & Demolition specializes in robotic demolition, electric interior excavation, curb cutting, wire sawing, concrete grinding, hydraulic splitting, concrete removal, confined space lifting and GPR scanning. They have been a CSDA member since 1999.

### RESOURCES

#### General Contractor

Txre Properties

#### CSDA Contractor

Interstate Sawing & Demolition

**Contact for Story:** Haley Long

**Email:** [Haley@InterstateSawing.com](mailto:Haley@InterstateSawing.com)

**Tel:** 262-334-7522

**Instagram:** @interstatesawing

**Website:** [www.interstatesawing.com](http://www.interstatesawing.com)

#### Methods Used

Selective Demolition





## H2O—What's the Magic Number?

By Erin O'Brien



**S**ixteen glasses a day. Eight cups a day. Forty percent of your body weight in ounces. Drink when you're thirsty. Drink when you're hungry. Drink when you're sweating. Don't drink coffee or soda. Don't drink tap water. Don't drink bottled water. Don't drink carbonated water.

Does anyone else feel like there is no right way to drink the right amount and right kind of water? How much is enough? How much is too much? With summer quickly approaching, hydration and dehydration will again be a hot topic (get it? summer = hot?? Sorry, I'll stop). I had questions about my own water intake, so I did the hard work for you on what and when you should drink.

Our bodies are made up of about 60% water. This water is in our blood, muscles, connective tissue, organs and interstitial space (I'll buy you a glass of something other than water if you can tell me what that is). Over millions of years, our bodies have also developed an amazing mechanism to tell our brains when we are thirsty and need to drink more water. However, with everyone's busy lives, many of us have ignored that trigger too many times and become dehydrated, meaning our bodies do not contain enough water to function optimally.

When we are dehydrated, several things can happen. Mood and concentration can

become impaired, headaches become more common and severe, physical performance can suffer, whether at the gym or on the jobsite, and endurance is reduced, meaning we cannot sustain physical or mental activities for extended periods of time. Dehydration is caused by more fluid leaving the body than entering. This can happen during intense workouts, in hot weather, in dry climates, during illness, while breastfeeding or after drinking substantial amounts of alcohol. Concrete cutting professionals working in hot, sunny weather need to be especially vigilant. Water loss of as little as 1% of your body weight can cause mild dehydration.



Water serves many vital functions and provides our bodies with a great deal of benefits. Besides keeping us alive, studies have shown that benefits of water include increased metabolism, weight loss, prevention of illness, maximizing physical performance, increased energy and brain function, headache prevention and the ever-popular hangover cure. These are covered in detail below.

#### INCREASED METABOLISM

Some studies have shown that drinking 500mL (17 oz.) of water can temporarily (up to 90 minutes) boost metabolism by 24-30% and drinking 2 liters (68 oz.) in one day can increase energy expenditure by about 96 calories a day. So just by drinking enough water, theoretically you could lose an extra pound a month or 12 pounds a year! Cold water is best for this, because the body then has to burn calories to warm the cold water to body temperature.

#### WEIGHT LOSS

Drinking water 30 minutes before a meal has also been shown to reduce the number of calories consumed during a meal, because your stomach has less room for food. One study showed that people who drank 500mL (17 oz.) of water before meals lost 44% more weight over a period of 12 weeks compared to those who didn't.

#### PREVENTION OF ILLNESS

Increased water intake has been shown in some studies to lower risk of developing bladder and colorectal cancer, kidney stones and constipation.

#### MAXIMIZING PHYSICAL PERFORMANCE

Athletes and those working in the construction field can lose up to 6-10% of their weight via sweat during workouts or on the jobsite. This can lead to altered body temperature control, reduced motivation, increased fatigue and make physical activity feel more difficult, both physically and mentally. Optimal hydration can prevent this from happening and may even reduce the oxidative stress that occurs during intense physical activity.

#### INCREASED ENERGY AND BRAIN FUNCTION

Even mild dehydration of 1-3% of body weight can impair many aspects of brain function. Studies have shown that in young men, a fluid loss of 1.6% was detrimental to working memory and increased feelings of anxiety and fatigue. This is about 1.5-4.5 lbs. on a 150-pound



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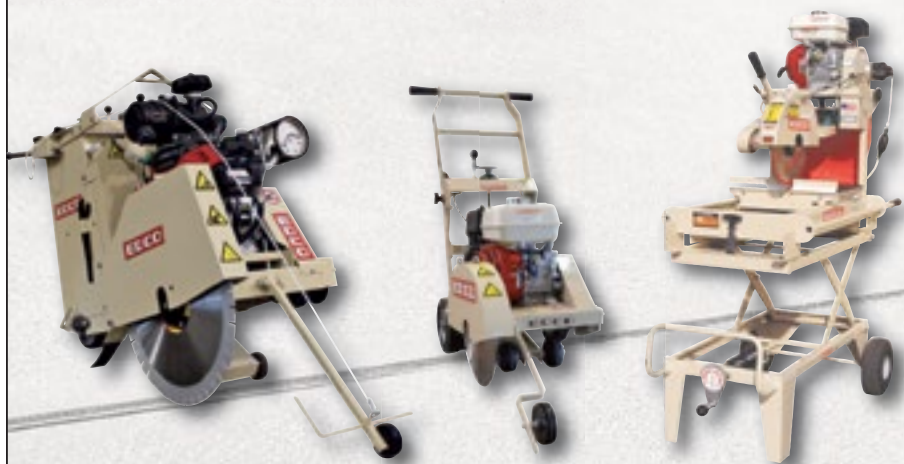
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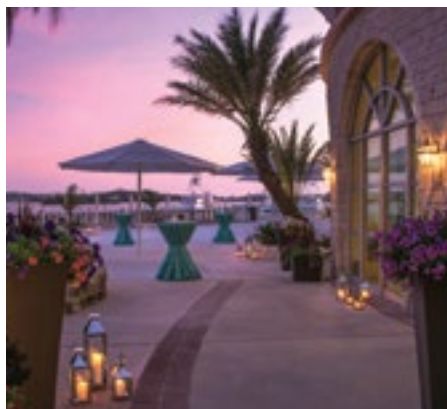
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person. This fluid loss can easily occur through normal daily activities and is intensified during exercise or working in high heat.

### HEADACHE PREVENTION AND TREATMENT

In some people, dehydration can trigger headaches and migraines. Water can relieve these headaches or make them less severe and shorter. So, your headache could be caused by not drinking enough water! No Advil needed.

### HANGOVER PREVENTION

Most of us have dealt with a hangover or twenty-six. Maybe those are behind you now, but if they are not, water is your new best friend. It's no secret that many of the symptoms of hangovers, like thirst, fatigue, headache and dry mouth, are caused by dehydration. While its not the main cause, it is one that is easily preventable. A good way to reduce hangovers is to alternate a glass of water with each alcoholic beverage you consume, and drink at least one really big glass of water before you go to bed.

Water, however, is not the only way to stay hydrated. One myth is that caffeinated drinks like coffee or tea don't count towards staying hydrated because caffeine is a diuretic. While caffeine is a diuretic, the effect of these beverages is very weak and fairly insignificant in causing your body to dehydrate. Additionally, many foods are loaded with water, especially fruits, vegetables and even meat, fish and eggs.

Another similar option, and one that has been getting a lot of traction recently is carbonated water. Also known as sparkling water, club soda, seltzer water and fizzy water, this is water that has been infused with carbon dioxide gas under pressure. With the exception of seltzer water, they usually have salt added to improve the taste and sometimes other minerals are included. Natural sparkling mineral waters like Perrier and San Pellegrino are different because these waters are captured naturally from a mineral spring and tend to contain minerals and sulfur compounds. These waters are often carbonated as well. Tonic water is a form of carbonated water that contains a bitter compound called quinine, along with sugar or high-fructose corn syrup (we've discussed that ingredient before – stay away).

Concerns about carbonated water in the past are that it is acidic and could wear away the enamel on your teeth and decrease bone density. Studies have shown those to be

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myths, but there are actually a few benefits of drinking carbonated water.

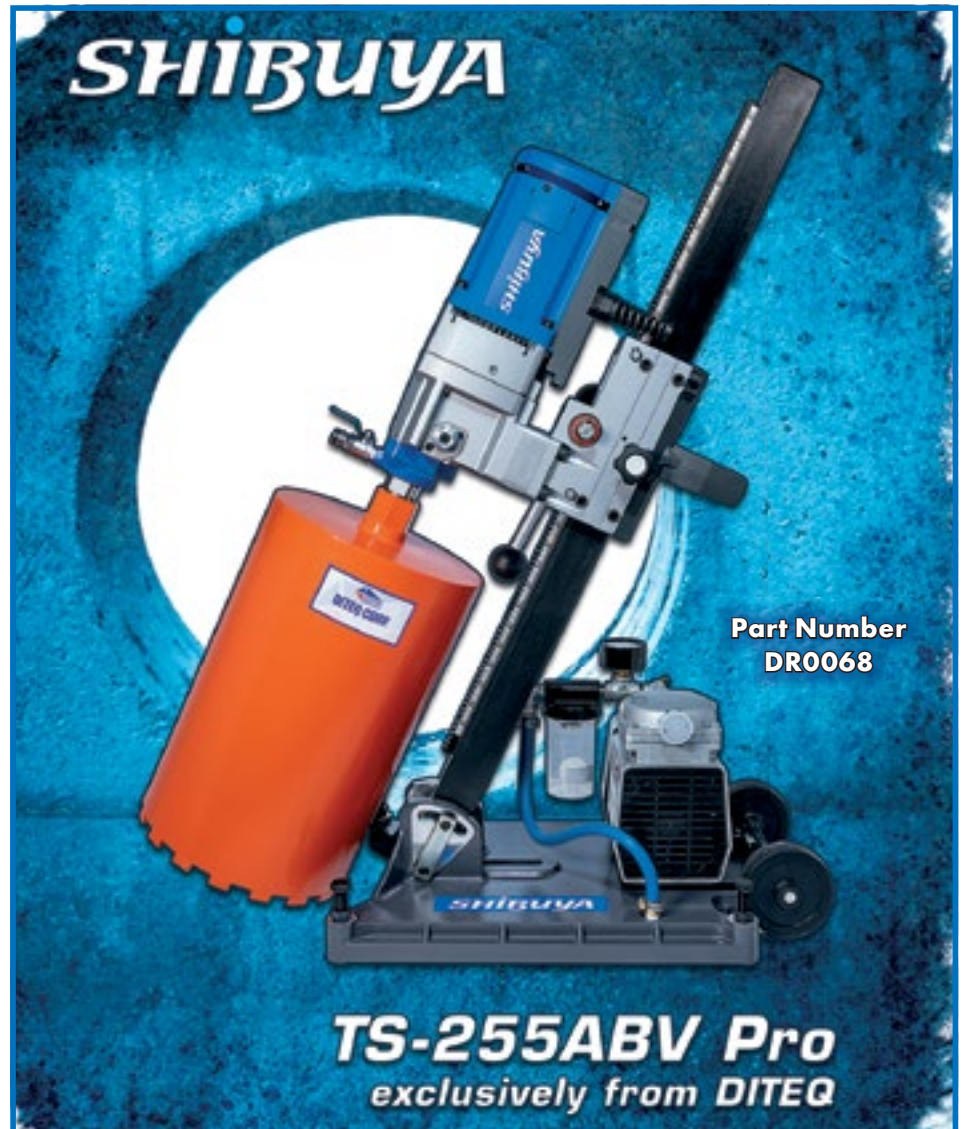
Some people are addicted to sugary sodas – but maybe it's just the fizzy taste they like? Sugary beverages, whether carbonated or not, can destroy tooth enamel and reduce bone density. So an alternative without the sugar is a great option. Carbonated water may also increase feelings of fullness, because the carbonation may help food to remain in the first part of your stomach longer, which triggers a sensation of fullness and can reduce the number of calories you consume.

*Author's note — I recently invested in a Soda Stream and it's one of the best purchases I've ever made. I save money on buying expensive carbonated water and I cut down on all those aluminum cans used. I recommend it to anyone who likes carbonation. (This note was in no way sponsored by Soda Stream—but call me guys, I'm happy to endorse).*

Or maybe you think that water is boring and has no taste, so you don't drink enough? Easy fix. There are tons of infuser pitchers on the market (through Amazon, at Target, etc.) that allow you to add a variety of natural flavors to your water — lemon, lime, grapefruit, strawberry—whatever floats your boat.

So, how much water is best? There is no one size fits all recommendation. Everyone is different, and your climate, diet, activity level, age and what you drink are all factors. The solution is simple. When you are thirsty, drink. When not thirsty anymore, stop. During high heat and exercise, drink enough to compensate for the lost fluids. That's really about it. Older adults and children should drink a little more. And if you want to put a number on it? I try to drink 60-80 oz a day, which is about 4-5 glasses. I'll add 1-2 more glasses in if I have an intense workout, spend a lot of time outside or have a few cocktails at happy hour.

*Erin O'Brien, MS, ATC is a Certified Athletic Trainer and Vice President for O'Brien International, the association management company that manages the Concrete Sawing & Drilling Association. O'Brien received her Bachelor of Science degree in Athletic Training from Ohio University and her Master of Science degree in Applied Physiology and Kinesiology from the University of Florida. She is also a Certified Level 2 CrossFit Instructor and member of CrossFit9 in St. Petersburg, FL. She is a regular contributor to Concrete Openings magazine. She can be reached at erin@csda.org or 727-577-5002.*





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# The Geisel House Project: Holes Incorporated's Role in Preserving History



**S**ituated about 70 miles northwest of Houston, Texas is a small town with a big history. Navasota, Texas was up-and-coming as the Civil War began, which is when R. H. Giesel and his wife, Fannie, chose to construct two three-story buildings to serve as a hotel and restaurant. Located near the Houston & Texas Central Railroad Depot, this stone building, originally built in 1860 with a two-story frame porch on the front, beckons to the architecture of the mid-1800s. The town of Navasota suffered a population decline when, in 1862, disgruntled confederate soldiers set fire to a warehouse. The fire damaged so many surrounding buildings, many citizens fled. By the late 1860s, the town was struck with Yellow Fever, and by the turn of the century, was completely lawless and ungovernable. In a current effort toward developing the downtown area to bolster tourism, the Giesel House was given a chance at a new life and a total revamp.

General contractor, B&A Commercial Contractors was hired by owner of the hotel, P.A. Smith Hote, to renovate and connect the two historical buildings, which had acted as the restaurant and hotel, to turn the property into a single boutique hotel. This effort hoped to enliven the downtown area and bring people back to Navasota. All of the original woodwork, wood flooring and concrete walls were to be preserved for the boutique hotel. The contractor also wanted the main wooden beams in both buildings to be carefully preserved during construction. However, new electrical, plumbing and openings needed to be created to connect the two buildings – and that is when CSDA contractor Holes Incorporated was hired.

Holes was initially contracted to wall saw two individual 3-foot by 8-foot openings needed to connect the two buildings. One opening was located on the second floor and the other was on the third floor. B&A Commercial did not know the thickness of the combined walls, so a core drill operator was sent from Holes to drill into the wall and make that determination. Using a Shibuya core drill, it was discovered that the two building walls were a massive 44 inches thick. Since the contractors needed to preserve so much of this building, overcuts were simply









not an option. With this in mind, the possibility of wall sawing these openings was ruled out, and wire sawing was chosen as the method of removal.

To prepare for the sawing, Holes operators erected a plastic enclosure around the work areas on both sides of the walls in both buildings to prevent damage to existing surfaces, and protective flooring was installed inside and outside of the enclosure. Spray foam was used inside of the wall to avoid water and slurry from seeping through to lower levels. The walls were made of sandstone, which forced operators to through-bolt all equipment to the wall, as normal anchoring systems would not work.

During the inspection of the layout, the Holes Lead Operator and Field Safety Supervisor, whom Holes had onsite throughout the duration of the project, noticed that the contractor's layout was off by 6 inches because the two buildings were slightly offset. The realization that one building was staggered 6 inches in front of the other caused a bit of panic among everyone, but was quickly and fortunately detected prior to cutting.

The GC, with assistance from Holes operators, installed two lintels prior to saw cutting the door openings. Without the lintels, there was a fear of the sandstone openings crumbling without support. Holes operators used a Husqvarna Hi-cycle chainsaw to saw cut both buildings on either side of the wall to create the lintel opening. Utilizing diamond blades and chains allowed operators to cut the perfectly straight and level lines needed while avoiding the excessive vibration that could risk structural damage to the historical building. The Husqvarna CS2512 wire saw was used to complete the door openings, the wall was then demolished using a small Hilti demo-hammer with a dustless system and dry vacuum. The wall was already falling apart, so the jackhammer assisted in breaking it up into manageable pieces for removal by the Holes team. The pieces were removed from the building with wheelbarrows, using an antique historical freight elevator.

Upon successful completion of the two individual openings, the GC awarded Holes additional work and requested they cut two additional 8-foot-wide by 8-foot-tall openings. These openings, again, were to connect the buildings to create walkways between the two buildings



on the first floor. Because the structural integrity of the sandstone walls was a concern, prior to cutting the openings, they had to drill ten 12-inch by 44-inch cores to install five 8-inch-wide I-beams made of structural steel. Once the I-beams were in place, the cutting could begin!

Despite the challenges with communication between two buildings with two different teams working on multiple different phases of a project, the Holes team was able to complete the wire sawing of four openings totaling 108 feet long by 44 inches deep. In addition, various sized core drilled holes ranging from one inch to four inches were completed and successfully drilled to run wire through both buildings, despite operating this equipment on the antiquated structure with priceless chandeliers hanging beneath them, as well as new drywall. At this phase in the project, much of the construction by the GC was completed and Holes operators had to work carefully around the finished work.

Coordinating and communicating with both teams in both buildings posed a challenge for everyone onsite. With renovations, slurry control, sawing and demolition all happening at once, any incident required both teams to stop working and investigate. Good communication was absolutely key to the success of this job, as it is to so many. Respirable crystalline silica was a concern due to the enclosed nature of the work areas, so Holes operators wore respiratory protection during cutting when working inside the enclosure and dustless equipment was used with dry vacs when









available. The Field Safety Supervisor also had all windows open on the elevated floors to allow natural ventilation to assist with mitigating the silica hazard. All saws and core drills are water integrated to allow for a continuous spray of water on the bit or blade during the cutting process. In addition to all other standard personal protection equipment, Holes operators also re-built a handrail system around the staircase on the second floor to protect their workers from falling to the lower level.

The project is ongoing and Holes Incorporated is expecting more work on this project soon. They believe they were chosen due to their reputation in Houston as a leading concrete cutting and demolition company, but the additional work was awarded because of their success and expertise on the initial project. Not only was B&A Commercial Contractor's expectations exceeded by the CSDA contractor, but the owners of the building were as well. Kellie Kimball, Vice President of Holes Incorporated said about the project, "Holes operators did an outstanding job for our client and it was all thanks to our team having a plan, working safe and not backing down from a challenge."

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## COMPANY PROFILE

The Holes Companies are service companies specializing in concrete slab sawing, core drilling, wall sawing, wire sawing, pile cutting, concrete breaking, lifting, demolition, GPR scanning, load and haul and anchor bolt installation. The Holes Companies primarily work for commercial and industrial contractors, state highway departments and municipalities. Holes Incorporated, Holes Golden Triangle, LLC, Holes South Texas, LLC and Holes Technology, LP have built a solid track record through 47 years of experience, reliability and reputation. They have 52 employees and 28 operators and have been CSDA members since 1976.

## RESOURCES

### General Contractor

B&A Commercial Contractors

### CSDA Contractor

Holes, Inc.

**Contact for Story:** Kellie Kimball

**Email:** [Kellie@HolesInc.com](mailto:Kellie@HolesInc.com)

**Tel:** 281-469-7070

**Instagram:** @holes\_inc

**Website:** [www.holesinc.com](http://www.holesinc.com)

### Methods Used

Core Drilling, Wall Sawing, Floor Grinding







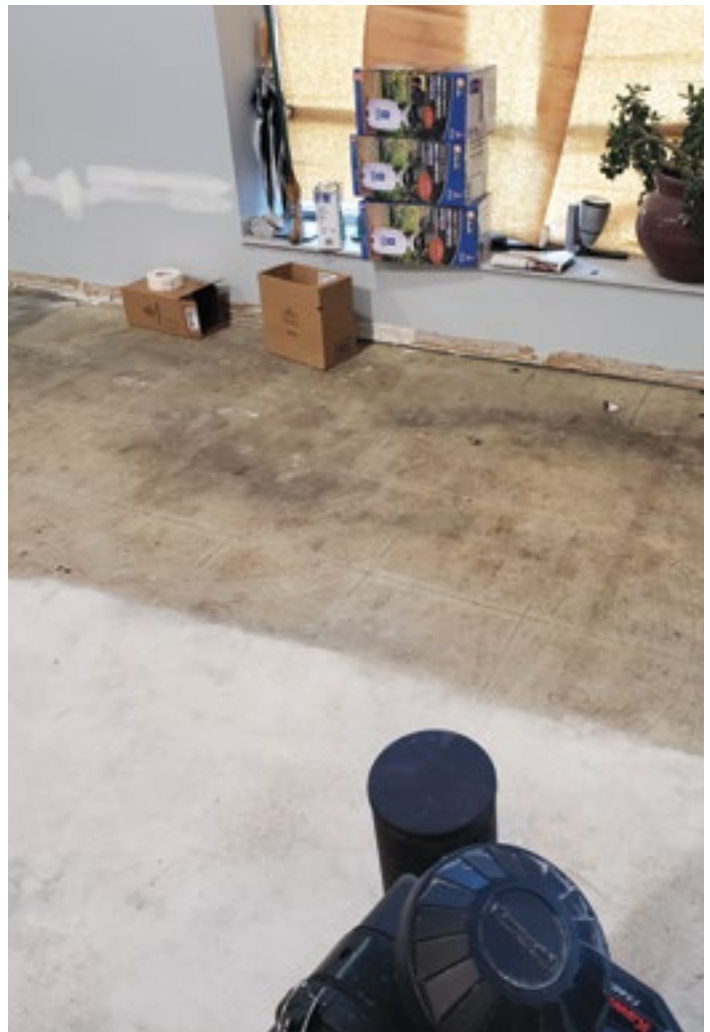
# Concrete Polishing Restores Luster to a Vintage Motorcycle Museum

**F**or a concrete refurbishing contractor, it is a good thing to have grinders and related polishing equipment at work on a job site, but when that equipment is down for repairs or needed at another location, what are the options? For PaintSmiths of Missouri, the answer was Sunbelt Flooring Solutions, a nationwide company that rents a full line of concrete grinding and polishing machines, tooling and HEPA dust collectors. PaintSmiths turned to Sunbelt for the equipment required to tackle a concrete polishing project at the Moto Museum in St. Louis, Missouri.

The Moto Museum is a 16,000-square foot facility housing a collection of vintage motorcycles dating back to the turn of the twentieth century, including some of the rarest bikes still in existence. The museum, which grew out of the private collection of owner and founder Steve Smith, has six galleries featuring unique motorcycles from around the world. Two of the museum's galleries are leased for special events such as conferences, retreats, weddings, birthdays and family reunions.

A recent renovation project at Moto Museum entailed a plan to repair and polish a worn concrete floor in an event gallery. The floor had a variety of coverings—including paint, epoxy, carpeting, luxury vinyl tile and vinyl composite tile—and was stained, scuffed and worn from decades of heavy traffic.

The Moto Museum floor refurbishing project was a joint venture involving PaintSmiths of St. Louis, Inc., Sunbelt Flooring Solutions, Niagara Machine, Inc. and Sherwin-Williams H&C division, which supplied the concrete treatment chemicals used for the project.







PaintSmiths' services include painting, coating, wall covering, as well as floor staining, coating and polishing for commercial, industrial and high-end residential projects. CSDA member Niagara Machine, Inc. is a concrete flooring and surface preparation specialist, and a national distributor of leading brands of grinding machines, shot blasters, scrapers, dust extractors, air scrubbers, diamond tooling and chemical treatment products. Niagara supplies both Sunbelt Flooring Solutions and Sherwin-Williams with concrete resurfacing equipment, and is also a resource for comprehensive, hands-on training for concrete contractors, building maintenance managers and others involved in concrete floor restoration and preservation.

In the initial phase of the project, the 4,000-square foot event gallery was stripped of existing paint, tile, carpeting and adhesives. The luxury vinyl tile and composite vinyl tile were removed using a BlastPro scraper, and paint and epoxy were

removed with a propane-fired Lavina® 30-GTX forced belt-driven planetary grinder. This grinder features fast, cordless operation, clean exhaust, simple tool changes and balanced, easy-to-control handling.

With all floor coverings, adhesives and epoxies removed, minor repairs were made and the floor was ready for multi-step grinding. "Our normal inventory of grinding and dust control equipment was wrapped up on other job sites," said PaintSmiths project manager Jeff Hasty, "so I gave my Sunbelt representative Dallas Hill a call. Sunbelt and Niagara became resources for the machines we needed on this job. We started the grinding and polishing process with 30-grit diamonds, and worked our way up through 50-, 100-, 200- and 400-grit stages. Then we used an 800-grit tool for the final polishing."

The last phase of the Moto Museum project entailed staining and sealing the gallery floor. Sherwin-Williams













H&C® acetone dye stain was selected in ranch hand brown and tortoise shell hues to complement the gallery's décor. The dye stain was applied after the 400-grit polishing stage, along with a clear liquid hardener/densifier. After the final polishing with 800-grit, the surface had the desired matte finish.

The Paintsmiths crew completed the Moto Museum repair and polishing project in one week, including the downtime required for other trades on-site to utilize the gallery floor. "This was a very efficient project," said Paintsmiths Jeff Hasty. "We had the right equipment in the right hands, and the result is a beautiful concrete floor. I think it will make a great contribution to the overall Moto Museum experience." The combination of a CSDA distributor's knowledge and diverse service offerings along with the reliability and versatility of diamond tools ensured project success and yet another satisfied customer.

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## COMPANY PROFILE

Niagara Machine is headquartered in Erie, PA, and has facilities in Charlotte, NC, Gloucester City, NJ (Philadelphia area), North Bergen, NJ (NYC area), Debary, FL and Grand Prairie, TX. These six locations serve as showrooms, warehouses and repair sites, as well as customer training facilities. Niagara also has field representatives and inventory at nine remote locations. Their representatives are Niagara employees and draw upon years of concrete polishing experience to meet specific job requirements. Niagara Machine, Inc. has been a CSDA member since 2020.

## RESOURCES

### CSDA Contractor

Niagara Machine, Inc.

**Contact for story:** Maggie Christensen

**Tel:** 704-329-5701, 404-834-1162

**Instagram:** @Niagara\_Machine\_Inc

**Website:** [www.niagaramachine.com](http://www.niagaramachine.com)

### Methods Used

Concrete Polishing

**The PaintSmiths of St. Louis, Inc.** is a professional union contractor specializing in painting and wallcovering for the commercial, light industrial, and high-end residential markets. Headquartered in St. Louis, Missouri, the majority of their work is in the metropolitan St. Louis area of Missouri and Illinois. However, they also extend nationally and have many projects throughout the entire United States. The PaintSmiths of St. Louis, Inc. typically employs about 50 professional union painting craftsman. These craftsman are highly-trained union professionals who have honed their skills with schooling and experience. They continually deliver excellence in workmanship and service.



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## IACDS President's Insight

**O**n a sunny Saturday in April, a fatal accident occurred during the non-static demolition work on a construction site on which my company was entrusted with the core drilling and sawing work.

A young man tore down a four-meter high brick wall under cramped conditions according to the following principle: "I will make a hole below, and if the wall collapses, I will run away".

It goes without saying that this cannot go well. The fact that the consequences are so tragic is of course more than regrettable. And above all so avoidable. I have thought a lot about it since I found out about this accident, but one question that concerns me is this: How do you come up with such an idea?!

I've also thought about this a lot and always come to the same conclusion: there is a lack of training! Sound training is so important and the alpha and omega of sensible and, above all, safe work. Folks, what we do every day is often so dangerous that I cannot emphasize it enough—do an apprenticeship or send your operators to training classes so you can perform your job professionally! Company owners, send your operators to training and you will get employees who perform well at the job site! In Europe, there are many options for training and apprenticeship programs. In the U.S., CSDA offers introductory and advanced operator training as well.




**MICHAEL FINDEIS**  
*IACDS President*

Although the number of vaccinations is now increasing here in Europe, an end to the travel restrictions is not in sight just yet. In this context, the news that Bauma will be postponed from April 2022 to October 2022 is a good one, because it gives us reasonable hope that we can all meet again at Bauma in October 2022. The bad news: The Oktoberfest will certainly not take place at the same time.

Please stay safe and get your vaccination!

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## What Does the Post-COVID Concrete Renovation Market Look Like?

By: Erin O'Brien

**W**e are almost there – cities and states are opening back up, vaccinations are rolling out, projects that were put on hold are moving forward and mask mandates are being lifted all over the country. The largest event in construction, World of Concrete, is happening June 8-10, 2021. We are finally seeing signs of progress and leaving the COVID year in the rearview mirror. So now what? We have adapted, gone part virtual, rethought our business plans and are still desperately searching for employees to tackle the influx of work coming our way. But what does this new construction market look like for the concrete renovation industry?

### THE MARKET—WHERE ARE WE GOING?

We were poised for such a promising 2020. The construction industry added more than \$900 million to the U.S. economy for Q1 2020 – the highest since the 2008 recession. The industry employed 7.64 million people in February 2020, also the highest level since 2008. Then COVID-19 hit. The industry lost \$60.9 billion in GDP and jobs decreased to 6.5 million, effectively wiping out four years of job gains and two years of GDP growth.

The construction and engineering industry however learned from the 2008 recession and was better equipped than many other industries to weather this storm. Some market segments were hit harder than others however, and geographic location (and local COVID response) played a big role in determining the amount of work still available. Project delays, cancellations, difficulty obtaining permits, cost of materials and procuring them has slowed down most of the industry to varying degrees.

Fortunately, we are not facing the same challenges as the residential construction market, who is grappling with a severe shortage of materials, although the commercial and industrial markets are not immune. Supply chain disruptions have made certain materials scarce, creating long lead times and cost overruns, putting



additional pressure on contractors trying to service their clients, pay their employees and still have something left for themselves. The Paycheck Protection Program (PPP) loans may provide some relief until projects ramp up and invoices are paid. More on those later.

In a postelection poll conducted by market research firm Deloitte, 70% of construction and engineering leaders agree that new infrastructure projects, if fully approved, will help restart the economy. However, subcontractors need to be wary – as competition between subcontractors increases, many could be driven out of business, especially smaller and less diversified firms. General contractors may choose to perform some of the work they normally sub out. It will be more important than ever as a business owner to embrace digital marketing and leverage their existing relationships to solidify their place in the market as a valuable, knowledgeable, professional and integral part of the jobsite.

### THE INFRASTRUCTURE PROPOSAL

President Biden's proposed \$2.25 trillion infrastructure bill continues to provide optimism within the industry—depending on the final inclusions. The bill—which could have party agreement as soon as Memorial Day—would in part fund infrastructure projects over an 8-year time frame, potentially including road, bridge, airport, Army Corps

of Engineers works, civil, public education, rail and water improvements, as well as flood control mitigation projects, clean drinking water, renewable energy projects and broadband construction and improvements. Some possible spending amounts have been made public, including \$299 million for roads and bridges and \$44 million for airports.

### LABOR SHORTAGES AND CHALLENGES

While this would mean an influx of new projects for the commercial and industrial construction sector, labor shortages continue to be a concern. As many companies had to lay off employees during the pandemic, some are not ready to commit to hiring and training new full-time operators. Given the demand for projects, along with many firms trying to hire workers whenever jobs are finally released in 2021, contractors may experience labor challenges all over again.

"I would predict that many of you will continue to suffer difficulty finding truly motivated and skilled workers," said Anirban Basu, chief economist at the Associated Builders and Contractors. "One thing that has happened in past recessions is that many construction workers who lost their jobs left the construction industry altogether."

One little-known solution for this labor shortage is a program called the Work Opportunity Tax Credit. It's been around



for a number of years but was extended in December's stimulus bill through the end of 2025. The credit — which reduces the amount of federal taxes owed — can be a lucrative recruiting tool for small businesses that want to pay hiring bonuses.

The tax credit is available to employers that hire certain types of employees, such as those coming off welfare or a “qualified” veteran, which includes ex-service personnel who were unemployed for anywhere from four weeks to at least six months over the last year. The list of eligible workers also includes ex-felons, qualified Social Security insurance recipients or those who have been receiving long-term welfare assistance. The credit is also available to employers who hire a “qualified long-term unemployment” recipient, defined as someone who has been unemployed for not less than 27 consecutive weeks at the time of hiring and received unemployment compensation during some or all of the unemployment period.

The credit can reduce your taxes anywhere from \$2,400 to \$9,600 per employee, depending on which group the qualified employee belongs to. For most hires, however, it is calculated at 40% of their yearly wages, up to a total credit of \$6,000. The person must be retained for at least 400 hours during the year to get this amount, otherwise the credit may be reduced. Each state has different requirements and filing procedures, so be sure to check with your CPA or accountant when filing your taxes.

#### PPP LOANS

Many firms applied for and received a PPP (Paycheck Protection Program) Loan in 2020. As those payments are starting to materialize, this is a great time to look where you need to invest this cash influx. According to Benjamin Johnston, Chief Operator Officer of financing firm Kapitus, “A second PPP draw is a great opportunity for construction companies that have seen a drop in business due to COVID-19 to stabilize their financial situation. The capital is intended to help business owners pay employees, pay outstanding rent and other bills and invest in reopening and getting back to business. This is a 5-year loan carrying a 1% interest rate so it is some of the lowest cost financing small businesses will find. Much, if not all, of the loan is likely to be forgiven just by paying bills and employees, so the program has tremendous benefits with limited downside. However, 60% of the forgivable amount



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must come from payroll, so if your business has reduced its staff significantly from pre-pandemic levels, not all of the loan may be forgiven.”

So what can construction firms do to make sure they're on solid financial footing in 2021? Johnston suggests, “As businesses look to take advantage of the growth opportunities in the market, it is important that they not let their expenses get too far ahead of anticipated work. That being said, when a company needs capital to staff-up and purchase equipment to in order to add new jobs, it is important to have a financial partner who can supply needed capital quickly and dependably. If you anticipate the need for growth capital in the coming year, talk to your bank or to a small business finance company, like Kapitus, to determine what you qualify for and what products are right for you.”

While we are still facing a great deal of uncertainty, there are encouraging signs of a steady recovery over the next year. This rebuilding period will not be without challenges, but there are reasons to be optimistic. Connected technologies and an

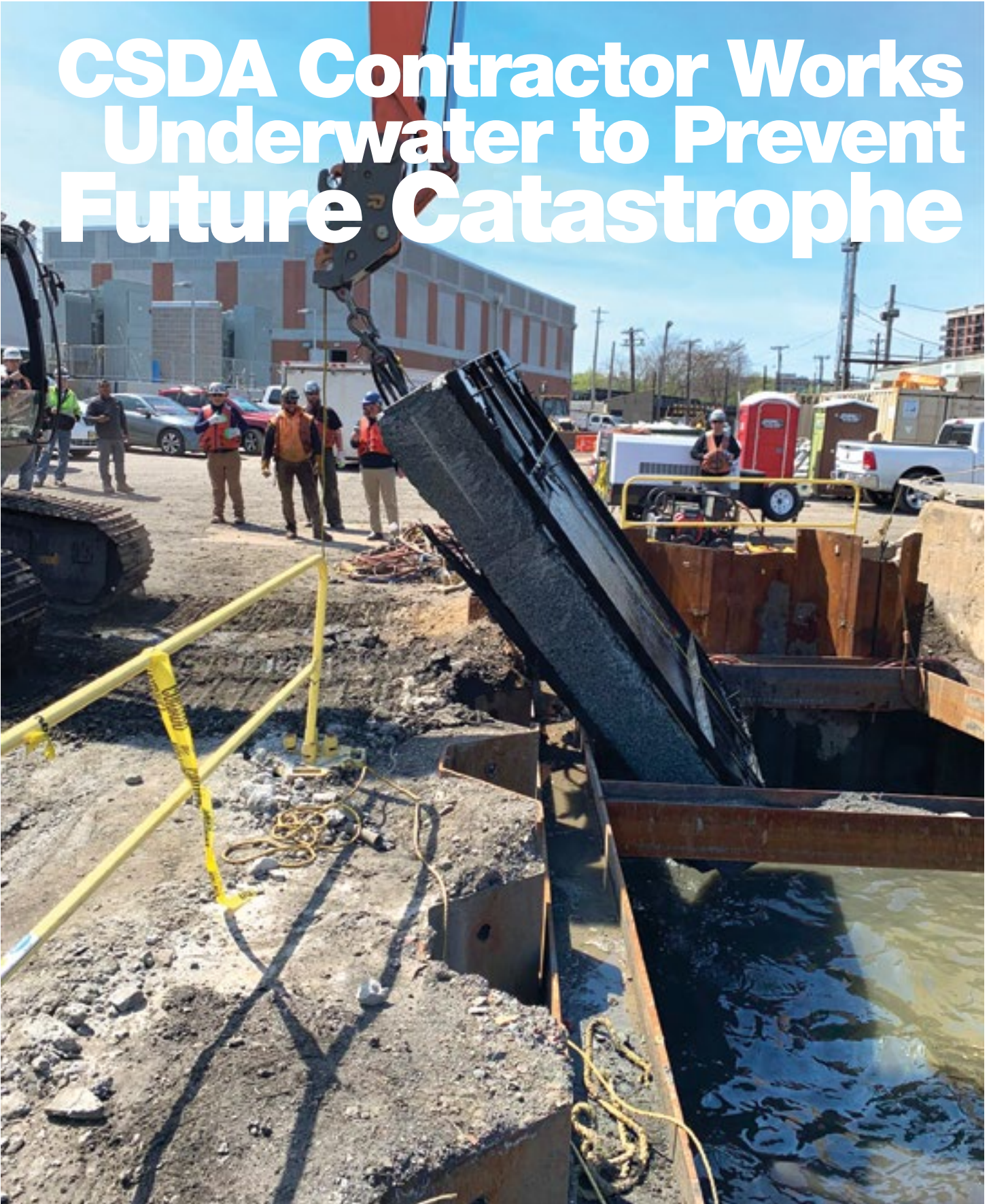
increase in associated investments may help firms realize new operational efficiencies. New business models and an increase in M&A activity are further accelerating the shift toward digital and operational efficiencies. Finding, retaining and training employees will be paramount towards this shift, and many concrete construction firms who have been slow to embrace and utilize new digital technologies and platforms should seize this opportunity to do so now.

*Erin O'Brien is the Vice President for O'Brien International, the association management company for the Concrete Sawing & Drilling Association, and CSDA's Executive Director. She has worked in the concrete renovation industry for over 10 years. Prior to joining the O'Brien International team, she held various marketing positions with several companies in the healthcare industry, including a Fortune 100 company. O'Brien received her Bachelor of Science degree in Athletic Training from Ohio University and her Master of Science degree in Applied Physiology and Kinesiology from the University of Florida. She is a regular contributor to Concrete Openings magazine. She can be reached at [erin@obrienintl.com](mailto:erin@obrienintl.com).*





# CSDA Contractor Works Underwater to Prevent Future Catastrophe







**O**n the Hudson River waterfront in Jersey City, New Jersey, a 100-foot wide by roughly 1,700-foot-long canal runs adjacent to the tracks of NJ TRANSIT's Hoboken Yards. The canal, known as the Long Slip, was previously used for shipping traffic, but had been inactive for over 40 years. When Superstorm Sandy made landfall in New Jersey in 2012, it caused the banks of the Long Slip to overflow, causing enormous flood damage to the Hoboken Yards, halting NJ TRANSIT services for weeks during the repair efforts. The Long Slip project, initiated in 2019 with a hefty \$40-million budget, plans to eliminate the Long Slip as an intermediary for the flood water which would expand NJ TRANSIT's capacity to operate during and recuperate from these intense storm events.

NJ TRANSIT awarded general contractor Walsh Construction Co. with the \$40 million contract for the first phase of the renovation of the Long Slip, which consists of work both above and below the water. Fortunately for Walsh Construction, CSDA contractor Walker Cutting Services, a division of Walker Diving Underwater Construction, is headquartered just a short drive away in Hammonton, New Jersey and had the knowledge and manpower for the underwater element of this job. The task was removal of an 11.5-foot high by 7-foot wide slab of concrete that ranged in depth from 18 inches to 32 inches. Removal was necessary to create a new opening in the outfall structure in the canal, 10 feet below the surface of the water.

The first step of this project for the divers was removing 40 yards of debris and mud that was obstructing access to the future opening. Complicating the situation even more was an almost complete lack of visibility in the water, as divers could see only a foot in front of them at any given time. In a team effort, Walker Diving Underwater Construction and Walker Cutting Services worked together to remove the silt, trees, timber and an old overpour of concrete from the site. Because of these difficulties, it was determined that the divers would need a template to accurately locate and drill the wire access holes. Walker's in-house metal fabrication shop designed and built a frame that was used as a template and mounting frame for all the work, including the core drilling of the wire access and pick holes and mounting the wire saw transition wheels.

Walker Diving divers then installed the metal template underwater onto the wall and using a Diamond Products M4 Core Rig with









a hydraulic motor with K2 Diamond bits. They core drilled four 2-inch diameter holes in the slab that ranged from 18-inches to 30-inches thick to prepare for wire access, and two 6-inch diameter by 18-inch holes for pick holes to facilitate the removal of the slab. Divers attached the wire transition wheels to the template and strung the wire to the operators to begin making the four cuts required to move the piece in a safe manner. Once cuts were completed with the Hilti 3018 Hi-Cycle wire saw and the piece was strapped in securely, the wire chokers were attached through the pick holes and connected to an excavator on the surface, which removed the massive section in one lift. The piece, approximately 24,150-pounds, was safely removed from the wall and placed on the topside for removal and disposal.

Diamond wire sawing was the only choice for this project due to extremely low underwater visibility, strict tolerances and limited access to the specific work area. Large hammers on backhoes or excavators would have put too much vibration on the slab and would have ruined the structural integrity of the outfall structure. Furthermore, the lack of visibility in the water would have caused anyone operating the hammer to be unable to see what they were hammering. The aforementioned limited visibility underwater was far from the only complicating factor on this job. Divers also were faced with inclement weather and limited access in the culvert they were working in. Even worse, the silt in the canal would constantly filter back into the workspace, requiring its removal several times to complete the core drilling and wire sawing. The limited visibility left for surprise obstructions underwater, such as









timber sheeting and steel sheeting that had to be core drilled and cut with the wire saw to detach it from the wall that was being removed. In total, over 60 square feet of concrete was wire sawed underwater and removed with the extra debris and rebar that was attached. To prevent skin exposure to the contaminated environment, divers wore dry suits that mated to their helmets and all topside personnel wore life jackets because of their proximity to the water and the risk of possibly falling and drowning.

To everyone's satisfaction, the project was completed two days early and on budget. Both teams agreed the project was a huge accomplishment and a successful collaboration. Doug Walker, Director of Cutting of Walker Cutting Services, was pleased with the outcome of the project. Walker said, "The project was a success because of the teamwork of Walker's divisions; Walker Diving, Walker Cutting and our metal fabrication team. Doing all of the work in-house gave us the advantage of controlling every aspect of the project and allowing the general contractor to limit their risk and involvement."

Walsh Construction, Co. chose Walker Cutting Services and Walker Diving because of their ability to work together as a team, but also because their reputation for accomplishing complicated and demanding jobs. CSDA is proud to represent companies that are as hardworking and experienced as a team like this.

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## COMPANY PROFILE

Walker Cutting Services is located in Hammonton, New Jersey and was established in 2019. They have a fleet of 5 trucks and 15 employees. Management at Walker Cutting Services has a combined total of over 60 years of experience in the concrete cutting field. They offer wire sawing, wall sawing, slab sawing, core drilling, curb sawing and sawing and sealing. Most of their technicians are CSDA Certified Operators with between 20-30 years of their own experience. They have been a CSDA member and a CSDA Certified Company since 2019.

Walker Diving Underwater Construction has been in business since 1957, and under their current name and ownership since 2009. They boast 14 dive stations, including trucks, trailers, conex boxes and barges all capable of supporting multiple divers. They also have four barges with self-picking spuds outfitted specifically to support diving operations. They offer commercial diving, underwater construction and specialty marine construction as well as vast diving experience and specialized equipment.

## RESOURCES

### General Contractor

Walsh Construction Co.

### CSDA Contractor

Walker Cutting Services

**Contact for Story:** Doug Walker

**Email:** [DWalker@walkercutting.com](mailto:DWalker@walkercutting.com)

**Tel:** 609-704-8650

**Instagram:** @WalkerCuttingServices

**Website:** [www.walkercutting.com](http://www.walkercutting.com)

### Methods Used

Core Drilling, Wire Sawing





# Rogue Supervisor: How to Defend Against OSHA Citations Involving Supervisory Misconduct

By: Mark A. Lies, II and Adam R. Young



**M**any accidents, safety incidents and OSHA citations in the construction industry are the result of misconduct or poor performance by a foreman or supervisor -- failing to supervise employees for compliance with safety rules, failure to correct violations of safety rules or failure to follow safety rules themselves. OSHA uses admissions from foremen and supervisors to establish "employer knowledge," that the employer knew or should have known of the alleged violation, a crucial element to any OSHA citation. Under most circumstances, this element can be satisfied when a supervisor, manager or foreman, who are agents of the employer, witnesses an employee exposed to a hazard and does nothing about it. But what happens when

the supervisor, manager or foreman is the individual violating OSHA's regulations (and the Company's rules)? In the past, OSHA has tried to use the supervisor's bad act to impute liability on the employer, arguing that the supervisor's own knowledge of his bad act is sufficient to impute or infer knowledge of that bad deed onto the employer. But the existence of a rogue supervisor may create an affirmative defense that employers can argue and informal conferences and prove in litigation.

### OSHA BURDEN TO PROVE EMPLOYER LIABILITY

In order to prove a violation of an OSHA safety or health regulation, OSHA must show by a preponderance of evidence the following elements:

- the regulation or a generally recognized industry safety practice or the employer's own safety policy applies to the safety or health hazard (e.g., fall, confined space, machine guarding, etc.) which OSHA observed at the worksite; and
- the requirements of the regulation or industry practice or employer policy were not met at the worksite (e.g., there was no fall protection, no confined space program, no machine guards in place, etc.); and
- one or more of the employer's employees were actually exposed to the hazardous condition so that the employee could have been injured by the hazard. NOTE: On



multi-employer worksites, an employer may be liable for exposure of another employer's employee to the hazard if certain conditions are met and

- the employer knew, or with the exercise of reasonable diligence, should have known of the violative conditions.

Employers are not strictly liable under the Act or a particular OSHA standard simply because a violative condition exists, or an accident has occurred. Because many employers are legal entities, such as corporations, and are not individuals, it may be difficult to determine what a corporation "knows." Therefore, the case law involving OSHA citations has established a general rule that the actual or constructive knowledge of an employer's agent, such as a foreman or supervisor, can be imputed to the employer. In other words, if OSHA can prove that a supervisor or foreman knew or, with the exercise of reasonable diligence, should have known that a violative condition exists, OSHA may be able to satisfy the employer knowledge element of its burden of proof in a contested case.

#### CASE LAW ESTABLISHING AND LIMITED THE "ROGUE SUPERVISOR" DEFENSE

To satisfy its burden of establishing "employer knowledge," OSHA often tries to use a supervisor's own bad deeds to impute direct knowledge to the employer. In essence, OSHA's view is that because the supervisor engaged in the dangerous act, his knowledge of that dangerous act is sufficient to establish employer knowledge. That position of "strict liability" for supervisor acts has been addressed by multiple federal courts of appeals. Under the current case law, employers may be able to argue that a "lone wolf" or "rogue supervisor" engaged in unforeseeable misconduct that cannot legally be imputed to the employer. In *ComTran Group, Inc. v. DOL*, 2012 U.S. App. LEXIS 15023 (11th Cir. July 24, 2013), the Eleventh Circuit addressed the issue of whether it is appropriate to impute a supervisor's knowledge of his own violative conduct to his employer under the Act, thereby relieving the Secretary of his burden to prove the "employer knowledge" element of his prima facie case. The Eleventh Circuit found against OSHA, holding that if this approach were to apply, the Secretary would only have to meet three of the four evidentiary elements of the prima facie case, and would

not have to prove the "employer knowledge" element. Analyzing prior Federal appellate court decisions, the Eleventh Circuit stated that: We say that a supervisor's knowledge is "generally imputed to the employer" because that is the outcome in the ordinary case. The "ordinary case," however, is where the supervisor knew or should have known that subordinate employees were engaged in misconduct, and not, as here, where the supervisor is the actual malfasant who acts contrary to the law. Further, seeming to support the unavoidable supervisory misconduct defense, the Eleventh Circuit found that "[i]f a violation by an employee is reasonably foreseeable, the company may be held responsible. But, if the employee's act is an isolated incident of unforeseeable or idiosyncratic behavior, then common sense and the purpose behind the Act require that a citation be set aside." Finally, the Court stated that a supervisor's "rogue conduct" cannot be imputed to the employer merely because the supervisor is the violator. As a result, the Eleventh Circuit remanded the matter back to the Review Commission to require the Secretary to prove the "employer knowledge" element and permit the employer to establish its defenses to the citation. The Fifth Circuit has issued case law agreeing with the "supervisory misconduct" principle, holding that "a supervisor's knowledge of his own malfasance is not imputable to the employer where the employer's safety policy, training and discipline are sufficient to make the supervisor's conduct in violation of the policy unforeseeable."

Unfortunately, the Eleventh Circuit has walked back the supervisory misconduct defense when the supervisor himself or herself is simultaneously involved in violative conduct with a subordinate employee and imputes employer knowledge of the hourly employee's misconduct. In *Quinlan v. Secretary, U.S. Department of Labor*, No. 14-12347 (11th Cir. January 8, 2016), the Eleventh Circuit, that carved out the exception for the "lone wolf" supervisor, nonetheless held a supervisor's knowledge of a subordinate employee's OSHA violation is imputed to an employer when a supervisor working for the employer is aware of the subordinate employee's OSHA violation and the supervisor is simultaneously involved in the violation.

#### IV. HOW TO RAISE AND PROVE THE ROGUE SUPERVISOR DEFENSE

Under the typical "unavoidable employee misconduct" defense that applies to hourly employees, the employer must prove the following elements:

- employer created work rule to prevent violation at issue;
- adequately communicated that rule to its employees;
- took all reasonable steps to discovery noncompliance and
- enforced the rule against employees when violations were discovered.

Supervisory misconduct, or the "rogue supervisor," is proved through the same elements. The employer had a safety rule in place, trained the supervisor on the safety rule, supervised for violations of the policy and enforced the safety rule when it found violations. Because supervisors are expected to follow and enforce an employer's safety rules, the "unavoidable supervisory misconduct" defense is often more difficult to establish. Specifically, the employer often must present evidence to show that it monitored and audited the supervisor for compliance with the safety rule, the supervisor has no prior history of engaging in any safety violations or unsafe behavior, and the employer could not have anticipated that the supervisor would have engaged in the unsafe behavior. Because the Eleventh Circuit's decision rejected OSHA's argument that an employer is strictly liable whenever a supervisor engages in unsafe behavior, an employer now has a more viable argument that it should not be held liable when a trusted supervisor engages in "unforeseeable or idiosyncratic behavior" or "rogue conduct." Since the burden of proof for this affirmative defense will remain on the employer to show that the supervisor's bad deed was in fact "unforeseeable or idiosyncratic," it will be necessary for the employer to conduct audits or other evaluations of supervisor performance to establish the supervisor was compliant in prior situations.

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*Mark A. Lies, II, is a partner with the law firm of Seyfarth Shaw LLP, (312) 460-5877, mlies@seyfarth.com. He specializes in occupational safety and health and related employment law and civil litigation. Adam R. Young is a partner with the law firm of Seyfarth Shaw LLP, (312) 460-5538, ayoun@seyfarth.com. His practice focuses on occupational safety and health matters, employment and commercial litigation.*





Tech Talk is a regular feature of *Concrete Openings* magazine, focusing on equipment, maintenance and technical issues of interest to concrete cutting, polishing and imaging contractors. Readers wishing to have a particular subject addressed can call or email CSDA with their suggestions at 727-577-5004 or [editor@concreteopenings.com](mailto:editor@concreteopenings.com).

# The Principles of Early Entry Joint Cutting

By Sid Kilgore

**E**arly entry is a cutting method that cuts joints in new concrete slabs soon after the slab has been finished. Why do we cut these joints? As concrete cures, it contracts rapidly and its changing shape results in cracks that relieve the stress. If left uncut, the concrete will crack randomly. By cutting joints, we create a weak point that tells the concrete precisely where to crack. Why early entry? When we cut the joints sooner rather than later, you are more likely to avoid random cracking, assuming you cut the joints correctly.

Early entry has been around for quite a while now – since at least 1988 – and is a proven method. It was marketed through dealers to concrete finishers, which then left many professional cutters out of the equation and missing a previously lucrative segment of their business. That market approach has started to change along with the technology that is available.

There are four parts/principles that make early entry cutting so successful.

### TIMING

The timing of early entry joints is crucial. Early entry sawing is done soon after a slab is finished. Once a slab reaches just a few hundred psi (sometimes less), it can be cut with an early entry system. Because you are cutting earlier, your cut does not need to be as deep. The American Concrete Institute specifies a cut 1/10th the total slab depth with a minimum of one inch. This standard is used on many large jobs across the country.





However, always make sure you cut to the depth specified for each specific job. The proper timing and depth of cut gives you the best odds to avoid random cracks.

#### SKID PLATE

The importance of the skid plate is to keep the concrete whole – to prevent any kind of chipping at the surface of the cut. This is done by pressing slightly on the concrete surface with the smooth, flat surface of the spring-loaded skid plate. That's why it's important to inspect the condition of your skid plate before each use. The blade slot and bottom surface should be free of burrs and excessive wear.

#### UP-CUTTING

The importance of up-cutting is threefold. The primary and most important function is to clear the cut of as much concrete dust as possible. Although not the original intent, lofting the dust up and forward assists with dust collection by vacuum, which has grown in importance in recent years. Second, with up-cutting the rotation of the blade helps keep the blade in the cut rather than the blade acting like a wheel that might want to ride up and out of the cut. Finally, up-cutting works in conjunction with the skid plate to avoid chipping. The rotation of the blade is helping to keep the saw and skid plate pressed firmly against the concrete as the joint is cut from the bottom up.

#### BLADE SELECTION

The importance of blade selection is just as important here as any other specialty cutting job, but there are a couple of key differences when cutting joints using early entry. First, early entry joints must be crisp and clean. If your blade chips the surface, the work could be deemed unacceptable. Second, your work piece (the slab) is changing all the time. Your pace of work must keep up with the timing of the curing slab, and your blade is important in that regard. Of course there are aggregate, concrete mix/additives and weather conditions to consider as well. Make sure you have options on hand in the event you need to pick up the pace.

*Sid Kilgore is the Northeast Regional Sales Manager for Diamond Products Limited. He is a member of the CSDA Manufacturer, Membership and Marketing committees, as well as a past CSDA Board Member and Committee Chair.*



“We pride ourselves on having technology that increases our productivity while decreasing risk of injury to our guys. The Vacuworx system not only fits right in with our work vision, but has decreased our diamond blade use and labor costs. Now that’s bad ass!”

— Duke Long, Interstate Sawing & Demolition

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## Blount, Inc. Rebrands as Oregon Tool

Blount, Inc. unveiled a new corporate name that positions it for growth while honoring its heritage: Oregon Tool. The global manufacturer of professional grade cutting tools and equipment selected Oregon Tool as its new name to harness the power of its pioneering origin story.

The company was founded by Joe Cox in 1947 in the basement of his Portland home. Inspired by nature – a timber beetle larva to be exact – Cox studied the creature to better understand how to cut wood more efficiently. With his learnings, he designed a new saw chain that was modeled after the larva's alternating C-shape jaws. He called it the "Cox Chipper Chain" and started the Oregon Saw Chain Corp. to produce it. Cox's saw chain revolutionized the timber industry, and it remains widely used today around the globe.

Over the years, the company has grown into a multinational organization with numerous acquisitions and mergers. Today, the newly named Oregon Tool has over 3,000 team members and sells thousands of products in more than 110 countries across multiple consumer brands, among them Oregon, Woods and ICS Diamond Tools. The company is the world's #1 manufacturer of saw chain and guide bars for chainsaws and diamond saw chain for concrete and pipe, a leading manufacturer of agricultural tractor attachments, and the leading original equipment manufacturer (OEM) supplier of first-fit and replacement parts.

"We are certainly proud of where we've been and where we are, but we're even more excited about where we're going as Oregon Tool," said Oregon Tool CEO Paul Tonnesen. "Because Oregon is the undisputed leader in the global bar and saw chain market, we are confident the inspiration and momentum inherent in the name Oregon Tool will help our organization achieve our goals in the years ahead, including aggressive growth across brands and launching into adjacent categories. We will also go beyond serving the professional end user and expand how we're serving the do-it-yourself consumer."

In addition to launching into adjacent categories, the company's growth strategy includes: evolving its branding across product lines, building on its legacy of innovation and leaning into global stewardship to promote the sustainability of the industry as well as to support those who work in it.

The shift from Blount, Inc. to Oregon Tool will be effective June 2. Tonnesen said that the brands and reliable, high-quality products that customers have come to know and trust will remain the same – they will simply operate under the umbrella of Oregon Tool instead of Blount, Inc.

**For More Information**  
Tel: 503-653-8881  
Email: [oregontool@blount.com](mailto:oregontool@blount.com)  
[www.oregontool.com](http://www.oregontool.com)

## Screening Eagle Welcomes Darren Burford as New Chief Sales Officer

Screening Eagle Technologies is excited to welcome Darren Burford to the leadership team in the newly created position of Chief Sales Officer.



Darren enters Screening Eagle in a steep growth phase to lead global sales and drive its commercial go-to market strategy. Darren brings a wealth of IoT and SaaS experience with over two decades of sensor and software sales leadership. He will oversee global sales operations, sales marketing and customer service, reporting directly to Co-Founder and CEO Marcel Poser.

"Our mission to protect the built world with software, sensors and data requires passionate leaders driving industry innovation and serving our clients with customer-centric solutions," said CEO Marcel Poser. "Darren is a seasoned technology sales leader with a proven track record for growing revenue and scaling teams for customer success. He's been an early IoT adopter in connected sensors and software and shares our predictive asset maintenance and sustainable infrastructure vision. We are thrilled to welcome Darren to Team Eagle!"

Darren spent over 20 years in the IoT connected building and lighting industry having built up business operations at Andromeda Telematics (acquired by Schneider Electric) and held various commercial leadership roles at Schneider Electric (EPA: SU) and Dialight (LON: DIA). Most recently, Darren was the Chief Revenue Officer at GeoSLAM, a privately-held UK company in the 3D geospatial market focused on the Construction, Engineering and Mining industries.

"Screening Eagle is a disruptive technology company pioneering the InspectionTech revolution" - explains Burford. "I am impressed by the product-driven leadership and software-first innovation, and the company's values resonate strongly with my own. I can see many opportunities ahead where I can contribute and add value to both the team and the customer experience."

**For More Information**  
**Contact: Sonia Giron**  
**Tel: +41 43 355 38 00**  
**Email: [media@screeningeagle.com](mailto:media@screeningeagle.com)**  
**[www.screeningeagle.com](http://www.screeningeagle.com)**

## Siegenthalerconsulting GmbH Announces Expanded Range of Services and a New Website

Ernst Siegenthaler, CEO of Siegenthalerconsulting GmbH, announces that his consulting firm has been converted from a sole proprietorship into a GmbH. Founded in September 2017, Siegenthalerconsulting has seen constant growth and an increased demand for diamond wire application training. The company can now design and deliver special diamond wire sawing machines and additional devices used in the dismantling of nuclear power plants. They offer a wide range of special diamond wires that meet the highest of demands, as well as a wealth of competent and project-related advice.

Siegenthaler says, "Despite the ongoing and very demanding challenges posed by the existing pandemic, we look to the future with confidence and high motivation and look forward to every contact and inquiry that we receive."

**For More Information**  
**Contact: Ernst Siegenthaler**  
**Tel: +41 79 673 1917**  
**Email: [sigi@siegenthaler-consulting.com](mailto:sigi@siegenthaler-consulting.com)**  
**[www.siegenthaler-consulting.com](http://www.siegenthaler-consulting.com)**



## Brokk Inc. Partners with Vacuworx to Offer Vacuum Lifting Attachments in North America

Brokk, the world's leading manufacturer of remote-controlled demolition robots, announces the addition of two Vacuworx lifting attachments to its lineup in North America. The vacuum lifting systems, optimized for use with Brokk machines, are capable of attaching to and lifting concrete, granite, marble, metal, steel and other flat, non-porous materials. With the ability to lift up to 2 metric ton, the attachments share the safety- and efficiency-improving benefits of Brokk machines and increase the versatility of the robots.

"We strive to give our customers a multitude of ways to get more out of their machines. This is often achieved with the wide variety of attachments we offer. So, the Vacuworx system made perfect sense," said Mike Martin, Brokk Inc. vice president of operations. "We've heard amazement from our customers over how simply the system works, while boosting productivity and providing a huge safety improvement over manual methods. The attachments have the potential to pay for themselves right on the job by speeding up the work."

Just like Brokk machines, the vacuum lifting attachments improve safety and can save contractors time and money by reducing both the number of cuts and the number of people required. For example, a job may require concrete removal from an existing building for utility installation. Because it's an interior job, the contractor may be limited in equipment size and therefore lifting capacity. As a result, crews may only be able to cut and remove 3x3-foot blocks of concrete at a time. In the same case, a Brokk could be paired with a Vacuworx attachment and allow the lifting of 3x6-foot blocks, resulting in half the necessary cuts. This saves time, diamond blade and labor costs. In addition, the contractor can bid the job more competitively, all resulting in the potential for a high ROI.

**For More Information**  
**Contact: Mike Martin**  
**Tel: 800-621-7856**  
**Email: [mike@brokkinc.com](mailto:mike@brokkinc.com)**  
**[www.brokk.com](http://www.brokk.com)**

## Hilti North America Senior Vice President of Marketing Rafael Garcia Promoted to Global Role

Rafael Garcia, Senior Vice President of Marketing of Hilti North America, has been promoted to the Hilti Group Business Unit Head for Direct Fastening effective January 2022. He will be relocating to the global headquarters in the Principality of Liechtenstein.

As marketing head, Rafael has been instrumental in establishing and driving strategy execution while scaling and professionalizing the marketing function to bring value to Hilti customers through an innovative portfolio of hardware, software, and service solutions. He has been in this role since 2013 and was among the first wave of Hilti team members moving to Texas when the organization relocated headquarters operations to Plano in 2014.

Rafael joined Hilti 20 years ago in a finance role at Group headquarters and went on to be a project and product manager in the Direct Fastening Business Unit. In 2017, he relocated to the U.S. as an account manager then regional manager, marketing director and later senior vice president of marketing.

Rafael holds a M.S.E. in Mechanical Engineering from the Federal Institute of Technology, ETH Zurich. He and his family will relocate to the Hilti Group Headquarters area for this assignment.

**For More Information**  
**Contact: Danielle Wilson**  
**Tel: 972-202-6178**  
**Email: [Danielle.Wilson@hilti.com](mailto:Danielle.Wilson@hilti.com)**  
**[www.hilti.com](http://www.hilti.com)**

## Aggregate Technologies Named a Top-performing U.S. Construction Company by ABC

Aggregate Technologies of Houston was ranked 54th on Associated Builders and Contractors' 2021 Top Performers list with Special Designations, which recognizes ABC member contractors' in safety, quality, diversity, project excellence and special designations, ranked by work hours. Aggregate Technologies earned the EIC award and achieved STEP gold or higher in 2020.

Published as a supplement to Construction Executive magazine, the ABC Top Performers lists identify the Top 200 Performers, Top 75 Trade Contractors, Top Electrical Contractors, Top Plumbing/HVAC Contractors, Top Specialty Contractors and Top 100 General Contractors and Top General Contractors Up to \$50 million, all of which have earned the elite Accredited Quality Contractor credential, as well as the Top Performers With Special Designations.

**For More Information**  
**Contact: Mitch Riordan**  
**Tel: 800-752-2729**  
**Email: [sales@aggregatetechnologies.com](mailto:sales@aggregatetechnologies.com)**  
**[www.aggregatetechnologies.com](http://www.aggregatetechnologies.com)**





## It's Time to Start Thinking about the 2021 GSSI Photo Contest

GSSI has received photos from every continent of the globe - geophysical surveys from the top of the world in Nepal, the bottom of the world in Antarctica, concrete inspection on the top of a sky scraper and archaeological investigations in caves. All of the amazing photos submitted illustrate your dedication to providing the highest level of GPR surveys.

Because of the incredible participation last year, we thought you might like to get a jump start on planning for the pictures you will enter this year. And to give you a little incentive, we are happy to share the prizes for this year's Photo Contest:

Grand Prize: DJI Mavic Air 2 Drone (est. retail value \$800)

2nd Place Prize: Your Choice: GoPro HERO9 Action Camera (Black) with Premium Accessory Bundle (est. retail value \$500) or Dyson Cyclone V10 (est. retail value \$500)

3rd Place Prize: Your Choice: Nintendo Switch 32 GB (est. retail value \$300) or Yeti Hopper Backflip 24 (est. retail value \$300)

### For More Information

Contact: GSSI

Tel: 603-893-1109

www.geophysical.com

## DDM Concut Announces the Addition of Lukasz Gasior to their Sales Team

DDM Concut is pleased to announce that Lukasz Gasior has assumed the role of Territory manager.

Lukasz will be responsible for the Michigan, Illinois, Wisconsin markets. Lukasz has a strong background in technical sales. Lukasz has spent the last thirteen years as a senior account manager to the masonry and restoration market. Prior to that, he was an account manager in the steel and metal market.

Lukasz's hobbies are cooking and golf. He lives in Palatine, IL along with his wife and 8-year-old daughter and 5-year-old son.

We are excited to have him as part of our team. Please join us in welcoming him.

### For More Information

Contact: Garry Henderson

Tel: 800-654-7224

Email: ghenderson@ddmconcut.com

www.ddmconcut.com



## Husqvarna and HTC: Combining the Best of Both Worlds

Husqvarna Construction today announces that the HTC products, services and solutions are now fully integrated into the global Husqvarna Construction offering to the surface preparation industry. The introduction of the rebranded range, promoted under the tagline "The Orange Evolution", is enhanced with the launch of brand-new products.

By combining two existing eco systems, the floor grinding customers will have a much wider choice of products, features and solutions at hand - all under one roof and one brand.

"We are thrilled to introduce the most comprehensive product range on this growing market for surface preparation. With this powerful combination we open up a whole new world of options for our customers," says Stijn Verherstraeten, Vice President Concrete Surfaces & Floors.

To further build on the strong heritage from HTC, Husqvarna Construction launches a series of product innovations, including a new family of high-performing polishing tools a tool holder "Multi" allowing to fit both Redi Lock® and EZchange™ tools a new portfolio of edge grinding tools for hand-held grinders a new range of chemicals for the creation and maintenance of polished concrete floors an enhanced process of the Superfloor™ method to polish concrete floors.

"We are committed to developing the floor grinding industry, we strongly believe in the benefits of polished concrete floors and we want to help our customers win interesting flooring projects as well as complete their work in the most productive, sustainable and safe manner," said Stijn Verherstraeten.

### For More Information

Contact: Cate Stratemeier

Tel: 913-928-1442

Email: cate.stratemeier@husqvarnagroup.com

www.husqvarnagroup.com





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## Hilti Expands Digital Services Offering with Launch of On-Demand Training Platform for Contractors

A global leader providing innovative tools, technology, software and services to the commercial construction industry has launched Hilti Academy, a comprehensive on-demand training platform for contractors. The announcement today, affirms Hilti's investment in the digital transformation of the construction industry and strengthens its leadership as a provider of productivity solutions.

Hilti Academy is a digital learning platform that offers contractors access to on-demand when it is most convenient. The 30 to 60-minute courses cover various topics including, powder actuated and gas actuated operator training, health and safety trainings, and Adhesive Anchor Installer certification pre-training with more topics such as firestop coming soon.

Anyone can access the Academy by using a current Hilti account or creating a new one. Most modules are completed fully online with an accompanying quiz. The platform automatically saves records for up to two years to download and print for records. Hilti Academy not only allows users to manage all Hilti education and records, it also allows the ability to manage team members' education by assigning learning modules and being able to monitor who has received their documentation.

**For More Information**  
**Contact: Danielle Wilson**  
**Tel: 972-202-6178**  
**Email: [Danielle.Wilson@hilti.com](mailto:Danielle.Wilson@hilti.com)**  
**[www.hilti.com](http://www.hilti.com)**

## EKKO Project™ - Unlock Powerful Visualization Tools with V6

Sensors and Software are excited to announce the release of Version 6 of EKKO Project™ GPR Analysis Software.

EKKO Project™ software allows you to easily generate insightful images from your GPR data and intuitively combine screenshots, external photos and other data images from your project into a GPR Summary report, delivering professional results to your clients or a record of your GPR survey for future reference.

Version 6 unlocks new powerful visualization tools that build on the organizing, data analysis and reporting capabilities of prior versions of EKKO Project.

**For More Information**  
**Contact: Sensors & Software Inc.**  
**Tel: 800-267-6013**  
**Email: [tds@sensoft.ca](mailto:tds@sensoft.ca)**  
**[www.sensoft.ca](http://www.sensoft.ca)**



## Aquajet Online: New Tool Provides Real-Time Data for Long-Term Success

Aquajet, a global leader in manufacturing Hydrodemolition machines, introduces Aquajet Online, a cloud-based system for equipment tracking, real-time diagnostics, data collection and analytics. Aquajet Online is accessible via a computer or smartphone and provides owners, operators and project stakeholders with a digital toolkit to maximize safety, security, productivity and machine utilization. Robust data collection and analysis tools also allow customers to track the long-term value of equipment and its impact on their overall operation.

"Aquajet Online is our answer to Industry 4.0," said Roger Simonsson, Aquajet managing director. "Location, efficiency and automatic features for your entire fleet are available at the touch of a button. The system controls and monitors key functions through a user-friendly digital platform and provides actionable data, not just raw numbers, to help customers make positive changes for their business."

Aquajet Online tracks all registered machines in a list or on a map with GPS position for easy planning and deployment. The interface also reports serial number, active alarms, auto status, run time/auto time and fuel levels/temperatures in real time for each machine. This allows at-a-glance insight into machine status as well as remote diagnostics, when necessary, to help avoid costly downtime. Additionally, the system allows for remote asset management — from sw/fw updates and parameterization to control of specific machine functions.

In addition to real-time information, Aquajet Online collects and stores data on each enrolled machine to help owners and project stakeholders track equipment effectiveness and key performance indicators to evaluate success. Data is securely stored, according to numerous ISO standards, for at least five years and can even be retrieved after the machine has been decommissioned. Historic data can also be used to gain financial insights on the machine's overall value to the company as well as help identify the cause of maintenance issues for faster diagnosis and resolution. Data analytics is available through the system, making retrieval and evaluation of important information quicker and easier.

"As the industry continues to change, contractors and equipment operators need to be able to look beyond today's jobsite," Simonsson said. "Aquajet Online allows them to not only keep track of what is happening right now, on the jobsite, but also evaluate the overall impact each piece of Hydrodemolition equipment has on their process. With that information, they can optimize their operation for long-term success."

**For More Information**  
**Contact: Roger Simonsson**  
**Tel: +46-383-246613**  
**Email: [roger.simonsson@aquajet.se](mailto:roger.simonsson@aquajet.se)**  
**[www.aquajet.se](http://www.aquajet.se)**

## New Research Finds Abrasive Chainsaws Decrease Kickback by Nearly 50% When Cutting Pipe in Trench

For operators cutting pipe in the trench, circular cutoff saws have long been the preferred choice of power tool. But the comfort afforded by familiarity comes with the increased risk of kickback-related injury or death.

While circular cutoff saws have many safe applications, their inherent design exposes the operator to greater kickback-related hazards like head and neck injuries, lacerations or fatality when cutting pipe in the trench. According to a research study recently published in the International Journal of Occupational Safety and Ergonomics, abrasive chainsaws generate nearly 50% less kickback energy than circular cutoff saws – making them a safer choice in the trench.

ICS Diamond Tools, a division of Blount International, engaged a world-leading research university to conduct an independent research study to measure kickback energy for circular cutoff saws and abrasive chainsaws when cutting pipe in the trench.

ICS has always prioritized safety, and its parent company, Blount, pioneered saw chain designs and championed regulations for safer wood-cutting chainsaws in the 1970s. While there is now strong regulation in place for wood-cutting saws, there isn't currently any regulation specific to pipe-cutting in the trench, which exposed a need for data collection around the kickback risks.

The independent research study focused on pinch-derived kickback in an effort to better predict kickback risk to saw operators. Researchers developed a mathematical model and designed, built and tested a kickback machine to evaluate the phenomenon, focusing on differences between circular cutoff saws and abrasive chainsaws. The model allowed for the direct comparison, and results showed that kickback energy of the circular cutoff saw is nearly twice that of the abrasive chainsaw.

"Kickback events happen so fast, and not even the most experienced operator is able to react. But there's been a lack of data surrounding the kickback risks of different tools, and this independent research study helped solve that," said Todd Gerlach, director of product group, Concrete

Cutting and Finishing division at ICS. "Results found that using an abrasive chainsaw decreased kickback risk by nearly 50% when compared with a circular cutoff saw, making them a safer option for operators in the trench. We're proud to support this data and hope that it helps decrease injuries by informing operator choices and helping shape regulations for pipe-cutting in the trench."

Using an abrasive chainsaw also allows more control of the tool without having to reposition themselves around the pipe – or reposition the blade guard for the final cut as they do with circular cutoff saws, which is when the danger of kickback increases significantly.

Beyond reduced risk of serious injury, using an abrasive chainsaw to cut pipe in the trench also improves project efficiency by reducing excavation requirements.

To view a white paper detailing the full independent research study on how to decrease risk in the trench and learn more about safer alternative cutting methods, visit <https://icsdiamondtools.com/kickback-study>.

### For More Information

Contact: Nathan Dupont

Tel: 608-256-6357

Email: [ndupont@hiebing.com](mailto:ndupont@hiebing.com)

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



## Vacuworx Introduces Online Training Program for RC Series

The Vacuworx commitment to safety does not end with product development. Recognizing that implementing and enforcing safety protocols can sometimes be quite difficult, especially amid rising costs of doing business, Vacuworx has introduced an industry-leading training program to provide unparalleled access to information to help ensure that dealers and contractors are able to use and service its equipment correctly and safely.

The new online Vacuworx Training Center is available to anyone who operates or services Vacuworx Vacuum Lifting Systems through the company's website ([vacuworx.com](http://vacuworx.com)). The self-guided program currently includes five modules, each with course certifications, focused on the RC Series lifters including Installation, Daily Operation Checklist, Operation, Maintenance and Troubleshooting.

Within each module, topics are broken down into specific instructions using a mix of formats including videos, photos and text. Users are guided step-by-step on how to install Vacuworx lifters and pads, how to operate the equipment safely and troubleshoot any problems that may arise. The interactive learning process is designed to promote retention of the material presented. At the conclusion, users earn their



certifications by answering a set of questions that addresses each of the points covered.

The overall goal of this program is to provide convenient access to training at any time. It enables customers to quickly educate new hires rather than waiting to schedule in-person training from Vacuworx as well as standardize instruction for the entire team.

The mobile-friendly Rapid LMS platform can be used in the field to answer questions or troubleshoot problems. In addition, the Daily Operation Checklist module can be referenced to address any inspection concerns and eliminate equipment being shut down on the job.

According to Vacuworx owner Bill Solomon, "We are constantly looking for new ways

to make good on our promise to deliver the safest product for our customers. And we realize that part of that equation is making sure the user knows how to operate and take care of the machine properly. This new program allows us to be a resource to our customers whenever and wherever they need training."

### For More Information

Contact: Paula Bell

Tel: 918-591-3004

Email: [paulab@vacuworx.com](mailto:paulab@vacuworx.com)

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





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## Hilti Introduces Easy-to-Install Wedge Anchor to Cover More Applications and Jobsite Conditions

Hilti North America, a commercial construction-focused technology, software and services company, expands its industry-leading concrete anchor portfolio with the launch of Kwik Bolt-TZ2, a high-performing mechanical anchor that's easier-to-install and can be used in more application and jobsite conditions than any other expansion anchor currently on the market. The innovation is proven to make design easier for engineers and contractors, delivering up to 20% higher tension performance and approvals, while optimizing edge distance and spacing.

Taking the time to ensure a safer anchor design requires a thorough review of the specific applications and load requirements. The use of complex anchors like epoxy or heavy-duty mechanical anchors can be labor-intensive and expensive, which can lead to complex anchor redesign requests from project owners or contractors. The Kwik Bolt TZ-2 has been designed to help make anchoring easier by being the only fractional expansion anchor on the market to offer diamond core hole approvals, a combination drill bit that reduces fatigue on the installer and compatibility with Hilti's Adaptive Torque module that helps increase installation quality every time.

Additionally, the new KB-TZ2 has improved embedment depths for the thinnest of slabs and an expanded portfolio with 94 different diameter and length options, offering the right size anchor for more applications. This includes the first quarter inch and one-inch diameter, seismic approved expansion anchors.

Modifications to the cone angle and geometry allow the KB-TZ2 to efficiently expand, while the unique sleeve design produces a higher undercut percentage in the concrete. Specialized bolt and nut coatings help prevent over-torquing and provide better pre-tension control to reduce the expansion forces transferred to the base material. In the end, this enables the KB-TZ2 to deliver unmatched, ultimate tension performance even under seismic conditions.

**For More Information**  
**Contact: Danielle Wilson**  
**Tel: 972-202-6178**  
**Email: [Danielle.Wilson@hilti.com](mailto:Danielle.Wilson@hilti.com)**  
**[www.hilti.com](http://www.hilti.com)**

## GSSI Announces a New Handbook for GPR Users

Peter Leach, GSSI staff Archaeologist, has written and published an important new resource for the archaeology and forensic markets. We asked him to share his thoughts with you.

"I am pleased to release this new and freely-available GSSI handbook: A Theory Primer and Field Guide for Archaeological, Cemetery, and Forensic Surveys with Ground-Penetrating Radar.

For me, one of the greatest pleasures in life is to teach Ground-penetrating radar (GPR) theory and method to new users. I didn't learn GPR in an academic setting – I had to learn it on my own during cultural resource management projects. I therefore can sympathize with people who are enthusiastic about the method but feel somewhat overwhelmed by the ostensibly complex nature of this and other geophysical techniques.

This handbook is my attempt to synthesize the salient aspects of GPR theory and field practices, and essentially to create a reference guide containing everything I wish I had known when I first started. The handbook is by no means a complete treatment of the subject, but it incorporates many of the important things I have learned in the past 13 years.

While this guide is intended for very specific application areas, I encourage everyone to read it regardless of their area of interest. As GPR becomes increasingly mainstream, and more people are introduced to it, a solid foundation in relevant theoretical considerations and proper field techniques is of critical importance. I hope you find this handbook interesting and useful, and that it is presented in an approachable and clear fashion. Now, get out there and zap stuff with GPR and have fun doing it!" –Peter

Download this exciting new resource on our website: [www.geophysical.com](http://www.geophysical.com)

**For More Information**  
**Contact: GSSI**  
**Tel: 603-893-1109**  
**[www.geophysical.com](http://www.geophysical.com)**

## Capstone Headwaters Reports: Construction Services Demand, M&A Activity Improves

Capstone Headwaters released its Construction Services Update today, reporting that optimism in the Construction Services industry has been supported by an improving backlog of projects and heightened confidence for near-term sales and employment. Following depressed levels at year end, the Commercial & Institutional and Infrastructure segments have experienced a healthy pipeline of projects, with backlog increasing in February to 8.3 months and 9.1 months, respectively, according to Associated Builders and Contractors (ABC). Demand visibility has improved substantially in Q1, evidenced by the Dodge Momentum Index, a monthly measure for nonresidential projects in planning, rising 7.1% in February from the prior month, marking the index's highest reading in nearly three years.

"2021 will be a perfect storm for the mergers and acquisitions industry and result in record setting levels of transactions. Baby boomer owners looking to exit will be taking advantage of their last opportunity to lock in low capital gains tax rates while acquirers will take advantage of record setting amounts of dry powder, low interest rates, and unprecedented levels of federal stimulus to generate continued growth," commented Darin Good, Capstone Managing Director and lead contributor to the report.

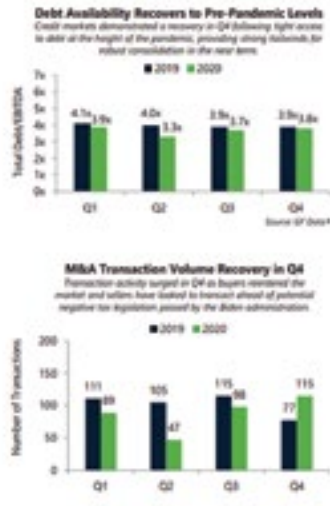
M&A activity in 2020 trailed prior year levels by 14.5% as Q2 experienced a drastic slowdown in transaction volume. However, volume surged in Q4 as buyers returned to the market with 115 transactions announced or completed, far outpacing the prior year quarter. As market turbulence has subsided, many deals previously placed on hold have resumed, lending to robust transaction markets.

### For More Information

Contact: Darin Good

Tel: 303-549-5674

Email: [dgood@capstoneheadwaters.com](mailto:dgood@capstoneheadwaters.com)



## Hilti Elevates Sustainability Program, Publishes Comprehensive Report

The Hilti Group is amplifying its sustainability efforts and formulating a global strategy based on the three pillars of environment, people and society. The company's new sustainability report provides transparency on the targets established and progress made.

In view of the increasing challenges posed by climate change, and to meet its social responsibilities, the Hilti Group has set clear sustainability targets and launched a number of global and local initiatives. The program is based on a holistic understanding of sustainability that incorporates the strategic action fields of environment, people and society.

### CO2-neutrality planned for 2023 — focus on circularity

In the "environment" field of action, the company is bringing forward its target of CO2 neutrality in its own value chain, originally set for 2030, to 2023. The transition of the energy supply at all Hilti sites worldwide to electricity from renewable sources was already completed at the end of 2020. This will lead to CO2 savings of more than 20 percent, or 40,000 metric tons, per year. A start has been made with the successive conversion of the worldwide vehicle fleet, of around 14,000 vehicles, to more environmentally friendly drive systems, which is expected to result in a substantial contribution to reducing the CO2 footprint.

The principle of a circular economy - decoupling resource consumption from economic growth - is the second central pillar of the construction technology group's environmental goals. To determine the status quo, Hilti is the first company worldwide to apply a newly developed method that allows to measure the expansion of the circular economy at various levels. Among others, planned optimization steps include the further development of the Fleet Management business model for electric tools, which operates according to the "product-as-a-service" principle. There will also be a focus on increasing the proportion of recycled material used in Hilti products and packaging.

### Growing importance of health and safety topics in the construction industry

With its focus on "people", the Hilti Group is addressing, among other topics, the health and safety of construction workers. The aim is to reduce the long-term health effects triggered by heavy physical strain. Two solutions launched by Hilti in 2020, the first BIM-enabled construction site robot, Jaibot, and the first exoskeleton, EXO-O1, are examples of the new human augmentation systems product line. These products focus on supporting and relieving the strain on trade professionals during particularly demanding or repetitive physical work.

### For More Information

Contact: Danielle Wilson

Tel: 972-202-6178

Email: [Danielle.Wilson@hilti.com](mailto:Danielle.Wilson@hilti.com)

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

**CSDA Safety Handbook**  
Now in English & Spanish!  
On sale at [csda.org/store](http://csda.org/store)





## OPERATOR CERTIFICATION

CSDA's Operator Certification is a comprehensive six-day program that combines detailed classroom instruction with on-slab demonstration and evaluation of advanced concrete cutting techniques. Safety, proper equipment use and efficiency are emphasized. CSDA certified operators are recognized industry-wide for their proficiency in the full range of sawing and drilling applications.

## MINIMUM REQUIREMENTS

- Successful completion of CSDA Cutting Edge, Slab Sawing & Drilling 101, Wall Sawing 101 or Wire Sawing 101
- Three years field experience (4,500 hours)
- Successful completion of 10-hour OSHA Construction Safety course
- No more than one lost-time injury within the last three years
- Unrestricted driver's license
- Negative drug test within 30 days of taking the course



**A-1 CONCRETE CUTTING & CORING LTD.**  
Calgary, AB, Canada

**ACCU-CUT CONCRETE SERVICES, INC.**  
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Cumberland, RI

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Houston, TX

**AMERICAN EAGLE CONCRETE SERVICES**  
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Pensacola, FL

**JACK DOHERTY CONTRACTING**  
Woburn, MA

**KRAUS-ANDERSON CONSTRUCTION CO.**  
Minneapolis, MN

**MAVO CONCRETE SAWING SERVICES, INC.**  
Edgar, WI

**M6 CONCRETE CUTTING & CORING**  
Wichita, KS

**NEIL'S CONCRETE CUTTING, INC.**  
Taylorsville, UT

**TRUE LINE CORING AND CUTTING OF MARYLAND, INC.**  
Baltimore, MD

**WALKER CUTTING SERVICES**  
Hammonton, NJ



## COMPANY CERTIFICATION

The CSDA Company Certification Program is the first of its kind in the industry. This program has been created for cutting contractors to provide owners, architects, engineers, general contractors and government officials with a valuable pre-qualification tool that acknowledges sound business practices. It is available to all sawing and drilling contractors.

### A COMPANY MUST MEET THE FOLLOWING CRITERIA TO ACHIEVE CERTIFICATION:

- Meet the basic safety and insurance requirements of the industry
- Undertake sound operational and financial best practices
- Provide evidence it has taken part in basic training or certification programs to better its employees and the company as a whole
- Successfully pass a written application review

#### ADVANCED CONCRETE SAWING

St. Paul, MN

#### AMERICAN GPR SERVICES LLC

Avondale, AZ

#### AUSTIN ENTERPRISE

Bakersfield, CA

#### COBRA CONCRETE CUTTING SERVICES CO.

Arlington Heights, IL

#### CONCRETE CUTTING SYSTEMS, INC.

Philadelphia, PA

#### CONCRETE CUTTING SYSTEMS,

PITTSBURGH INC.

Pittsburgh, PA

#### DIACORE CONCRETE CUTTING

SPECIALISTS

Frenchs Forest, NSW, Australia

#### ECHO GPR SERVICES

Paola, IL

#### HARD ROCK CONCRETE CUTTERS, INC.

Wheeling, IL

#### HARD ROCK CONCRETE CUTTING

Raleigh, NC

#### HOLES INCORPORATED

Houston, TX

#### IN-PLACE MACHINING COMPANY, LLC

Batavia, OH

#### INTERNATIONAL DRILLING & SAWING, INC.

Pensacola, FL

#### ONLINE CONCRETE CUTTING SERVICES PTY. LTD.

Seven Hills, NSW, Australia

#### RECLAIM COMPANY, LLC

Fairmont, WV.

#### WALKER CUTTING SERVICES

Hammonton, NJ



## GPR CERTIFICATION

GPR Certification is for experienced GPR technicians who have expanded their knowledge of the methods, theory and practical application of GPR imaging. Certified technicians receive classroom and hands-on time with experienced instructors and representatives from leading GPR manufacturers.

### A GPR CERTIFIED OPERATOR:

- Has shown proficiency in performing scans and reading and interpreting results
- Can select the appropriate GPR scanner for the job
- Passed a written and practical test
- Was issued a certification card upon completion of the class

#### ADVANCE CONCRETE SAWING

Saint Paul, MN

#### AMERICAN GPR SERVICES, LLC

Avondale, AZ

#### BREAK AWAY CONCRETE CUTTING INC.

Coyote, CA

#### CANADA CUTTING CORING & STABILIZATION LTD.

Regina, SK, Canada

#### COBRA CONCRETE CUTTING SERVICES CO

Arlington Heights, IL

#### CONCRETE CORING CO. OF CINCINNATI, INC.

Cincinnati, OH

#### CONQUEST DEMOLITION

Buda, TX

#### CSDT

Sandy Bay, TS, Australia

#### DALY CONCRETE CORING LIMITED

Courtice, ON, Canada

#### ECHO GPR SERVICES

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#### FINE LINE SAWING & DRILLING INC.

Newark, CA

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Prospect Heights, IL

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#### MAREK SAWING & DRILLING, LLC

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Edgar, WI

#### SAUNDERS CONTRACTING SERVICES INC.

Hampton, VA

#### SCAN TEK GPR

Davie, FL

#### SKYLINE CONSTRUCTION AND RESTORATION CORP.

Miami, FL

#### SOUTHEAST SCANNING & CORING

Norcross, GA

#### VERIFY LOCATING/SAF-CUT

Raleigh, NC





NEW MEMBERS

## CONTRACTOR:

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St. Louis, MO

**ENGINEERED DEMOLITION, INC**  
Denver, CO

**HI-TECH CONCRETE CUTTING INC**  
Bolton, ON CANADA

**MIDPOST CONCRETE CUTTING & CORING INC.**  
Monroe, NY

## AFFILIATE:

**SLURRY SOLUTIONS**  
Columbia, MO

## INDIVIDUAL MEMBER:

**SCOTT SWIRCZEK**  
Thornton, CO

# MEMBER BENEFITS



## SAFETY RESOURCES AND TOOLBOX SAFETY TIPS (TSTs)

- 230-page CSDA Safety Manual
- Safety Handbook in English/Spanish
- Safety Videos for concrete cutters
- Over 100 Toolbox Safety Tips (TSTs)

## DISCOUNT PROGRAMS

The Association negotiates member benefit programs with national vendors like Staples, UPS and V-beltsupply.com in order to provide cost-savings opportunities for CSDA Members

## NETWORKING

### AT THE ANNUAL CONVENTION AND QUARTERLY MEETINGS

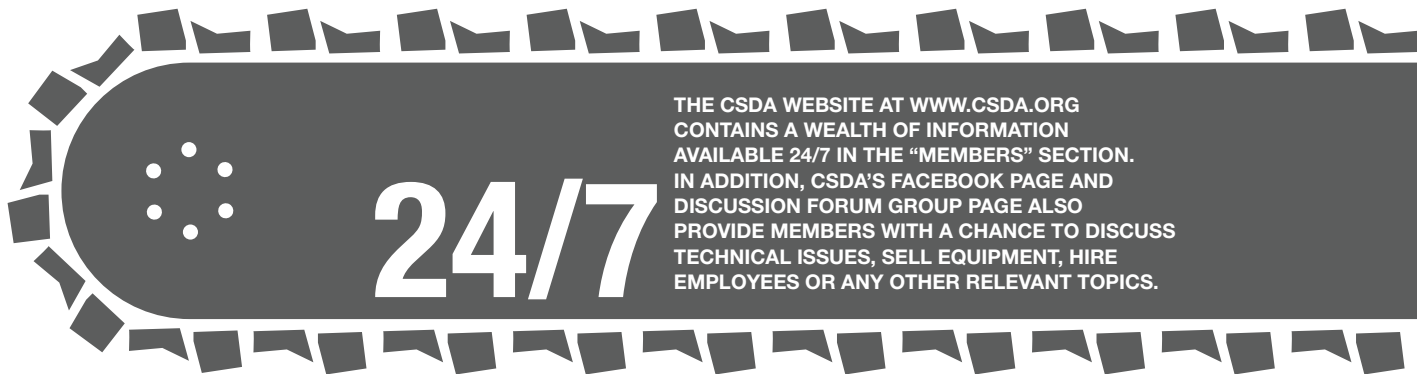
The number one benefit for members has always been the opportunity to network with cutting professionals at the annual convention and quarterly meetings. This networking provides opportunities to forge new relationships and learn from other experienced professionals.



## NEXT GEN

### CSDA NEXT GENERATION GROUP

The group aims to continue the growth of the association while serving the needs and wants of the younger generation, with the goal of continuing to set a standard of excellence.



THE CSDA WEBSITE AT [WWW.CSDA.ORG](http://WWW.CSDA.ORG) CONTAINS A WEALTH OF INFORMATION AVAILABLE 24/7 IN THE "MEMBERS" SECTION. IN ADDITION, CSDA'S FACEBOOK PAGE AND DISCUSSION FORUM GROUP PAGE ALSO PROVIDE MEMBERS WITH A CHANCE TO DISCUSS TECHNICAL ISSUES, SELL EQUIPMENT, HIRE EMPLOYEES OR ANY OTHER RELEVANT TOPICS.

## MEMBER TESTIMONIAL



"We are very excited to have become members of the CSDA. I cannot say enough how proud I am of our team for getting Hi-Tech to where we felt it was in our best interest to become members. The safety of all our employees is first priority and to know we now have more resources available to us for safety/training is invaluable. I am now in my 37th year in the concrete cutting industry and 3rd year as an owner, I am as excited to be a part of the association as I am to use it to our advantage."

**Dan St. Onge**  
Owner/President  
Hi-Tech Concrete Cutting

## TRAINING

OVER 4,000 INDUSTRY PROFESSIONALS HAVE GRADUATED FROM MORE THAN 20 CLASSROOM, HANDS-ON AND ONLINE CSDA TRAINING AND CERTIFICATION PROGRAMS FOCUSED ON CUTTING DISCIPLINES, ESTIMATING, POLISHING AND SAFETY. ONLINE TRAINING AT [WWW.CSDATRaining.COM](http://WWW.CSDATRaining.COM) OFFERS A COST-EFFECTIVE ALTERNATIVE TO THOSE NOT ABLE TO AFFORD THE TIME OR THE MONEY TO SEND OPERATORS TO CLASSES.



## DUES<sub>SCHEDULE</sub>

REGISTER ONLINE AT [WWW.CSDA.ORG](http://WWW.CSDA.ORG)

GROSS SALES	NORTH AMERICAN CONTRACTOR	POLISHING CONTRACTOR	GPR IMAGING CONTRACTOR	MANUFACTURER	DISTRIBUTOR	OVERSEAS CONTRACTOR	AFFILIATE
\$0 – 1M	\$715	\$715	\$715	\$1,505	\$1,095	\$450	\$875
\$1 – 2M	\$1,135			\$1,860	\$1,395		
\$2 – 3M	\$1,740	\$1,425	\$1,425	\$2,765	\$2,070		
\$3 – 5M	\$2,335			\$4,425	\$3,330		
\$5 – 10M	\$2,955			\$5,985			
> \$10M	\$3,705			\$7,375			



For more information about CSDA membership, visit [www.csda.org](http://www.csda.org), call 727-577-5004 or email [info@csda.org](mailto:info@csda.org).





## **World of Concrete June 7–10, 2021**

Las Vegas Convention Center  
Las Vegas, NV  
Tel: 727-577-5004  
Email: [info@csda.org](mailto:info@csda.org)



## **World of Concrete Asia November 30–December 2, 2021**

Shanghai New International Expo Centre  
Shanghai, China  
Tel +86 21 6157 7250  
Email: [info@wocasias.com](mailto:info@wocasias.com)

## **OSHA Safe & Sound Week August 9–15, 2021**

Tel: 727-577-5004  
Email: [info@csda.org](mailto:info@csda.org)

## **CSDA Winter Board & Committee Meetings Dec 1–2, 2021**

Nashville, TN  
Tel: 727-577-5004 Email: [info@csda.org](mailto:info@csda.org)

## **CSDA Fall Board & Committee Meetings September 2–3, 2021**

Seattle, WA  
Tel: 727-577-5004  
Email: [info@csda.org](mailto:info@csda.org)

## **Construct Canada / World of Concrete Pavilion Dec 1–3, 2021**

Metro Toronto Convention Centre, South Hall  
Toronto, ON- CANADA  
Tel: 416 512 3815  
Email: [frank.scalisi@informa.com](mailto:frank.scalisi@informa.com)

## **CSDA Sawing & Drilling 101 Training October 18–22, 2021**

Olathe, KS  
Tel: 727-577-5004  
Email: [info@csda.org](mailto:info@csda.org)

## **Canadian Concrete Expo February 17–18, 2022**

The International Centre  
Toronto, ON- CANADA  
Tel: 519-300-2635 Email: [rod@exposition.com](mailto:rod@exposition.com)

## **CSDA Operator Certification 201 Training November 1–5, 2021**

Clearwater, FL  
Tel: 727-577-5004  
Email: [info@csda.org](mailto:info@csda.org)

## **CSDA 50th Annual Convention & Tech Fair March 29–April 2, 2022**

Hamilton Princess Resort  
Hamilton, BERMUDA  
Tel: 727-577-5004  
Email: [info@csda.org](mailto:info@csda.org)

## **CSDA GPR Certification Training November 6, 2021**

Clearwater, FL  
Tel: 727-577-5004  
Email: [info@csda.org](mailto:info@csda.org)

## **Bauma Oct 24–30, 2022**

Messe München- GERMANY  
Tel + 49 89 949-11348 Email: [info@bauma.de](mailto:info@bauma.de)

# concrete openings



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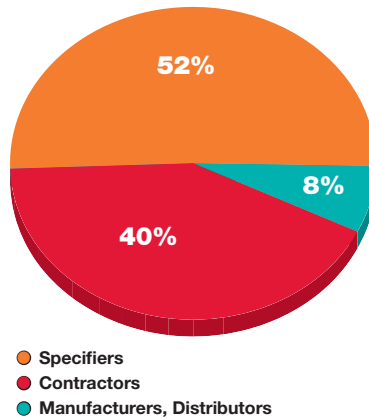
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### CSDA Social Media

CSDA's social media pages are packed with all the latest news, updates, photos and videos from the association and *Concrete Openings* magazine. Look out for exclusive content and become "friends" with others who are looking to network and promote the sawing and drilling industry. Join our growing fan base and stay in touch with the association through your PC, laptop or mobile device. Find direct links to these pages at [www.csda.org](http://www.csda.org).



### Circulation

**19,000+** minimum, per issue

**12,000+** member and prospective member companies made up of contractors, manufacturers, distributors and affiliates

**7,000+** general contractors, engineers, architects and government officials who specify cutting, polishing and imaging



### Readership Per Issue

A poll of *Concrete Openings* subscribers revealed that 66% pass on their copy of the magazine to at least one other person, with almost 25% stating that the magazine is passed on to four or more people each issue. This translates to an average of four people reading each issue of the magazine for a total readership per year of approximately 60,000.



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Visitors to the *Concrete Openings* website can access our advertisers at the touch of a button!

As a compliment to your ad placement, we include a direct link to your website on our Advertisers page. *Concrete Openings* also offers banner advertising opportunities throughout the year and a full, page-turning copy of the magazine, including ads, available for visitors on the website.

Visit [www.concreteopenings.com](http://www.concreteopenings.com) for more information.



## Advertisers

To receive additional information about products advertised in this issue, contact the vendors below.

PAGE	ADVERTISER	PHONE	EMAIL
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Inside Front Cover, 30-31	Diamond Products Limited	800-321-5336	jpalmer@diamondproducts.com
47	DDM Concut Diamond Tools	404-312-0770	ghenderson@ddmconcut.com
33, 50	Diamond Vantage	866-322-4078	tlaidlaw@diamondvantage.com
14, 15	DITEQ Corp.	816-246-5515	enelson@diteq.com
13	EDCO- Equipment Development Co., Inc.	301-663-1600	moran@edcoinc.com
29	GelMaxx	855-322-3335	info@gelmaxxusa.com
59	Hilti Inc.	972-403-5894	renee.moore@hilti.com
5	GSSI-Geophysical Survey Systems, Inc.	603-893-1109	lighthallj@geophysical.com
Back Cover	Husqvarna Construction Products	913-928-1000	hpcustomer.service@husqvarnagroup.com
2	ICS, Blount, Inc.	800-321-1240	jessica.gowdy@blount.com
15	Lissmac	518-326-9096	a.jung@lissmac-corporation.com
43	Vacuworx	918-259-3050	requests@vacuworx.com

## CSDA Launches NEW Online Training Site!

Check out our updated Cutting Edge course—perfect for your new hires, operators with less than two years of experience or anyone who needs to learn more about diamond tools. The course is completely online and can be taken at the student's own pace.

This course covers:

- Intro to Concrete Cutting
- Diamond Tools and Technology
- Slab Sawing, Core Drilling and Wall Sawing
- Troubleshooting Tips
- Jobsite Safety

Discounted pricing for CSDA members and bulk pricing packages available.

**Visit [csda.org/onlinetraining](http://csda.org/onlinetraining) to learn more and sign up!**





# CUT THROUGH WITH CONFIDENCE

Detach yourself and  
stay in control with  
the DSW 1510-CA



Designed to deliver the highest cutting productivity for heavy sawing applications, the wire saw DSW 1510-CA is steered with a wireless remote control and leverages Hilti's Cut Assist technology. Experience the added safety and productivity this innovation brings to wire sawing.

**CUT** **ASSIST**





**ERIN O'BRIEN**  
*Executive Director*

# The Dog Days of Summer

It's almost officially summer, and with the new season we're seeing a lot of change – busier jobsites and employees, increased travel, both personal and business, lifted COVID restrictions and life is getting back to something resembling normal for many of us. I don't know about you, but I'm busier than I've been in over a year. That's a good thing, right?

As we embark on another construction summer, it's easy to fall back into old, familiar habits that help us get our jobs done quickly. But why not use this as a time to create a new way of doing things, a new way of thinking? What can we do now that will help us when summer calms down? CSDA offers many resources, that with a little planning, can help you and your company not only get back on track, but STAY on track. Our new online training platform can help you train your employees virtually and prepare them for future advanced training with our hands-on classes for new and experienced operators. Our slate of Officers, Board of

Directors and Committee Chairs is infused with new leadership and perspective, and some fantastic leaders that are ready to get to work to improve the industry for everyone. You can participate in-person or virtually, and we'd love your ideas! Our Safety and Standards & Specifications committees are working hard to provide resources that will help not only our contractor members, but the entire industry.

Finally, I'd be remiss if I didn't shamelessly plug CSDA's 50th Anniversary happening in 2022, and our Annual Convention & Tech Fair in Bermuda, taking place March 29-April 2 at the Hamilton Princess Resort. We're ready for you with a program full of innovative ideas, technologies and networking opportunities. Join industry veterans and our next generation of business owners and operators as we meet to learn, network and celebrate.

So, as we jump into the dog days of summer, don't forget to plan for what's next. We sure are looking forward to it!

# CUTTING EVOLVED



## WSE1621 Wall Saw

Extremely compact and light components as well as innovative equipment features set new standards in the field of wall saws and make your job easier and more efficient than ever.

- Weighs less than other wall saws - 51.8 lbs. with head, 35 lbs. without
- More power - water-cooled 20 kW HF motor
- Cut depths up to 28", blade capacity up to 63"
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- Revolutionary P2® drive technology for extreme reliability without power loss

### Generator-Friendly Inverter Setting



### Quick-Release Motor



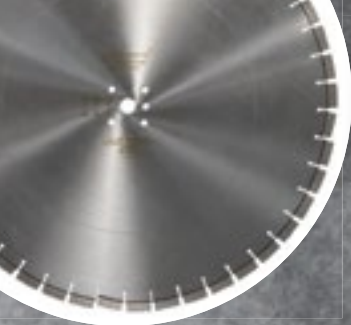
### Compact and Light-Weight Control Unit Remote Control with Color Display

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See The Video:





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100% SMOOTHER CUTTING.  
20% FASTER. 10% LONGER LIFE.  
averages on speed and life



Husqvarna



# WALK-BEHIND FLAT SAWS

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In walk-behind flat sawing, maximum productivity can only be achieved by a well thought out and balanced formula of power, ergonomics, torque, maneuverability and reliability. All factors must work efficiently together to get the most out of your working day. It's about the interaction between you, the machine and the diamond blade as a whole. This is what makes the wide range of Husqvarna flat saws the ideal choice for maximum productivity. Call your local Husqvarna representative to learn more. 800-288-5040

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