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**42**



**TECH PERSPECTIVE:**

**SPLASHY WAYS TO ADVERTISE**

**30**

# UPWARD TRACK

New technologies help contractor find ways to grow company

**12**

**DOWN & DIRTY:**

**UPGRADING A SANITARY SEWER SYSTEM TO SUPPORT A GEORGIA COLLEGE**

**24**



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# Contents

AUGUST 2019

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FOCUS: Horizontal Directional Drilling and Boring



## COVER STORY

### 12 **PROFILE: HYDROEXCAVATION** **Upward Track**

Entrepreneur finds niche with new technologies and the determination to prove the capabilities of his growing business.

By Marian Bond

#### ON THE COVER:

Avery Zahn (left) assists technician Nicholas Sees as they prepare to do high-pressure jetting and vacuuming of a sewer line in Worthing, South Dakota. Zahn is the co-owner of Infra-Track, which offers services in high-pressure jetting, vacuuming and televising of sewer lines as well as hydroexcavation. (Photography by Jay Pickthorn)

## FEATURES

### 18 **PROFILE: DIRECTIONAL DRILLING** **Branching Out**

Brother-and-sister team establish company as go-to providers by offering unique services to plumbing companies.

By Marian Bond

### 32 **COMPANY DIRECTORY:** **Horizontal Directional Drilling and Boring**

### 36 **PRODUCT FOCUS:** **Horizontal Directional Drilling and Boring**

By Craig Mandli

### 40 **SUCCESS STORIES:** **Horizontal Directional Drilling and Boring**

By Craig Mandli

## COLUMNS

### 8 **BELOW THE SURFACE:** **A Focus on Your Company**

It's important to keep your business growing, but don't forget about safety in the process.

By Cory Dellenbach, Editor

### 24 **DOWN & DIRTY:** **Bursting Back to School**

RDJE goes with pipe bursting method to help upgrade sanitary sewer system near Georgia college as it continues to grow.

By Jim Schill

### 28 **SMART BUSINESS:** **Coming Up With Cash**

There are several options for contractors to choose from when it comes time to financing a startup, but researching is the first step for each.

By Joan Koehne

**30 TECH PERSPECTIVE:**  
**Creating a Traveling Billboard**  
With the rise of high-tech materials, personalized marketing is easier than ever.  
By Jared Raney

**44 SAFETY FIRST:**  
**Working With OSHA**  
Consulting program prevents penalties and allows contractors to head off issues before they begin.  
By Jared Raney

## IN EVERY ISSUE

**10 @digdifferent.com**  
Visit daily for new and exclusive content.

**42 The Latest: Products**  
This Issue's Feature: LowPro trench covers help provide a safe job site  
By Craig Mandli

**46 The Latest: News**

**46 Happenings**

**NEXT ISSUE: September/October 2019**

FOCUS: Excavation, Trenching, Education and Safety

- Profile: KESS Environmental Services (Opelika, Alabama)
- Tech Perspective: Trench safety options
- Smart Business: The key to retaining employees



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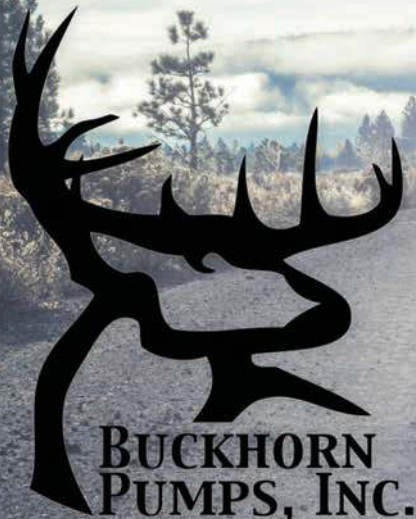


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## Advertiser Index

August 2019

BOR-IT Mfg. Co., Inc. ....	41	<b>Sonetics</b> CORPORATION	Sonetics .....	17
Buckhorn Pumps, Inc. ....	6	<b>Super Products</b>	Super Products LLC .....	5
 Fat Pumps .....	2	TRUVAC by Vactor Manufacturing, Inc. ....	27	
GapVax, Inc. ....	47	<b>ultraSHORE</b> PRODUCTS	UltraShore .....	39
HotJet USA .....	3	Vac-Con .....	<b>back cover</b>	
Infinity Tool Mfg. ....	9	VANAIR MFG .....	29	
Lee Supply Company, Inc. ....	25	Vermeer Corporation .....	11	
Milwaukee Rubber Products, Inc. ....	41	<b>WATER CANNON</b>	Water Cannon, Inc. – MWBE .....	31
Radius HDD .....	23	<b>RODDIE</b>	RODDIE, Inc. ....	7
 Rival Hydrovac Inc. ....	29	<b>Marketplace</b> .....	45	

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## A Focus on Your Company

**IT'S IMPORTANT TO KEEP YOUR BUSINESS GROWING,  
BUT DON'T FORGET ABOUT SAFETY IN THE PROCESS**

BY CORY DELLENBACH, EDITOR

**T**he last two issues I have used this column to talk about safety in the industry. One focused on safety on a job site, and then last month I discussed trench safety.

It's an important time to be thinking about safety. We're in the thick of summer now and all of your crews are hard at work, trying to get as much done in a day as possible.

So, you're now using the proper equipment and clothing on the job site, you're using trench boxes, and you're pretty confident you're doing everything you're supposed to be doing to keep you and your crews safe. Have you contacted OSHA to ensure you are doing everything possible?

### REACHING OUT TO OSHA

I can see the crazy looks you are all making as you're reading that last paragraph. No, I'm not crazy; and yes, you can — and should — proactively reach out to OSHA. It's called the On-Site Consultation Program.

We talk about this program in-depth in our Safety First feature this month. It is a no-cost, voluntary and confidential occupational safety and health service to small and medium-sized businesses. The program provides an opportunity for companies to work with the agency to find and fix hazards, achieve compliance, and establish or improve safety and health programs.

If something is found during the consultation, the company will not be penalized. The company's only obligation is to correct serious safety and health hazards.

Doesn't that already sound a lot better than getting slapped with a hefty fine if they come onto your site as a surprise? I know if I owned a company, I would be reaching out to them as soon as possible to make sure I'm in compliance.

### BRANCHING OUT

What do you do if you're considering branching out into your own company? One of the first things you're likely doing is reaching out to other contractors, your own family and financial institutions to come up with the cash.

Coming up with the money to start your own operation can be one of the most stressful times of owning a company, but you shouldn't let it be. There are several options that you, as a potential owner, should be looking at.

We go over several of those options in this month's Smart Business feature where writer Joan Koehne talks to banking professionals about what is available.

Some of these options come with more risk than others, but you need to decide which method will work the best for you.

After you have the financial aspect figured out and your company is running, you need to make sure you are staying relevant to your customers. Both of our profiles in this issue found ways to stay relevant and become that one-stop shop for clients.

One company — Infra-Track — started off working in the septic business, while the other — Emergency Mr. Plumber — got its start in the plumbing industry. Both companies still do work in those industries, but they picked up other work like vacuum excavation and directional drilling to become even more valuable.

### BECOMING A GO-TO

What can you do with your business to make it become a must-use service company? Are there services you are considering adding? Let me know at [editor@digdifferent.com](mailto:editor@digdifferent.com), or call me at 715-350-8436.

Enjoy this issue! ▼

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## SMART BUY

**A Standardized Approach to Equipment Replacement**

When it comes to timing the replacement of worn-out equipment, using some intuition is fine, but you'll get the best results if hard data is backing up your decisions. This online exclusive covers a few approaches to equipment replacement, all relying on different aspects of data sets to aid the process.

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## HEALTHY FINANCES

**Key Principles For Good Cash Flow Management**

Without good cash flow, it can be difficult to take care of business essentials such as employee payroll and materials purchasing. The larger the company, the more finance people you may have in place to help manage the task, but good cash flow principles go beyond your finance people. Here's a look at how other members of your team should factor in as well.

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## SAFETY

**A Refresher on Proper Trench Protocols**

We've covered trench safety plenty online and in the pages of *Dig Different*, but revisiting the topic is always warranted. After all, news headlines about trench cave-in accidents still pop up and not properly following safety measures is usually to blame. Earlier this year, we published this refresher on trench safety to mark the National Utility Contractors Association's Trench Safety Stand Down.

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# UPWARD TRACK

**ENTREPRENEUR FINDS NICHE WITH NEW TECHNOLOGIES  
AND THE DETERMINATION TO PROVE THE CAPABILITIES  
OF HIS GROWING BUSINESS**

STORY: MARIAN BOND PHOTOS: JAY PICKTHORN



Nicholas Sees, Infra-Track lead service technician, attaches a vacuum tube to a Vac-Con truck on a job site near Canton, South Dakota.



Eric Krumm, technician, operates a camera (Subsite Electronics) during a post-work CCTV inspection on a job site near Worthing, South Dakota.

“WE WANTED TO PROVE WHAT WE COULD DO ... I HAD TO SAY, ‘IF WE CAN’T DO IT, I WON’T CHARGE YOU ANYTHING. IF WE DO IT, I WILL CHARGE YOU.’ I HAVE NEVER LET ANYONE DOWN.”

Avery Zahn

Avery Zahn, co-owner of Infra-Track in Worthing, South Dakota, describes himself as a country boy who never imagined he would be building and promoting his own company. Still, that’s exactly where he found himself in 2010 when he founded the company with his business partner.

Zahn, however, has never been afraid of a little dirt. He worked with Lakota Septic & Sewer prior to forming Infra-Track, and he and his partner purchased the company in 2011.

Infra-Track specializes in hydroexcavation, as well as vacuuming, jetting and televising. The client list spans the municipal, industrial, commercial and agriculture sectors, with each accounting for around 25% of the business. It all evolved when Zahn’s father, George Zahn, who was the mayor of Worthing at the time, noted that he was having difficulty finding a company to serve the town’s sewer maintenance and repair needs.

In the surrounding area, there were numerous other small jurisdictions with populations ranging from 1,000 to 4,000 residents and sewers with similar requirements. Since there was no company to fill these needs in the immediate area, the younger Zahn sought out a partner, and Infra-Track emerged.

Zahn didn’t originally expect Worthing, with a population of 1,200, to be among his clients due to a perceived conflict of interest. He targeted the other local municipalities, and within a year, more clients emerged and presented further opportunities for growth. The tide even turned in Worthing, where they now handle preventive maintenance and emergency services for the municipality.

#### CALL AVERY

Infra-Track’s client list now includes two ethanol plants and 15 or more municipalities; and on the agriculture side, they tend to both hog consignments and dairy barns. A significant portion of the work with all these customers is dealing with lift stations that in some cases are as deep as 50 to 60 feet. Zahn’s four technicians are fully aware of how

to deal with these situations, which are often emergencies, where they will be vacuuming and hydro-blasting, getting rid of sludge and grease, and servicing and repairing or replacing pumps.

The business is a 24/7 operation, and Zahn estimates that at least 75% of business falls into the emergency category. They deal not only with lift stations, but power outages, emergency blockages and surveys. They jet out lines going to lagoons and take care of grain elevators on the hog farms and dairy barns. Their duties are more expansive at the ethanol plants, where they clean out wet wells, syrup tanks and DDG towers and lift stations. Their relationship with the plants is such that if there is something unusual going on, the response is “Call Avery.” While there are preventive maintenance contracts with municipalities, the ethanol plants and the hog and dairy people simply have a gentlemen’s agreement with Zahn.

**“MY GUYS, WHEN THEY PULL UP TO A LIFT STATION, KNOW WHAT THEY ARE DOING. WE PULL UP AND GET THE VAC TRUCK AND HYDRO BLASTER SET UP. ONE GUY WILL DO HYDROBLASTING, AND ANOTHER GUY WILL BE CHECKING OUT THE PUMPS AND FLOATS.”**

Avery Zahn



**Infra-Track Inc.**  
Worthing, South Dakota



**OWNERS:** Avery Zahn and Larry O. Olson  
**EMPLOYEES:** 5  
**SERVICE AREA:** South Dakota, Minnesota, Nebraska and Iowa  
**SERVICES:** Vacuuming, jetting, televising, hydroexcavation  
**WEBSITE:** [www.infratrackinc.com](http://www.infratrackinc.com)

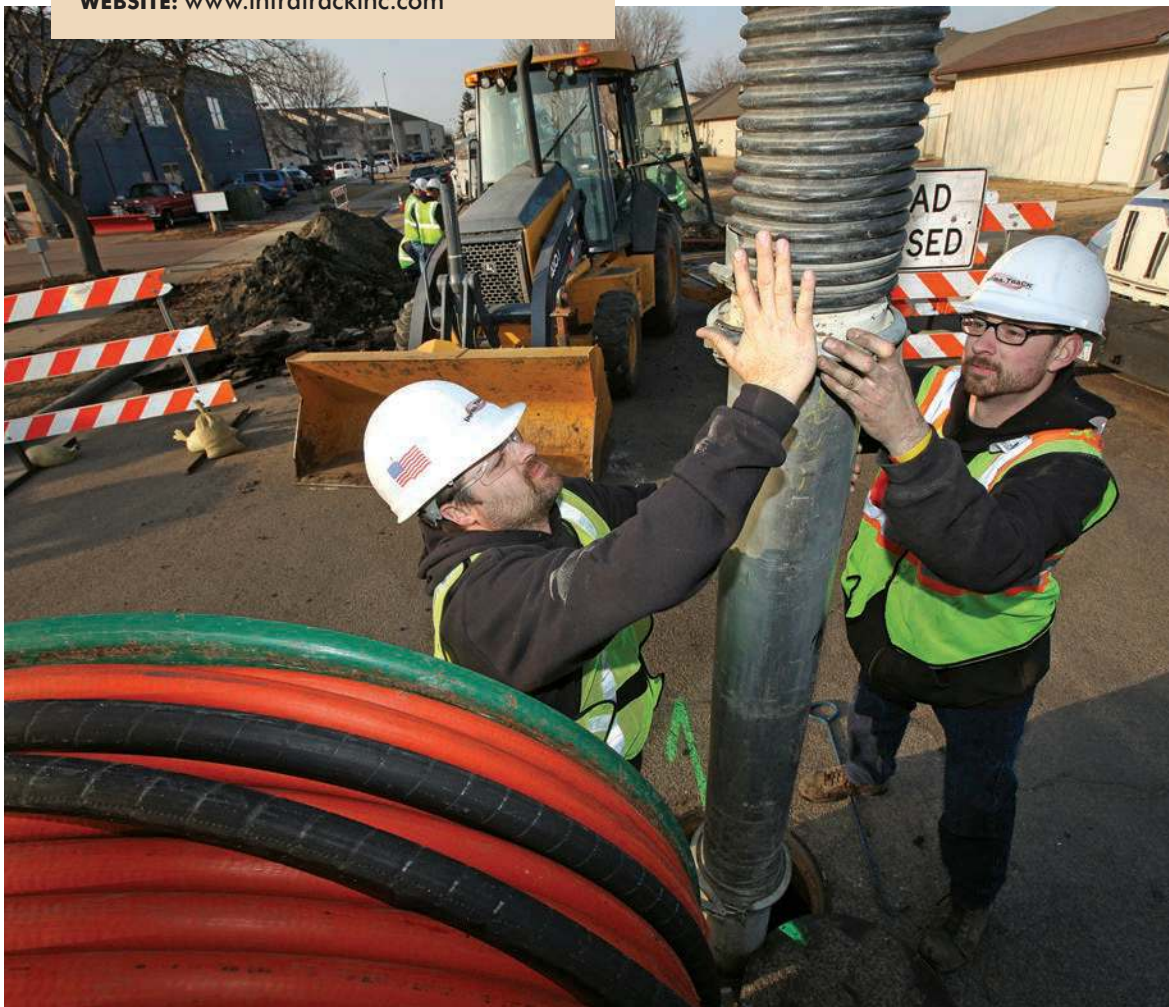
Jake Sees (left) and Nicholas Sees hydroblast a lift station in Canton. Hydroblasting is just one of many different services the company has diversified into.

Promoting Infra-Track in the beginning was the first important step, and Zahn took it on by personally calling on prospects. Zahn says people would often say, “What do you know? You are just a kid.” But he continued knocking on doors, visiting prospects and leaving his business card.

“We wanted to prove what we could do, and in a lot of cases I had to say, ‘If we can’t do it, I won’t charge you anything,’” Zahn says. “If we do it, I will charge you.’ I have never let anyone down.”

With Infra-Track, emergency situations take priority as they promote their claim to respond within an hour — which means they might need to pull technicians from one job in order to handle a dire situation. Zahn says he has worked 24 hours straight on an emergency call. Along with handling the public relations, phone calls and organization, he is also there in the trenches.

Zahn started out with a 2004 International Vac-Con vacuum truck with an FMC Technologies 80 gpm/2,000 psi Triplex Bean Pump, a three-stage fan and 11-yard steel tank.



Infra-Track service technicians Jake Sees (left) and Eric Krumm attach a vacuum tube while responding to a sewer line break in Sioux Falls, South Dakota. The company, based in Worthing, is owned by Avery Zahn and Larry Olson and offers services in South Dakota, Minnesota, Nebraska and Iowa.

Avery Zahn is the co-owner of Infra-Track. The company's service offerings include hydroexcavation, high-pressure jetting, vacuuming and CCTV.

He now also has a 2003 Sterling pump truck with a 2,300-gallon steel tank and Masport pump. This functions well for duties at ethanol plants and as an emergency backup when they have extra pumping chores.

For televising and inspection, the company started out with a 2006 CCTV trailer unit from R.S. Technical Services (now Subsite Electronics). They also added a 2004 Polaris Ranger (UTV off-road vehicle) outfitted with R.S. Technical Services camera equipment, giving the company off-road capabilities to access manholes out in the middle of pastures and on undeveloped land. Their CCTV vehicle is a 2003 Dodge Sprinter Van 3500, and they have three R.S. Technical Services Omni Eye III cameras with pan, tilt and zoom.

Zahn also has a reconditioned combination truck, a 2003 Sterling chassis with a positive displacement blower and 12-yard steel debris body.

The company, located 12 miles south of Sioux Falls, operates out of two sites: a 5,000-square-foot facility on 1 acre in Worthing and a 2,000-square-foot facility 20 miles away in Parker. They are also looking at another site to provide better service capabilities for the four states they serve.

#### MEETING CUSTOMERS' NEEDS

Hydroexcavation had been available in the area, but companies with small trailer vacuum units were offering the service on a much smaller scale. Infra-Track bolstered those capabilities with its Vac-Con truck, offering full-scale hydroexcavation for all its clients.

Offering hydroexcavation in the area was "huge," according to Zahn. "We are doing more and more all the time. We see big companies coming in to work on line projects, and we subcontract with them. It is important because of the minimal risk for damaging gas lines, fiber optic and other lines. We can dig a line in a quarter of the time it would take for the conventional method."

Equally essential for the company's purposes is the latest in televising capability. "This helps us identify the structure of the pipe, what the customer can expect on the life of the pipe and what needs to be done as far as preventive maintenance," Zahn says. "It's important or else you are guessing what is underneath the ground."

He says having a good selection of nozzles in the toolbox is essential. They



### Getting up to speed

"I never thought I would end up working in the sewer industry," Avery Zahn says. "I never thought I would actually enjoy it. But I am a farm boy and enjoy agriculture. I'm willing to get dirty, and all the guys who work for me have the same attitude. We're positive, willing to laugh if we end up with a little crap on us. We can laugh and the day goes faster."

Zahn and crew are also mechanically inclined, which is a big benefit for the young company because they are located in a fairly remote region without quick access to manufacturers when it comes to repair or replacement of parts.

"I was able to operate the vacuum truck because of my past experience working with large farm equipment, but when it came to repair and the mechanical side of things, we had to teach

ourselves, as well as how to repair cameras," Zahn says. "We have taught ourselves to work on the truck, to work on cameras. We do everything here. I'm not going to lie to you, when I first started working on that big truck it was pretty nerve-racking. I was 27 years old. If something goes wrong, how am I going to fix it? We just had to teach ourselves. Go on the internet. Call reps. Talk to service technicians in different states who can hopefully walk us through and give a rough idea as to what we can do."

With operating the cameras and computers, Zahn says there was a learning curve, but with some trial and error, he caught on readily enough.

"In the overall scheme, it all comes back to the team — a good team with good guys — and a lot of hard work. That is our motto."

buy their nozzles and root cutter saws from several manufacturers through Jack Doheney Cos.

Typically, they find clay pipe and see a lot of infrastructure in decay and in need of maintenance, repair or replacement.

While Zahn envisions his company offering additional disciplines such as relining and manhole rehabilitation in the future, they currently refer these types of projects to a company they work with out of St. Louis. Zahn then functions as a subcontractor.

"However, if the project calls for replacing the pipe, we can handle that through our excavation company," Zahn says. "When replacing pipe, we use PVC. We have a lot of options and great equipment.

"It costs so much to go into relining that we decided to stay focused on what we do best for now, and this has worked for us."

The team at Infra-Track includes (from left) technicians Jake Sees, Nicholas Sees and Kent Bertsch; Avery Zahn, co-owner; and Eric Krumm, technician.

His philosophy for purchasing equipment is not to take on a lot of debt. "We need additional equipment and we could use two more trucks and two more service techs, but we're not going to overextend ourselves at this point."

Still, Zahn sees there is room to grow, and that is the plan.

"I have a lot of irons in the fire," he says.

### TACKLE EACH DAY AS IT COMES

There is no typical day for Infra-Track. They can be on a 160-acre hog consignment working on a lift station or a pump, or jetting out lines to a lagoon, or running a camera through the lines in a small municipality with 1,000 residents. The next day could be at the ethanol plant, then on a dairy farm servicing outside lines that go into the barns or cleaning a grain elevator. There are times they have pumped from 2 to 5 million gallons of sludge at a lagoon.

Although they do not contract regularly with Sioux Falls (where they have their own equipment), Infra-Track did televise a 60-inch, 1,200-foot-long sewer main along the Big Sioux River. Zahn admits it was pretty challenging, but they made it work. They had to build an aluminum pontoon to float the camera since they couldn't use a wheeled tractor.

"We had that job done within one day," he says.

Of their varied projects, the most time consuming are those involving agricultural customers.

"For routine maintenance on lift stations, we will be cleaning them out, getting rid of sludge and grease and all kinds of things," Zahn says. "You name it, we have seen it. The largest lift stations are with the municipalities.

"There are always at least two guys, sometimes three, on a job with the lift station for safety reasons. My guys, when they pull up to a lift station, know what they are doing. We pull up and get the vac truck and hydro blaster set up. One guy will do hydroblasting, and another guy will be checking out the pumps and floats."

The technicians are certified for confined-space entry but seldom have to suit up when servicing lift stations since most equipment is on the surface. Confined-space entry is also sometimes necessary in ethanol plants and grain elevators.

### ROUGH AND READY

When hiring, Zahn looks for technicians who are willing to work long hours and people looking for a long-term future with his company. It's important to have team players, and he remains an active part of the team. It's also a benefit to have people who are mechanically inclined.

"I'm willing to train anyone who is going to be a team player for us," he says. "Our guys are all about the same age, and they are willing to look out for each other and for me. I look out for them. We enjoy every day."



**"I'M WILLING TO TRAIN ANYONE WHO IS GOING TO BE A TEAM PLAYER FOR US. OUR GUYS ARE ALL ABOUT THE SAME AGE, AND THEY ARE WILLING TO LOOK OUT FOR EACH OTHER AND FOR ME. I LOOK OUT FOR THEM. WE ENJOY EVERY DAY."**

Avery Zahn

Zahn says he is especially grateful to his father, George Zahn, for his faith and the work ethic he instilled, and to his business partner, Larry O. Olson, for the trust and support he has offered.

"I have put my heart and soul into the company. You would never think you would do that in the sewer business, but it's not about sewers. It is about helping others out. My proudest moment is helping out a customer, finishing a job that everyone thought was impossible to handle. We want everyone to 'Call Avery.'"

As he looks back on the steps he took to establish Infra-Track, Zahn says the smartest thing he ever did was continue working hard and moving forward. "I wanted to prove myself to the customers and not give up on a job. We never let anything take us down. I had to prove myself and my young company and my young crew." ▼

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## Emergency Mr. Plumber Toledo, Ohio

**OWNERS:** Ted Curtis and Tammy Owens

**EMPLOYEES:** 8

**SERVICES:** Plumbing, sewer and drain cleaning and repair, CCTV, locating, FTTH (fiber-to-the-home or directional boring)

**SERVICE AREA:** Toledo; eastern parts of Michigan

**WEBSITE:** [www.emergencymrplumber.weebly.com](http://www.emergencymrplumber.weebly.com)

Technician Martin Salazar uses a Ditch Witch 750 Tracker locator on a job site as the Emergency Mr. Plumber team installs a new waterline.

# BRANCHING OUT

**BROTHER-AND-SISTER TEAM ESTABLISH COMPANY  
AS GO-TO PROVIDERS BY OFFERING UNIQUE  
SERVICES TO PLUMBING COMPANIES**

STORY: **MARIAN BOND** PHOTOS: **AMY VOIGT**

**T**ed Curtis first stepped into the industry as a plumber with his uncle's company. When he was ready to strike out on his own, he partnered with another family member, sister Tammy Owens. Together they formed Emergency Mr. Plumber, and they've been putting out fires ever since.

Curtis initially handled all the fieldwork, with Owens overseeing the office and marketing efforts. The business has grown from one truck to a fleet of 10 vehicles and a prominent position within the 30-mile radius they serve around Toledo, Ohio. By the 10th year in business, Curtis had segued from standard residential plumbing to a broader range of services, including directional drilling, CCTV, locating, jetting, drain cleaning, and sewer repair and replacement with the requisite equipment, including excavators and dump trucks.

The current customer base is 85% residential and 15% commercial. Emergency Mr. Plumber serves northwest Ohio and parts of eastern Michigan, operating out of a 1-acre facility with 3,000 square feet of shop and office space in Toledo.

## **DEFINING POSITION**

Directional drilling was becoming a popular solution to replacing residential sewer, water and conduit lines in the late 1990s, and after hiring a subcontractor to take on a specialized job for a customer, Curtis decided the service was something that would benefit their growing customer base. He added horizontal directional drilling to the mix, and his Ditch Witch equipment quickly became among the most useful items in his toolbox.

"For private residences, this is a good solution, as they don't want to tear up the yard or driveway to put in a new or replacement line," he says. "With our equipment, we can pull a line as small as 1/2 inch up to 12 inches. With directional boring, we simply go around or bypass the old pipe. We have pulled up to 200 feet, but typically it would be 100 feet or less. For one job, we bored a 6-inch storm drain to a parking lot manhole, a distance of 30 feet. We set up in a grassy area and bored under the parking lot to the manhole with SDR 35 PVC. At the manhole, we drilled a hole and connected the pipe. Then we cemented it in place."

## Prepared for emergencies

When Ted Curtis found himself a somewhat-frustrated wannabe fireman working as a plumber, he found a unique way to satisfy those cravings.

"As a kid I was fascinated with fire trucks and ambulances," he says. "When my sister and I were planning to open our company, I was looking for a service truck and happened to run across a 1991 Chevrolet Kodiak ambulance, which became our first service vehicle. Today we have two ambulances in our fleet. Back then, I was also looking for a fire engine and found a 1970 GMC fire engine in Saginaw, Michigan. It all kind of came together to form the name of the company.

"My work truck is a 2005 Ford E-350 SD, and the stretcher has been modified to serve as my tool bucket. I don't always take the stretcher out, but if I'm in a parking lot, I sometimes will."

Curtis says they actually used the fire truck as a service vehicle for a few years, pulling heavy equipment, but primarily it has served as a promotional piece. It sits on a prominent spot at their property and has appeared in numerous parades in their community.

At a past Toys for Tots collection event, the Emergency Mr. Plumber fire engine led Toledo Mayor Michael P. Bell, who was on his motorcycle, along with 1,000 other motorcyclists on a 15-mile trek on the Interstate 75 expressway to kick off the toy drive. It is safe to say competitors cannot quite match this rolling billboard.

With the Ditch Witch equipment, they are able to bore down to the depth they want and then the rod runs parallel to the prepared exit. In a residence that has a basement or crawl space, the equipment is set up at the curb and the bore goes across the yard and beneath the house. The new pipe is pulled from inside the home to the outside location. In most cases, a residential project will be completed in one day with two technicians on site. For replacement lines, they use both copper and plastic.

There are two pieces of equipment from Ditch Witch: the JT920 is for larger projects on 4- to 12-inch lines, and the JT520 goes out more frequently for lines 4 inches and smaller. This machine is smaller and is much easier to handle in tight quarters common on residential jobs.

The company promotes its directional drilling services through print and word-of-mouth advertising. Customers include homeowners, as well as electrical and other plumbing companies, for whom Emergency Mr. Plumber acts as a subcontractor. Curtis says they get calls for the service three to four times in any given week, and he has a crew of specially trained technicians to operate the technical boring equipment.

**"IT'S ALWAYS GOOD TO GET ANOTHER OPINION. WE DON'T LIKE TO SEE COMPANIES TRYING TO UPSSELL WHEN THERE IS A LESS INVASIVE SOLUTION. THIS HURTS THE INDUSTRY, AS DO THE MANY REGULATIONS WE HAVE TO DEAL WITH AS A SMALL BUSINESS."**

Ted Curtis



Diane Brackett, inside truck, office manager, and owners Ted Curtis and Tammy Owens, in front of the fire engine vehicle used on the job at Emergency Mr. Plumber. Their employees (from left) on truck: Rich Chadwell, Dean Bumpus, Martin Salazar and George Buder III.



“WE WILL BE INSTALLING A WATER HEATER ONE DAY AND THE NEXT TELEVISIONING AND JETTING A DRAIN OR PREPARING TO DO A DIRECTIONAL BORE TO INSTALL A NEW SEWER LINE. **THESE DAYS IT IS ALL ABOUT DIVERSIFICATION.”**

Ted Curtis

George Buder, drill operator, uses a Ditch Witch JT520 directional drill to install a new copper water service while Ted Curtis, co-owner, looks on.

Curtis says their inspection and locating equipment goes out on an as-needed basis and is not regularly carried on the service vans, but they are frequently in use.

“We have been using Electric Eel for the variety of its equipment, and this has been a plus for us as they are located in Springfield, Ohio,” Curtis says. “Their sales rep travels through often, and if we have a problem with equipment, he will pick it up and take it in for repair. That has been a big benefit for us, and it saves on shipping costs.”

The Electric Eel equipment includes an eCAM inspection camera, and Model C and Model N sectional drain cleaning machines. A Radiodetection locator and Aqua Mole Technologies nozzles round out the list.

“When it comes to equipment, there is always the need to accumulate more as money becomes available and there is a demand,” Curtis says. “Just like with the camera, it was a big expense upfront, but we need it and we utilize it frequently.”



Emergency Mr. Plumber owners boast a database of almost 20,000 clients. Former ambulances converted into work units serve them well and make distinctive company vehicles.

### THE PLAYING FIELD HAS CHANGED

Curtis, reflecting on the industry and his own company, believes the company might not even still be in business today had they not ventured into a wider selection of services. A solid 50% of the business is now generated from work they didn't perform at the outset.

“We will be installing a water heater one day and the next televising and jetting a drain or preparing to do a directional bore to install a new sewer line,” he says. “These days it is all about diversification.”

Curtis says there is so much emphasis on the do-it-yourself culture, and with the big-box stores offering classes, the industry has changed significantly.

In his operation, both aspects of service are essential. “One hand feeds the other,” he says.

Clay and tile pipe are typical in the company's service region, along with some cast iron that has been in the ground 30 to 60 years. Lines are up to 8 feet deep. Root intrusion is a common problem, and they regularly deal with toilets clogged by baby wipes and feminine products. Electric Eel drain cleaning tools fit the bill for these frequent situations.

Accessing residential clean-outs is another common problem. They're frequently located in basements and require the plumber to drag heavy and sometimes dirty equipment through the house. Curtis often encourages the homeowner to solve the problem and facilitate proper cleaning of the line by having a 6-inch clean-out installed outside the home.

“This is a simple enough procedure and not that costly when you consider



Technician Martin Salazar prepares the copper waterline in the house for a pullback with the directional drill outside.

example, one young fellow we had on the crew refused to go out on a job because he said the weather was too cold. That was his last day with us.

“We actually rarely see anyone coming in the door looking for work, yet Toledo is not a very thriving area. People need jobs.”

#### FROM THE TOP

Curtis gives credit for much of the success of Emergency Mr. Plumber to his sister. “People tell me all the time that if it wasn’t for Tammy, we might not be here today. We see so many companies with a husband and wife at the helm. My sister is the person who has proven that one guy cannot do it all. It’s good to have a woman providing input. Many will identify with that I am sure.”

Together they have focused on company growth and maintaining customers, and they have a database of almost 20,000 clients. However, they are evaluating current technology with the intent to take a more active approach to interaction and contact.

“The most satisfying element of my daily job is when I go out to a customer to give an estimate, and I know the customer likes me as much as I like him or her, and I am awarded the opportunity to do the job — especially when I’m chosen over my competitors,” Curtis says. “I feel they have given me a compliment and an opportunity to meet their expectations.” ▼

“THE MOST SATISFYING ELEMENT OF MY DAILY JOB IS WHEN I GO OUT TO A CUSTOMER TO GIVE AN ESTIMATE, AND I KNOW THE CUSTOMER LIKES ME AS MUCH AS I LIKE HIM OR HER, AND I AM AWARDED THE OPPORTUNITY TO DO THE JOB — ESPECIALLY WHEN I’M CHOSEN OVER MY COMPETITORS.”

Ted Curtis

there will be easier access to the line. The new clean-out provides access to the 3-inch clean-out into the basement and to the larger outside line as well.”

The company’s five service vans include a 2005 Ford E-350 SD, 2001 and 2005 GMC Isuzu box trucks, a 2006 GMC Savana box truck, and a 2011 GMC Terrain. A 1991 Chevrolet Kodiak van — a big ambulance they call the tank — is used for the directional drill. They have two Takeuchi mini-excavators, a trailer jetter that Curtis built and a number of other pieces of equipment.

#### SIZING UP ESSENTIALS

In today’s marketplace, with the importance of customer satisfaction and the competitiveness of the industry, Curtis likes to recommend people get three opinions as to the solution for major projects.

“We run into situations time and time again where a contractor is cabling the sewer, finds a break and makes recommendations and the customer is concerned that the cost will be great,” he says. “It’s always good to get another opinion. We don’t like to see companies trying to upsell when there is a less invasive solution. This hurts the industry, as do the many regulations we have to deal with as a small business.”

Curtis praises his office manager, Diane Brackett, for her outstanding service and attention to detail. “She has been a rock for us. She babysits all of us and represents us very professionally.”

Technicians, all plumbers, have a lengthy tenure with the company, but what concerns Curtis are the younger people who show an interest in the profession.

“The problem is the younger guys seem to want everything handed to them,” he says. “They don’t understand they need to start at the bottom and work their way up through the trenches. It is sad, and it is a problem. As an



Ted Curtis,  
president,  
Emergency  
Mr. Plumber

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# Bursting Back to School

**RDJE GOES WITH PIPE BURSTING METHOD TO HELP UPGRADE SANITARY SEWER SYSTEM NEAR GEORGIA COLLEGE AS IT CONTINUES TO GROW**

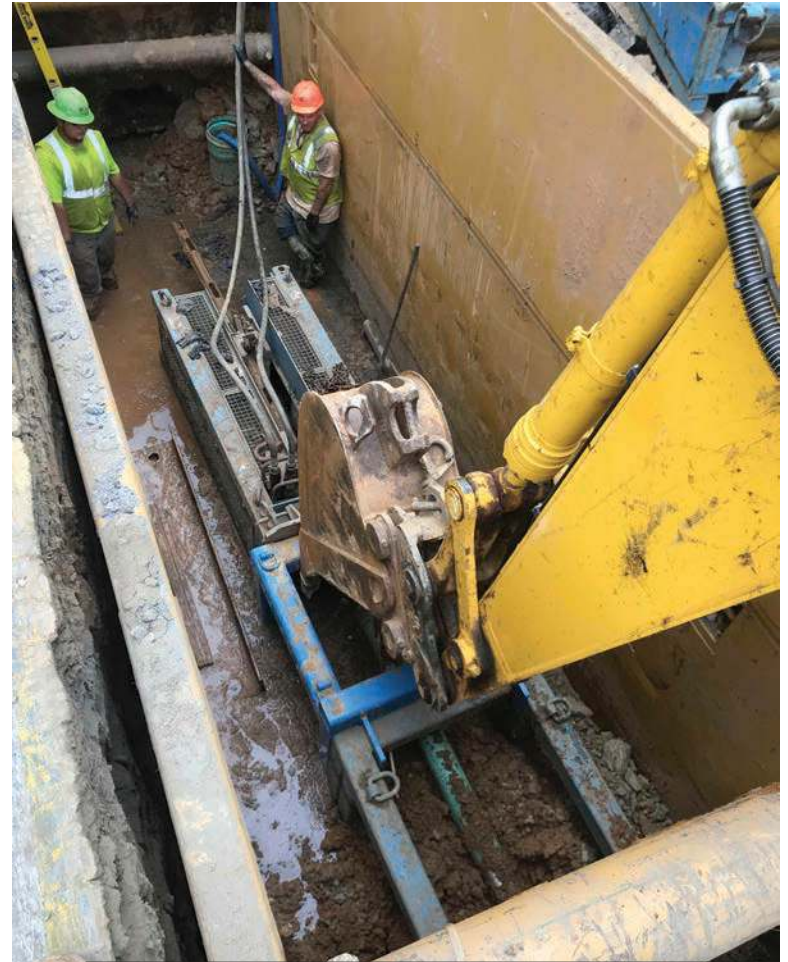
BY JIM SCHILL

**K**ennesaw State University is a fast-growing university with an enrollment eclipsing 35,000 students and two metro Atlanta campuses, but that continued growth has put pressure on the infrastructure used by the university.

Located in Kennesaw, Georgia, KSU is also Georgia's third-largest university. One of the hardest hit pieces of infrastructure because of the school was Cobb County's sanitary sewer system.

In 2018, the Cobb County Board of Commissioners moved to meet some of that increasing demand by approving an upgrade to the existing system. Dubbed the Pinetree-KSU Outfall Sewer Upgrade, the county-engineered project aimed to significantly increase the capacity of the system used by the university, as well as a local country club.

The 2,200 feet of bursting was divided into 900- and 1,300-foot-long runs, with one 900-foot section of opencut in between.



PHOTOS COURTESY OF RDJE

Approximately 2,200 linear feet of the 10-inch sewer on Kennesaw State University's campus was upsized through static pipe bursting.

**PROJECT:** Pinetree-KSU Outfall Sewer Upgrade  
**CUSTOMER:** Cobb County, Georgia  
**CONTRACTOR:** RDJE  
**EQUIPMENT:** Grundoburst 1250 static pipe bursting system  
 TT Technologies; Aurora, Illinois  
 800-533-2078, [www.tttechnologies.com](http://www.tttechnologies.com)  
**RESULTS:** Two separate pulls of 900 feet and 1,300 feet each took about two days to complete. The entire project was completed with a week to spare before school started again, including all the restoration work.



## THE DETAILS

The project included replacing approximately 5,700 linear feet of 10-inch and 12-inch vitrified clay pipe with 16- and 18-inch HDPE. Utility contractor RDJE of Newnan was awarded the bid.

"Around 2,200 linear feet of the 10-inch sewer on KSU's campus was slated to be upsized to 16 inches through pipe bursting," says Joe Webb, RDJE vice president of utility rehab. "That method was specified in order to avoid extensive trenching on Campus Loop Road. The remaining 2,500 feet of new 16- and 18-inch mains were installed by open-cut. Most of that was outfall, located in the woods near campus. Old and shallow pipe — you could actually see the pipe coming out of the ground. They wanted to place the pipe deeper in the ground, and that's why we open-cut that section."

To perform the significant upsize from 10-inch VCP to 16-inch HDPE on the pipe bursting section, RDJE chose static pipe bursting with a Grundoburst 1250 static pipe bursting system (TT Technologies).

"RDJE is proficient in both pneumatic and static pipe bursting, but for the layout of this job, static bursting was ideal," says Eddie Ward, pipe bursting specialist with TT Technologies. "It allowed for longer runs and less disruption. And the bursting unit was definitely powerful enough to handle the upsize."

## TOP OF THE CLASS

RDJE is a full service construction and utility contractor, providing construction services for commercial, municipal, private development and specialty projects. Established in 1943, RDJE is a third-generation contractor. Much of the company's work has focused in the utility market including water system development, sanitary sewer and water treatment plants, pump stations, stormwater and drain development, underground utility (telecom, electrical) construction, road improvements, grading, and excavation and emergency services.

"RDJE's primary service area is in the southeastern states of Georgia, Florida, Alabama and Tennessee," Webb says. "We perform work in large metropolitan areas such as Atlanta, Orlando (Florida), Birmingham (Alabama), Nashville (Tennessee), Knoxville and Memphis, to name a few. We're also an active member of the National Utility Contractors Association and the Georgia Utility Contractors Association."

RDJE performs both pneumatic and static pipe bursting and has for about 10 years. After the recession of the late 2000s, the company decided to expand its service offerings and incorporated pipe bursting.

"When it comes to selecting which method to use, it really depends on the actual job. What's the upsize? What type of material are you bursting? What's the location like?" says Trey Russell, RDJE project manager. "There's a list of criteria we use to evaluate which pipe bursting method is best suited for a particular project."

## SUMMER SCHOOL

According to Russell, RDJE purposely waited until the summer months to perform the portion of the project located on the KSU campus. That gave them

from late May until August to finish the work. The campus project was divided into 900- and 1,300-foot-long bursting runs, with one 900-foot section of open-cut in between them.

The 900-foot section of open-cut was designed that way because of existing utilities and culverts. That section included a high-profile fiber line, a gas

**"THERE'S A LOT THAT GOES INTO COMPLETING A PIPE BURSTING PROJECT OF THIS SCOPE, AND THE CREW ON THIS PROJECT WAS EFFICIENT AND EFFECTIVE FROM START TO FINISH."**

Eddie Ward

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main, an existing sewer line and a waterline. Crews needed to safely work around those utilities in order to place the new section of sewer main. According to Russell, the area had extremely poor soil and RDJE crews removed and disposed of any spoil offsite. They replaced and refilled excavated areas with graded aggregate base.

The bypass for the project was rather challenging because of the amount of flow and the layout of the project. During the several weeks of preparation leading up to pipe bursting, the RDJE team employed very creative bypass routes.

With a lot of flow in several areas, each day RDJE spent a significant amount of time setting up bypass pumps. There was no 24-hour bypass established during preparation for bursting, so each day crews would reset pumps.

“We kind of had to leapfrog for the bypass. We couldn’t bypass the

**“ON THE END OF THE 1,300-FOOT RUN, THE UTILITIES WERE A NIGHTMARE AND THE PIT WAS ABOUT 60 FEET LONG BECAUSE WE HAD TO THREAD THE NEW PIPE THROUGH ALL OF THEM.”**

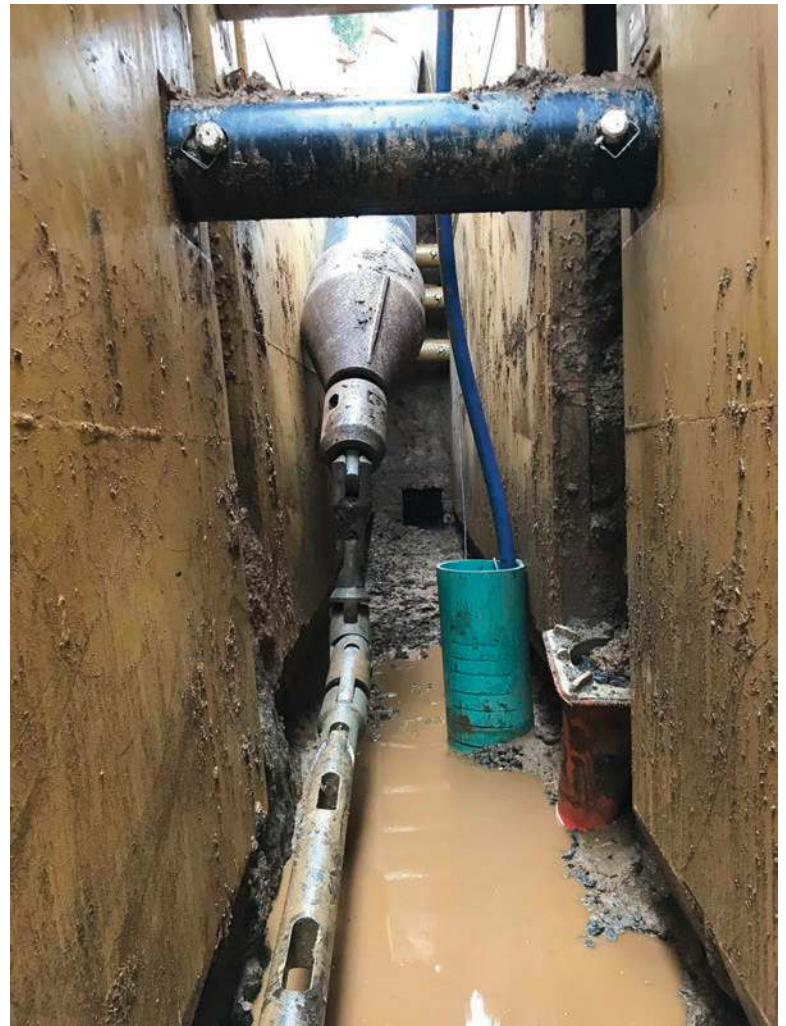
Trey Russell



The pipe bursting project at Kennesaw State University required a significant upsized from 10-inch vitrified clay pipe to 16-inch HDPE. Shown here is the pipe bursting expander.

entire area at once, so we bypassed from one manhole to the next for however many feet we needed until we could discharge into a line that was open and usable,” Russell says. “Some of the service laterals were servicing the dorms. Even though school was out, there was still fairly significant flow from the dorms.”

When it was time to begin actual pipe bursting, RDJE kept a crew person on site 24 hours a day to monitor the bypass so that bursting could begin process first thing in the morning.



On the 900-foot run, the launch pit was about 40 feet long because of the extreme depth of over 25 feet.

## CAMPUS WORK

The launch pits for the project were fairly long because of the overall depth of the existing main.

“On the end of the 1,300-foot run, the utilities were a nightmare and the pit was about 60 feet long because we had to thread the new pipe through all of them,” Russell says. “On the 900-foot run, the launch pit was about 40 feet long because of the extreme depth — over 25 feet at that point. Fortunately, groundwater wasn’t an issue, even with the depth. Pull pits were not quite as deep. Those were between 12 to 14 feet deep, 30 feet long and 10 feet wide.”

Bursting started at the end of Campus Loop Road with the 900-foot bursting run first. The hydraulic bursting unit was positioned in the pull pit and the existing 10-inch line was rodded with QuickLock bursting rods (TT Technologies). Once rodded, crews attached the rods to the expander and fused pipe string, a 21-inch expander was used to facilitate the significant pipe upsized. For this run, crews fused and staged all of 900 feet of HDPE needed. The burst was completed in two days.

For the second section of bursting, crews staged about half of the 1,300 feet of pipe. After moving the bursting unit and rodding the host pipe, that section of bursting went equally well, with the 1,300-foot pull taking two days. The entire project was completed with a week to spare before school started again, including all the restoration work.

“RDJE did a great job with this burst. The upsized was impressive,” Ward says. “There’s a lot that goes into completing a pipe bursting project of this scope, and the crew on this project was efficient and effective from start to finish. Nice project.” ▼

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# Coming Up With Cash

**THERE ARE SEVERAL OPTIONS FOR CONTRACTORS TO CHOOSE FROM WHEN IT COMES TIME TO FINANCING A STARTUP, BUT RESEARCHING IS THE FIRST STEP FOR EACH**

BY JOAN KOEHNE

Looking for money to open a utility construction business? A variety of lenders are out there — from your gray-haired grandma to a stranger you meet on the internet. Banks, credit unions, investor groups, and city and state microloan programs are just a few of the financing options available. Choosing the best way to finance a startup is one secret to long-term success.

Aaron Faulkner, senior vice president at Bank First in Green Bay, Wisconsin, encourages entrepreneurs to begin by understanding how a business operates. “Make sure you talk to other people in the industry,” he says. “It pays to reach out to guys who have been there, done that.”

Experienced contractors understand working capital. They know how often they are paid, the method of payment and how to maintain a steady cash flow. Successful contractors can provide the inside information another contractor needs to get his business going.

“The more perspectives you can have, the better decision you can make in the long run,” Faulkner says.

The second step to securing financing is to write a high-level business plan. The plan should include strategies for ownership, business management, capital and decision-making.

“You need to think things through so two years down the road you’re not disappointing your bank, your family and your investors,” he says.

Opening a business is not for the faint of heart. “Nobody goes into business to lose money ... but there’s a high percentage of startups that don’t make it. I think one of biggest success factors is tenacity and the ability to not quit.”

Unless the business owner has the ability to finance the new venture 100%, the third step is to investigate different avenues for funding. According to Faulkner, each option should be evaluated based on three things: the cost of the financing, the flexibility and what’s going to be the best fit at the time.

Here’s a breakdown of the most common forms of financing:

## **Borrowing from family and friends**

This method can offer flexible repayment terms. For example, grandma lends you \$50,000 at 3% interest and tells you to pay her back when you can. However, relationships can be strained if things don’t pan out like expected.

“Draw up a standard agreement so there’s no disappointment on either side,” Faulkner says.

## **Borrowing from an investor group**

This may be the best option for startups willing to sell a portion of their company in exchange for capital.

## **Microloans**

These are available through business advancement organizations, munic-

ipalities and states. Eligibility guidelines vary, but microloans can often be paired with other funding sources.

## **Internet lending and GoFundMe**

These type of accounts are becoming more accepted forms of financing, but it’s important to know the terms and conditions before signing up. “Just like any lending, know what your fees are,” Faulkner says. “Understand what your cost of capital is, what your interest rate is and how long it’s locked in for.”

While the internet may be good for the lending, entrepreneurs might find value in forming a relationship with a local lender.

“A local relationship can provide some different insight into your business as you get going,” Faulkner says.

## **A home equity line of credit**

This enables owners to fund their business venture through the equity in their home. Companies can draw against the line of credit if they’re running short and can pay it down as cash comes in. A business line of credit operates in much the same way.

“Funds are available to you as you need them, versus having a set term loan,” Faulkner says. “If we loan you \$10,000, once it’s gone, it’s gone.”

## **Credit cards**

Credit cards are the most unstable and expensive way to finance a startup. Credit card payments are typically higher than payments for a line of credit. In addition, high balances on credit cards can negatively impact a business owner’s credit score.

“You want to be real protective of your credit,” Faulkner says. “Financing your business on your personal credit cards is going to stretch you personally, increase your payments and potentially impact your credit score, which is not the ideal situation when you’re starting your new venture.”

## **Commercial lending**

Commercial lending is a standard method of financing a startup, and Faulkner recommends asking a potential lender a series of questions: What is your focus? Do you work with contractors? How do you support small business? What financing options are available? Are you a preferred lender with the Small Business Administration? Do you have experience with SBA loans?

“Whoever you’re going to be banking with, make sure you’re comfortable sitting down with them and having a conversation,” Faulkner says. “Be sure they’re explaining things in a way that makes sense to you.”

Business owners can finance their startup with a combination of finance types, contributing some of their own money while keeping some money in their pockets. “A good, seasoned banker can direct you to some options,” Faulkner says. ▼

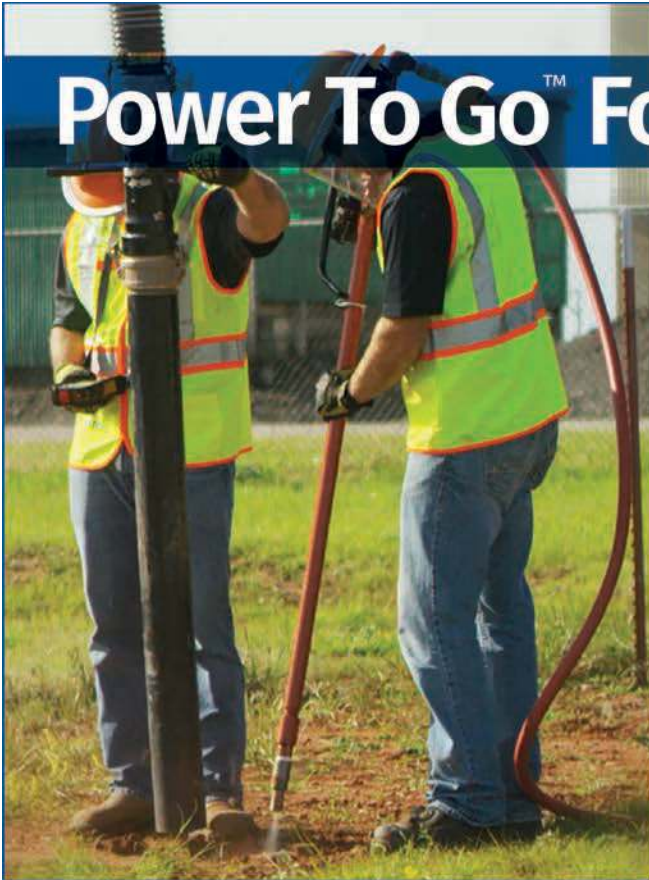


Aaron Faulkner, senior vice president at Bank First in Green Bay, Wisconsin, has a background in business banking.

**“MAKE SURE YOU TALK TO OTHER PEOPLE IN THE INDUSTRY. IT PAYS TO REACH OUT TO GUYS WHO HAVE BEEN THERE, DONE THAT.”**

Aaron Faulkner

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Work vans from Marvel Sewer and Drain in Minnesota effectively display the company's logo, services and image through attention-grabbing graphics.

**"I FEEL LIKE I HAVE AN IDENTITY NOW: I'M NOT JUST SOME GUY SHOWING UP TO FIX THINGS. JUST BE YOU. LET IT COME THROUGH AS YOU — FIND SOMETHING YOU ENJOY AND DO IT."**

Ben Smith

## Creating a Traveling Billboard

WITH THE RISE OF HIGH-TECH MATERIALS, PERSONALIZED MARKETING IS EASIER THAN EVER

BY JARED RANEY

Radio, TV, phone book, Facebook, billboards — the options for advertising your company can be overwhelming, but have you considered using the mediums you already own? We're talking about the vehicles and equipment your company relies on every day.

"Vinyl graphics and advertising on your vehicle is probably your best investment compared to newspaper ads, periodicals and things like that where you're getting charged every single time you put that advertisement out there," says Rodney Roeda, director of sign and vehicle production with ROEDA. "If you have vehicle graphics on all your trucks and everything, you basically have a traveling billboard you only pay for once."

Not only is it a cost-effective method for promoting your company, it also gives you a launching platform to build your logo and brand.

### CREATING AN IMAGE

Another advantage of using your work equipment as advertising space is that consumers will naturally associate your brand with your work. Instead of seeing a utility contractor on a random interstate billboard or hearing about it while driving to work, they see it in their neighborhoods and communities.

"A neighbor will see us, call and say, 'Hey, you're at my neighbor's house, do you have time to come over?'" says Scott Haymer, vice president of Campbell Plumbing & Drain Cleaning. "People see us at the gas station and say, 'Oh, I've been looking for a contractor.'"

Campbell Plumbing's logo has a simple red, white and blue theme with a caricature of a plumber and a simple message. Their vehicles are hand-painted by a local graphic artist.

"Ours is very basic; you can read our stuff when the truck rides by at 35, 40 mph," Haymer says.

You might be inclined to think that having a logo constantly on the move might make it less memorable, but those who invest in making their brand stand out often find the opposite effect.

Haymer says when they were looking for a new facility, a Realtor assumed they would need a large garage for a fleet of vehicles, because he had seen their logo around town so much. Campbell Plumbing only has four service vehicles.

"One of the coolest moments for us: We were on a personal trip and someone recognized our name," says Ben Smith, owner of Marvel Sewer and Drain. "She said, 'You're the guy with the superheroes on your truck!'"

Marvel Sewer and Drain's logo is truly unique — cartoon versions of the Smith family, children included, as superheroes.

"I've got two wrapped vans," Smith says. "Right there, that person remembered me from looking at my van one time. If you know much about advertising, that's pretty epic."

Smith even says that while at jobs, he's sold additional jobs to people who have come up to talk about the logo. It also creates added accountability for his drivers when any bystander can immediately see what company they're with.

"We've been stopped before on the side of the road for people to take pictures. People love it — they think it's super cool. It's eye-catching; we get remembered for it," Smith says. "When my guy pulls up to the job, they see the big wrapped truck and know this is somebody from my company."

### BUILD OFF YOUR LOGO

Having a cool logo is just the start — a way to build an association in the customer's mind — but creating a brand requires more than a clever logo: You've got to get it out there.

"We're pretty proud of our logo; we put it everywhere we can. It took me a long time to recognize that I was a brand," Haymer says. "The logo is on our



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Water Cannon is proud to be a MWBE

shirts, and we all wear matching shirts; we have built something. We're not Under Armour or Nike by any means, but we are a brand, and people see us."

Once you have a presence, you can steadily build it into a brand through small steps.

"You don't have to push it hard, this whole branding thing, and put billboards up of your logo, but just start. You can start branding now and not do it at the high level," Smith says. "You start now — that way you have an image you're building."

Marvel Sewer and Drain's branding initiative began as a simple outreach to customers' children — Smith had a graphic designer print superhero versions of his kids on coloring sheets to be handed out at jobs and events. One thing led to another, and now Marvel Sewer and Drain incorporates their superhero motif into bid sheets, invoices, emails and coffee mugs. Smith even expanded the cartoon family to include versions of his technicians for their personalized business cards.

### GRAPHICS ARE VERSATILE

"We have our logo on stickers, and we put stickers on garbage disposals, sump pumps, water heaters — the sticker is by far our best way of advertising," Haymer says. "When you just took a shower and you have no hot water and you walk downstairs, you're like 'Oh, there's a big orange sticker that has somebody to call.'"

With modern technology and printing techniques, there are really no applications beyond the limits of available materials.

"We definitely try to specialize in custom products. It all depends on what the need of the customer is," says Jacob Roeda, director of screen print production for ROEDA. "If we are in a situation where a certain customer needs a large heat range — to apply to a surface that is high-heat or really low-temp — there are certain materials that are more resistant or more durable, so depending on what the customer is looking for, we always try to cater to that need. If somebody is looking for product for steel pipes, water

surfaces, constant use, outdoor use, we can find that correct product."

ROEDA also has a stable of graphic designers, and they offer artwork services at any level, whether a company has an existing brand that needs tweaking or is starting from scratch.

"Our job is to sell our customer's product. We're trying to create designs and artwork that sell a particular customer's product," Roeda says. "We want to respect what our customers are looking for, but sometimes we'll make our recommendations, too. Different options can give a different feel or vibe for that logo design. So we like to let them know there are different things they can consider to sell their product and get brand recognition."

### MAKE IT PERSONAL

In a market saturated by a variety of advertising, it may not be print, digital or radio advertising that makes the most splash. For some contractors, the most prime advertising real estate may already be in the shop: Vehicle and equipment decals provide long-term impact for a solitary upfront investment.

"It's endless; there are so many possibilities," Smith says. "And it's so enjoyable on my side. I feel like I have an identity now: I'm not just some guy showing up to fix things. Just be you. Let it come through as you — find something you enjoy and do it."

As far as deciding what logo to best represent your company, it's all about building a connection. If you feel attached to your brand, so will your customers.

"Don't stand behind some image that isn't you," Smith says. "So many of us, especially at my level, are so in tune with our own business; I'm bleeding through my marketing. Don't have something you're not going to enjoy. I love pushing my superheroes; I love showing my superheroes. Nobody remembers Marvel Sewer and Drain; they remember my superheroes." ▼



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# 2019 Horizontal Directional Drilling & Boring DIRECTORY

## MANUFACTURER

MANUFACTURER	Boring Machines/ Systems	Directional Drills	Drill Bits	Drill Pipe	Drilling Fluids/ Lubricants	Fluid Mixers/ Systems
 <p><b>BOR-IT Mfg. Co., Inc.</b> PO Box 789, Ashland OH 44805 800-289-6639 • 419-289-6639 Fax: 419-289-6352 www.bor-it.com info@bor-it.com</p> <p>See ad page 41</p>	✓					
 <p><b>Buckhorn Pumps, Inc.</b> 1786 CR 490, Stephenville TX 76401 855-362-2326 • 254-965-2555 Fax: 254-965-8833 www.buckhornpumps.com sales@buckhornpumps.com</p> <p>See ad page 6</p>		✓				
 <p><b>GAPVAX Inc.</b> 575 Central Ave., Johnstown, PA 15902 888-442-7829 • 814-535-6766 Fax: 814-539-3617 www.gapvax.com inquiry@gapvax.com</p> <p>See ad page 47</p>						
 <p><b>Imperial Industries, Inc.</b> 550 W Industrial Park Ave., Wausau, WI 54402 800-558-2945 • 715-359-0200 Fax: 715-355-5349 www.imperialind.com info@imperialind.com</p>						
 <p><b>Infinity Tool Mfg.</b> 11648 Skylane Dr., Benton, IL 62812 888-838-6657 • 618-439-4042 www.infinitytoolmfg.com sales@infinitytoolmfg.com</p> <p>See ad page 9</p>			✓			
<p>See ad page 11</p> <p><b>McLaughlin Group</b> 2006 Perimeter Rd., Greenville, SC 29690 800-435-9340 • 864-277-5870 Fax: 864-235-9661 www.mclaughlinunderground.com mmole@mightymole.com</p>	✓	✓				
<p><b>Pow-R Mole Trenchless Solutions</b> 1400 Commerce Pkwy., Lancaster, NY 14086 800-344-6653 www.powrmole.com</p>	✓	✓	✓	✓	✓	✓
 <p><b>Radius HDD</b> 2525 Ranger Hwy., Weatherford, TX 76088 800-892-9114 • 855-471-2771 Fax: 817-599-3024 www.radiushdd.com info@radiushdd.com</p> <p>See ad page 23</p>	✓	✓	✓	✓	✓	✓
 <p><b>Rival Hydrovac Inc.</b> Box 5, Major, SK S0L 2H0 Canada 844-467-4825 • 403-550-7997 www.rivalhydrovac.com tdell@rivalhydrovac.com</p> <p>See ad page 29</p>						




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			✓								Pumps - Parts Pumps - Mud
										✓	
										✓	
							✓				PDC Bits and PDC Reamers
	✓	✓		✓	✓	✓		✓			
						✓	✓				
										✓	

(continued)

# 2019 Horizontal Directional Drilling & Boring DIRECTORY

MANUFACTURER

MANUFACTURER		Boring Machines/ Systems	Directional Drills	Drill Bits	Drill Pipe	Drilling Fluids/ Lubricants	Fluid Mixers/ Systems
See ad page 7	<b>RODDIE, Inc.</b> 109 Canyon View, Columbia Falls, MT 59912 888-406-3821 • 408-224-7777 www.rodzieunderground.com rod@rodzieunderground.com		✓				
See ad page 17	<b>Sonetics</b> 17600 SW 65th Ave., Lake Oswego, OR 97035 800-833-4558 • 503-684-7080 Fax: 503-620-2943 www.soneticscorp.com sales@soneticscorp.com						
 SPARTAN SINCE 1943	<b>Spartan Tool</b> 1506 W. Division St., Mendota, IL 61342 800-435-3866 www.spartantool.com sales@spartantool.com						
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 TRUVAC by Vactor Inc. See ad page 27	<b>TruVac by Vactor Mfg.</b> 1621 S. Illinois St., Streator, IL 61364 800-627-3171 • 815-672-3171 www.truvac.com sales@truvac.com						
 ultraSHORE PRODUCTS See ad page 39	<b>UltraShore</b> 4745 Bakers Ferry Rd. SW, Atlanta, GA 30336 800-746-7464 • 404-505-0510 Fax: 404-505-0506 www.shoring.com info@shoring.com						
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See ad page 11	<b>Vermeer Corporation</b> 1210 Vermeer Rd. E., Pella, IA 50219 800-VERMEER www.vermeer.com salesinfo@vermeer.com	✓	✓	✓	✓		✓

	HDD Software/ Guidance	Locators	Mud Recyclers	Piercing Tools	Pipe Bursters	Reamers	Rock Drills/ Saws/ Cutters	Rod Pushers	Shoring / Safety Equipment	Vacuum Excavators	Other
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									✓		Wireless Headsets
		✓			✓						Pipe Relining
			✓							✓	
										✓	
									✓		
										✓	
	✓	✓	✓	✓		✓	✓			✓	

BY CRAIG MANDLI

## Air Excavation Equipment

### VANAIR PTO shaft driven air excavation kit

The VANAIR PTO shaft driven air excavation kit is housed under the chassis. It doesn't use a hitch, reduces weight and is easy to navigate. It saves space, solving the problem of reduced bed space because of spoil tanks and water tanks. Durable and compact, units are available in a standard PTO shaft-driven air excavation kit (200 cfm at 200 psi and 300 cfm at 250 psi) or as engine-driven cross mount air compressors (185 to 260 cfm and up to 150 psi).



units are available in a standard PTO shaft-driven air excavation kit (200 cfm at 200 psi and 300 cfm at 250 psi) or as engine-driven cross mount air compressors (185 to 260 cfm and up to 150 psi).

800-526-8817; [www.vanair.com](http://www.vanair.com)

## Boring Machines/Accessories

### Akkerman 1525B/D

The 1525B/D hydraulically driven high-pressure pump from Akkerman is used for effective pilot tube and other pipe jacking operations particularly on larger-diameter bores. The large, 525-gallon tank offers in-tank agitation for continuous mixing, independent agitation, or agitate and pump to maintain optimal mud viscosity. It displaces a Marsh Funnel viscosity as high as 50 seconds with pump flow up to 10 gpm at 2,500 psi. It is powered by a 20.7 hp diesel engine with an 8-gallon fuel tank. Like its 325-gallon counterparts, it is simple, safe and reliable. There are few moving parts, no belts and a shrouded agitator. The stepped platform



makes it easy for operators to access and fill the tank.

800-533-0386; [www.akkerman.com](http://www.akkerman.com)

### Pow-R Mole Sales Model P1-6RT

The P1-6RT mechanical rod turner from Pow-R Mole Sales integrates with the PD-6 Thrust Boring Machine and P1 Pusher Box to help install sewer pipes on grade and more accurately steer the bore to the target. It eliminates the need for pipe wrenches to turn the rods, making steering safer and more productive. It creates 4,500 ft-lbs of torque, allowing the operator to steer the boring machine up to 200 feet. Quick-disconnect hoses allow for fast and easy removal of the unit.



800-344-6653; [www.powrmole.com](http://www.powrmole.com)

### Wyo-Ben drilling fluids

CLAYMASTER, DRILL-X HP, WYO-VIS HP and WYO-LUBE RR from Wyo-Ben are available in small, easy-to-handle, 64-ounce pouches that are suited for smaller jobs. These quick-mixing, field-proven fluids make every bore more effective and efficient, protecting equipment and boosting productivity. Since they are highly concentrated, crews can do more with less, saving money in the long run.



800-548-7055; [www.wyoben.com](http://www.wyoben.com)

## Drill Bit

### Melfred Borzall Eagle Claw SD

The Eagle Claw SD bit from Melfred Borzall has integrated dome carbide blocks in the body to give greater wear protection and cutting power. Added conical carbides on the upper cutting face add more aggression to the bit's cutting power. The dome carbide blocks on the opposite side of the body also help transfer more power to the cutting surface as they push against the wall pack during rotation down the hole. The balanced cutting design ensures there is no vibration up the rod and to the rig so that wear protection extends to the rest of the rig.

800-558-7500; [www.melfredborzall.com](http://www.melfredborzall.com)



## Horizontal Directional Drilling

### Toro DD2226

The Toro DD2226 directional drill delivers 2,600 ft-lbs of rotational torque and 22,000 pounds of thrust and pullback for versatility, allowing the machine to pull back and turn larger reamers in tough ground conditions. Dual rear stabilizers provide additional stability in uneven terrain. For convenience, it is also equipped with TDOS-1 Operating System software, featuring the SmartTouch control mode that streamlines pipe handling by allowing the operator to advance through the process with a touch of a rocker switch on the joystick. It's designed to be easier for both new and experienced operators to learn. In addition, using SmartTouch allows operators to reduce the pipe loading cycle times, thereby increasing overall productivity. It includes a 72 hp Tier 4 Final Yanmar 3.3-liter engine that requires no diesel exhaust fluid, as well as a 31 gpm, 1,500 psi drilling fluid pump.



855-493-0088; [www.toro.com/en/underground](http://www.toro.com/en/underground)

## Hydroexcavation Equipment

### Dynablast Pratissoli Pumps KT28ASPF

The Pratissoli Pumps KT28ASPF high-pressure water pump, distributed by Dynablast, is ideal for hydroexcavating. It offers 18.4 gpm, 2,900 psi, 1,450 rpm and a 35 hp power end. It is available with a T13 female spline shaft and SAE two-/four-bolt flange for direct mounting to the hydraulic motor. Reducing the pump speed to lower water flow for hydrovac use can result in increased pump life and reduced water bypass. It has a self-lubricating design, with no oiler kit or weekly oiling required. The manifold is made from nickel-coated spherical cast iron for protection from cavitation. Its symmetrical aluminum crankcase makes it easy to reverse shaft the pump, and internal fins provide cooling to lower oil temperature. It has tapered roller bearing for improved lateral loading. Two bore ceramic plungers provide thicker ceramic on the water end to prevent from thermal shock.



905-867-4642; [www.dynablast.ca](http://www.dynablast.ca)

### Easy Kleen Pressure Systems Wildcat Heaters

Wildcat Heaters high-pressure, oil-fired hot-water/steam heaters and hydraulic pump systems from Easy Kleen Pressure Systems are designed for reliability and efficiency and are install-ready for vacuum trucks and hydroexcavators, according to the maker. A full range of heater options includes dry steam, redundancy packages, Schedule 80 and 160 stainless steel or A53 boiler pipe, fine-tuned temperature, and flow-control systems. All coils are manufactured in-house, with CRN boiler-approved coils now available. Heaters can be designed for mounting in a cabinet or supplied



as a completed cabinet unit. They are CSA and ETL approved. Hydraulic pumping systems are available.

800-315-5533; [www.easyklean.com](http://www.easyklean.com)

### Enz USA Rotodrill

The Rotodrill nozzle from Enz USA has a rotating front jet for improved cutting performance. It's effective at clearing blocked or frozen pipes and moving heavy debris. It has ideal propulsion but can also be used in hydroexcavation by plugging off the thrust jets. This versatile nozzle is available in 1/2-, 3/4- and 1-inch systems.

877-369-8721; [www.enz.com/en-us/home](http://www.enz.com/en-us/home)



### NozzTeq MONRO-JET

The MONRO-JET hydroexcavation nozzle from NozzTeq combines the power of a solid-stream pencil jet with the large coverage of a fan jet. An orbital design increases performance at a lower gallons-per-minute rate and pressures as high as 36,250 psi, allowing the operator to move faster when hydroexcavating and cleaning surfaces or sewer lines. It can be used for other types of surface cleaning such as concrete, steel, castings and large surface areas including line removal from runways. It can be modified for internal cleaning of sewers and pipes of all types.

866-620-5915; [www.nozzteq.com](http://www.nozzteq.com)



### Pressure Lift Power Booster

The Power Booster from Pressure Lift has Versa-Flow technology to help minimize man-hours and allow the user to combine multiple pieces of equipment, allowing them to provide time to increase workloads and reduce job expenses. The user can combine pressure washers or jetters with any vacuum equipment, providing manpower needed for other jobs. Versa-Flow technology not only breaks up soils and assists in decreasing load times and completing each job quickly, it streamlines projects and helps minimize maintenance cost.

866-504-6596; [www.pressurelift.com](http://www.pressurelift.com)



### ScreencO Systems Handle-Tech Hose Handles

Handle-Tech Hose Handles, distributed by ScreencO Systems, enable technicians to safely clamp onto hose or pipe and easily grip, torque and release it single-handedly through a natural movement. Through mud, cold, rain or sleet, the handles' design allows workers to safely and efficiently manipulate hoses and pipes in any climate. They are ideal for drilling, mud suction hose, tanker hose, pneumatic truck hose, aircraft refueling hose, frac pipe, drill pipe, welding poly pipe and other rigid pipes. Sizes range from 1 1/2 to 6 inches, with an 8-inch version coming soon. Handles are manufactured with long-glass nylon that enhances the thermal insulation properties. They are strong, nonconductive and wear-resistant in temperatures from 40 degrees below zero to 150 degrees F to withstand steam blasting with de-icing equipment.

208-790-8770; [www.screencosystems.com](http://www.screencosystems.com)



### Soil Surgeon hydroexcavating tool

The Soil Surgeon hydroexcavating tool fits any sewer combination truck equipped with a telescoping 6- or 8-inch boom. The tool has a 1-inch water connection. The operator controls water pressure and power through truck controls. It has a 6-foot Tuff Tube with handles to guide the unit down for potholing or side to side for trenching. Six jets boring inward cut the soil, while six boring outward bring the tube down.

949-363-1401; [www.soilsurgeoninc.com](http://www.soilsurgeoninc.com)



## Hydroexcavation Trucks and Trailers

### Cusco Sewer Jetter

The Sewer Jetter from Cusco can help perform major cleanups by excavating debris with a 26-foot boom reach and a 600-foot 3,000 psi jetting system. Outfitted with quality components and reverse engineered for optimal weight and payload with a superior operator control system, the unit is designed for simple regular maintenance and features durable and uncomplicated systems to reduce repairs and downtime. It can be paired with a Cusco SJX hydroexcavator to provide municipalities and contractors a powerful option for handling sewer and waterline maintenance and digging new lines with one piece of equipment. Options include various tank and chassis sizes and can be modified based on customer specifications.

800-490-3541; [www.wastequip-cusco.com](http://www.wastequip-cusco.com)



### Ditch Witch HX30

The Ditch Witch HX30 vacuum excavation trailer offers a 24.8 hp Kubota diesel engine designed for performance and productivity on midsized potholing, soft-excavation or cleanup tasks. The low-profile machine reduces unit height without compromising ground clearance. It is available with a 500- or 800-gallon debris tank and in a light or heavy version. Also available are advanced optional boom designs to improve ease of use. With advanced sound-reducing technology, it creates minimal disturbance in noise-sensitive areas. An optional reverse-flow feature allows quick and easy spoil off-loading for improved productivity.

800-654-6481; [www.ditchwitch.com](http://www.ditchwitch.com)



### GapVax HV33

Designed to safely transport water and debris in urban areas, the GapVax HV33 is shorter, smaller and more compact than its predecessor. It is 30 feet long overall on a medium-duty chassis and includes a 600-gallon water tank, 6-cubic-yard debris body, 14- to 17-foot 6-inch boom in 8 or 6 inches, 4,000 cfm power and an inverted, full-opening tailgate.

888-442-7829; [www.gapvax.com](http://www.gapvax.com)



### Imperial Industries Hydro 3600 Hybrid Excavator

The Hydro 3600 Hybrid Excavator from Imperial Industries offers compact power and versatility, with capabilities that include digging trenches to locating fiber optic cables and clearing debris. It provides direct applications for septic hauling, utilities maintenance and emergency response situations. It can be operated by one person. Units are available in code and noncode.

800-558-2945; [www.imperialind.com](http://www.imperialind.com)



### Kaiser Premier CV Series

The CV Series hydrovac from Kaiser Premier has all critical components centralized and housed in an insulated, heated aluminum van body. The RB-DV series of rotary three-lobe positive displacement blowers can operate at high vacuum levels thanks to a device that injects atmospheric air. RB-DV series blowers can reach



vacuum levels of up to 93% on a deadhead and 27 inches Hg without the need to inject water or use an upstream heat exchanger. Its hydraulically assisted off-load method eliminates overhead conflict concerns when off-loading by avoiding the need to raise the tank. Rather than using gravity alone, it applies its mechanical advantage to quickly off-load compacted tank debris. To release hot high-pressure water, the vehicle can be equipped with a 700,000 Btu boiler. The transfer case is specifically designed for vacuum excavation trucks requiring a highly configurable and easily serviceable gearbox.

970-542-1975; [www.kaiserpremier.com](http://www.kaiserpremier.com)

### Presvac Systems Hydrovac

The Presvac Systems Hydrovac is designed for versatility and cold-weather operation with optional full compliance with Department of Transportation specifications for collection or transportation of hazardous materials. The high-vacuum blower allows extraction of all types of soils, gravel, rock, clay, water and silt material, with knockout features in the debris tank minimizing carryover. Modular filtration configured to blower size provides blower protection and minimal maintenance, according to the maker. It comes with a heavy-duty, 8-inch boom that extends up to 25 feet, with six-way hydraulic power and wireless controls for all boom functions, soft-start water pump, vacuum breaker and truck engine speed.

800-387-7763; [www.presvac.com](http://www.presvac.com)



### Ramvac by Sewer Equipment HX-12

The HX-12 hydroexcavator from Ramvac by Sewer Equipment has a 12-yard debris tank and



a temperature-controlled environmental chamber that contains the entire water system, including water tanks. A directional discharge system allows the operator to off-load debris back into the excavation site when finished, without the mess of dumping the tank. This system also allows operators to blow any obstructions out of the dig hose. It includes a long-range wireless remote, NEMA 4 electrical system, a 900,000 Btu water boiler and a three-stage cyclonic filtration system. The standard 4,400 cfm blower delivers fuel economy. It is available with a RamAir air excavation system touting a 185 cfm at 150 psi air compressor for when the operator can't risk adding water to the problem area.

877-735-4640; [www.ram-vac.com](http://www.ram-vac.com)

### Rival Hydrovac T7

The T7 from Rival Hydrovac was designed primarily to be a unit that could be loaded with debris and drive within legislated road limits with most types of debris on board. Additionally the unit comes standard with a scale that reads real-time weights both in the cab and on the wireless remote to confirm weights prior to travel. It is operator friendly, and the operating system is engaged through one PTO switch. The remainder of the operation occurs from the rear panel or the wireless remote. The components used in this truck are high performance in nature, and the unit will dig at levels competitive to large units.

403-550-7997; [www.rivalhydrovac.com](http://www.rivalhydrovac.com)



### Tornado Global Hydrovac T-70 Twister

The T-70 Twister trailer-mounted hydrovac from Tornado Global Hydrovac can be used to expose other delicate utility lines — including electric and gas — and comes in multiple configurations specialized for the job at hand. It has a 6-cubic-yard debris tank and is capable of holding 720 gallons of freshwater. It is powered by a Tier 4 Final, 74 hp Cummins diesel engine and has an industrial positive displacement blower capable of 1,200 cfm at 15 inches Hg. The water pump is capable of up to 5.6 gpm at 3,500 psi. The trailered unit has operator controls on the rear and is capable of wireless operation. It can also be easily hauled with a non-CDL driver's license.

877-340-8141; [www.tornadotrucks.com](http://www.tornadotrucks.com)



### Transway Systems Terra-Vex HV38

The Transway Systems Terra-Vex HV38 has a 12-yard debris tank with onboard scales, which allows a driver to load the tank worry-free. It includes a large debris tank for those light loads, saving time and money, complete with a 26-foot-by-8-inch telescopic boom. It has a simple one-touch-operated hydraulic half-door with a 3,800 cfm at 27 inches Hg hydraulically driven blower. Water pressure is achieved with a hydraulically driven triplex pump, delivering 10 gpm at 3,600 psi from a 1,000-gallon HDPE baffled water tank. The water is heated with a 420,000 Btu diesel-fired burner for cold-weather operation.

800-263-4508; [www.transwaysystems.com](http://www.transwaysystems.com)



### Vac-Con X-Cavator

The X-Cavator from Vac-Con is designed to be powerful, durable and easy to operate. It features a hydrostatic drive using the chassis engine for vacuum, creating a more efficient system that eliminates the need for PTO, clutch and gearbox operation. It is available with water systems up to 4,000 psi and a mobile, wireless remote-control system controlling chassis engine revolutions per minute, boom, automatic vacuum breaker, dump controls and hydraulic door locks from up to a half-mile away. The boom rotates 270 degrees.

904-284-4200; [www.vac-con.com](http://www.vac-con.com)



### Vacall AllExcavate

Vacall AllExcavate hydroexcavators include AllSmartFlow smart controls that help to conserve water during high-performance jet/vac digging around utilities and waterlines or cleaning frac tanks and vessels. Single-engine efficiency helps conserve fuel and reduce emissions. It has a high-pressure water system with rheostat control to vary water volume and capacity output. A heated compartment protects the water system components against freezing. Its water tanks are made of high-quality aluminum for extra strength. Large, galvanized steel debris tanks are also available. A single control is used to open, close and lock the tailgate. It has double-cyclone filtration with a simplified design to reduce maintenance, extend performance and increase working life. Its rear-mounted boom front-loads debris. It is available with a cold-weather package.

800-382-8302; [www.vacall.com](http://www.vacall.com)



## Inspection/Mapping Software

### CUES GraniteNet

GraniteNet condition assessment software for the public works industry from CUES is asset based, which enables the software to easily interface with other asset-based software products such as Esri ArcGIS mapping systems and asset management systems to include Cityworks, Infor, IBM Maximo and others. Intuitive and easy to use, data and video can now be accessed via a web portal.



800-327-7791; [www.gnet.us.com](http://www.gnet.us.com)

## Locators

### RIDGID A-Frame Fault Locator

The RIDGID A-Frame Fault Locator finds the location of ground faults in direct buried insulated wire up to 2 megohms. It can find faults up to 3 miles away from the transmitter and up to 20 feet below the ground, depending on conditions. It has a durable, lightweight powder-coated frame and weatherproof membrane buttons. It provides a reference readout to aid in fault location. It is composed of two elements: the FT-103 Transmitter and the FR-30 A-Frame Receiver. The transmitter operates at 797 HZ – “dFF” displayed and has an output power of up to 3 watts with low, medium and high settings. The FT-103 Transmitter connects to an insulated conductor to establish a current flow. The current travels to the ground and back to the ground stake via an insulation fault. The FR-30 Receiver detects the current flow and gives audio and visual directions to locate faults.



800-769-7743; [www.ridgid.com](http://www.ridgid.com)

### Schonstedt Instrument Loki

Schonstedt Instrument's Loki is a multifrequency locator solution designed to sweep large areas to quickly and easily locate buried assets. With Dual Mode capabilities, the Loki can simultaneously search for and identify transmitter and power signals for quick and accurate sweeps prior to excavation. Available in two models, Contractor and Utilities, the locator operates in Active, Inductive, Sonde and Passive modes. The ShallowAlert warns of shallow pipes and cables, and NoiseProtect enables use in electrically noisy environments. Each model is optimized to perform in the demanding environments of the construction and utilities industries.



888-367-7014; [www.schonstedt.com](http://www.schonstedt.com)

### Vivax-Metrotech vScan M

The vScan M utility avoidance tool from Vivax-Metrotech helps contractors prevent damage to buried utilities. It allows the excavating operator to check an area for buried utilities before digging. It is simple to operate, requiring minimal training while being reliable and rugged for site use. An optional integrated man-hole detector allows even these hazards to be detected.

800-446-3392; [www.vivax-metrotech.com](http://www.vivax-metrotech.com)



## Pipe Bursting Equipment

### HammerHead Trenchless 26XPR

The 26XPR high-performance pneumatic hammer for pipe ramming and pipe bursting applications from HammerHead Trenchless has a newly designed high-flow valve system that produces a more powerful impact. XPR technology is a modification of the Air Reverse, or AR, valve system standard on all HammerHead Trenchless pneumatic hammers larger than 7 inches. Both sys-

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tems allow for the reverse function to be controlled above ground, greatly simplifying tool removal from pushing collets and burst heads. The 26-inch hammer has replaced the 24-inch AR model. It can install casing 24 to 84 inches in diameter and is effective in pneumatic pipe bursting applications of pipes 15 to 36 inches in diameter.



800-331-6653; [www.hammerheadtrenchless.com](http://www.hammerheadtrenchless.com)

## Reamer

### Infinity Tool PDC Pull and Push Reamers

PDC Pull and Push Reamers from Infinity Tool are designed for fast and reliable rock reaming. Their taper and spiral make it possible to use them both horizontally and vertically, and they are designed for reaming shale to hard limestone. They are stocked in 6- to 36-inch sizes, with 38- to 48-inch sizes made to order.

888-838-6657; [www.infinitytoolmfg.com](http://www.infinitytoolmfg.com) ▼



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BY CRAIG MANDLI



## Pit-launched HDD completes difficult water main installation

### PROBLEM

An aging 12-inch cast iron water main needed to be replaced in Overland Park in Johnson County, Kansas. The project took place under a highly traveled street, and because of the traffic count, a trenchless method was needed that could install the main without lane closures.

### SOLUTION

A pit-launched, **mini directional drill** from **TT Technologies** was chosen. These drills are compact and function well in tight working conditions. The one utilized by WaterOne, the public water utility, measures 54 inches long, 43 inches wide and 57 inches tall and provides 13,489 pounds of thrust and pulling force, 553 ft-lbs of torque, and typical bore lengths up to 150 feet. A pulling pit was established at the southern end of the street, while the launch pit was located within the curb radius, on the edge of the road, heading north. Over four days, drilling and reaming were completed. A 1 3/4-inch pilot bore was completed on the first day in approximately 2 1/2 hours. A 10-inch reaming pass was completed on Day Two. On Day Three, a 14-inch reaming pass was completed in approximately six hours. On Day Four, crews completed a final 18-inch reaming pass.

**RESULT** A 60-foot string of new PVC pipe was assembled and readied for pullback. The first 60-foot section was pulled in without incident. The remaining 40 feet was pulled back in two 20-foot sections. From start to finish, the project took one week to complete. **800-533-2078; www.tttechnologies.com**

## Pump used for bentonite pumping with horizontal directional drilling

### PROBLEM

Welvreugd Drilling, a Dutch pipeline construction company, was in need of a pump to pump bentonite, a type of clay with a fine structure that is mixed with water and used as a drilling fluid in tunnel construction to cool the drill head, remove the drill cuttings and stabilize the tunnel.

### SOLUTION

The company purchased a new **BBA Pumps mobile bentonite pump** for use in its horizontal directional drilling. The pump is used to pump the mixture from the recycler through the hollow pipe into the borehole.

**RESULT** The operator can now clean all crucial pump parts both during and after the pumping process via an internal flushing system, which prevents pump damage. **843-849-3676; www.bbapumpsusa.com** ▼

**DOWN & DIRTY**

### What's Your Story?

Dig Different welcomes news about your tough excavation, pipe bursting, trenching, boring or tunneling job for the Down & Dirty column.

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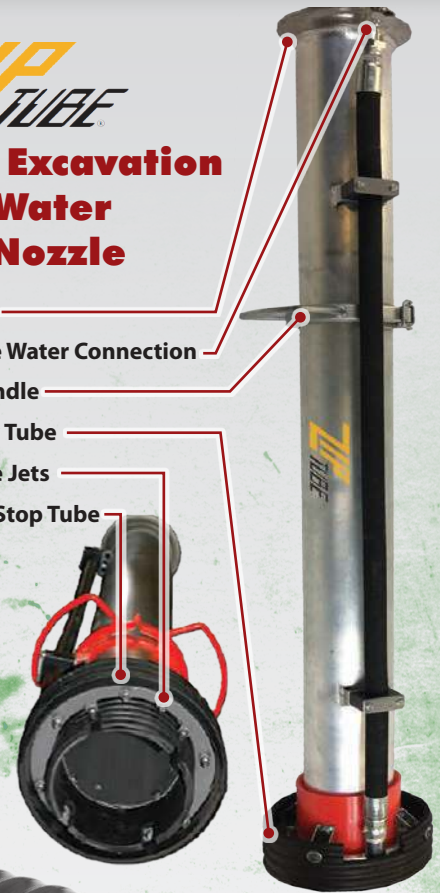
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# THE LATEST: Products



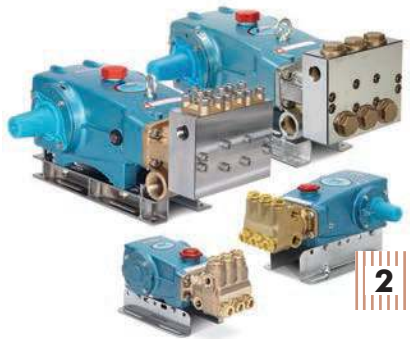
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## 1. Doosan Portable Power XP185WDO air compressor

The Doosan Portable Power XP185WDO high-pressure air compressor produces 185 cfm and 125 psi, making it ideal for a variety of applications such as general construction, sandblasting, pneumatic tool operation, pipeline testing and fiber optic cable installation. It can simultaneously power both air and electrical tools when outfitted with an optional 4 kW generator. The machine is equipped with two 120-volt duplex outlets with access on the curbside, rear panel of the air compressor. An onboard toolbox allows for convenient storage of both air-powered and electrical tools for safe transport and easy access on the job site. The XP185WDO offers a 10-hour runtime at 100% load. **800-633-5206; www.doosanportablepower.com**

## 2. Cat Pumps hydroexcavating pump

For over 50 years, Cat Pumps has been manufacturing long-lasting and low-maintenance triplex pumps. With dedication to zero-defect manufacturing, ease of service and availability from stock, Cat Pumps designs and builds high-pressure pumps and systems to the highest quality standards for the hydroexcavation industry. Popular models include the Model 3560 with 25 gpm, 3,000 psi or 20 gpm, 4,000 psi; Model 3570 with 30 gpm, 3,000 psi; the Model 660 with 10 gpm, 3,000 psi; and the Model 56 with 5.5 gpm, 3,500 psi or 8 gpm, 2,500 psi. **763-780-5440; www.catpumps.com**

## 3. CUES LOCK no-dig sewer rehabilitation product line

CUES LOCK includes structural point repair systems designed to be used for stand-alone spot repairs or to enhance quality and simplicity of cured-in-place-pipe relining. The LOCK products are easy to install and require very little equipment, and most repairs can be carried out in live

sewer operating conditions. It does not require digging or external point repair. The line includes stents to bridge holes, voids, cracks and weakened/broken sections in pipes; structural and sealer sleeves to restore damaged areas to full structural strength and seals infiltration; and end sealers to seal the annular space between the CIPP liner and the host pipe at the pipe ends. **800-327-7791; www.cuesinc.com**

## 4. Sewer Equipment Model 400 ECO Mini Combination Sewer Cleaner

The Model 400 ECO Mini Combination Sewer Cleaner from Sewer Equipment has all-stainless-steel construction for durability, including its 4-yard debris tank, water tank with up to 600-gallon capacity, hose reel with 400 feet of 1/2-inch sewer hose, and full shroud. It offers a UDOR U.S.A. 18 gpm at 4,000 psi water pump and a Hibon Inc. (a division of Ingersoll Rand) positive displacement blower at 28-inch Hg with a 4-inch system. The jet/vac truck utilizes a 19,500 GVWR chassis, requiring no CDL, and it also offers the ability to enter a standard 8-foot parking structure. **800-323-1604; www.sewerequipment.com**

## 5. MB Crusher America drum cutter attachments

MB Crusher America manufactures a line of rotary drum cutter attachments for excavators and loaders. MB drum cutters feature the unique direct-drive twin motor. The attachments are built with a low center of gravity that improves the balance on the operating machine. This design reduces the pressure, torsion and vibration on the equipment arm, creating low levels of noise and vibration on the job. They are ideal for channeling, rock and concrete profiling, demolition and finishing work, excavation operations, tunneling, chiseling and restoring deteriorated surfaces. **855-622-7874; www.mbamerica.com**

## 6. Hitachi EX1200-7 excavator

The EX1200-7 excavator from Hitachi features a fuel-efficient Cummins EPA Final Tier 4 engine with diesel exhaust fluid. For nonregulated countries, a Cummins engine featuring fuel-calibration optimization settings helps contribute to improved efficiency. Additionally, when the machine is in neutral, auto-idle reduces engine speed to save on fuel consumption. It also features a 4.5% increase in bucket capacity with a 9.2-cubic-yard capacity. Equipped with optimized swing control, the new machine also has an improved hydraulic system with a flow regeneration valve to reduce power requirements from the hydraulic system and engine, lowering fuel consumption and improving pump life. 866-973-0394; [www.hitachiconstruction.com](http://www.hitachiconstruction.com) ▼

## This Issue's Feature:

### LowPro trench covers help provide a safe job site

BY CRAIG MANDLI

No utility worker's life should end in a trench. Cave-ins during excavation work are some of the most common and grisliest causes of worker fatalities, yet they are entirely preventable. The **LowPro 15/10 trench cover system** from **Oxford Plastics** can be part of those preventive steps.

The LowPro 15/10 uses a Flexi-Edge system to greatly reduce trip hazards for pedestrians and to reduce unwanted movement. The product was originally designed to support a load of one wheel of a 7,716-pound vehicle, over a 35.4-inch span, and to use the LowPro technology. In most site configurations, the product will not need to be fixed in place, which reduces installation time and the costs of reinstatement, reducing the need to use steel plates in driveway applications.

"This is all on a product that offers an easy two-person lift," says Sheila Sardinha, sales/marketing/organizational manager for Oxford Plastics USA. "It is far easier to lift and install than steel plates, as there is no need for heavy-lifting equipment."

The increased loading and design also enables the product to be used in pedestrian applications that require a span up to 47.25 inches. The design, developed in collaboration with utilities and contractors alike, provides a single product that works in multiple applications. Stability is increased thanks to its PVC anti-slip edge and higher load rating. Because it is lighter than steel road plates, it is easier to maneuver and transport for driveway applications. The product's inner yellow section is made from a durable glass-reinforced composite, and while it is designed to be stable without anchoring, it can be anchored if site conditions require it.

"The anti-slide technology, on the underside and edges of the LowPro, is actually made from a soft, flexible rubber material that grips the sur-



LowPro 15/10 trench cover system from Oxford Plastics

face, reducing unwanted movement, noise pollution and noise complaints," Sardinha says. "The rubber edges can be replaced to extend the life of the LowPro as well."

Gas vents and a probe hole are designed into the shock-resistant product. The covers can also be personalized with a corporate color and logo on the flexible edge.

"Our customers love that these help remove injury, stress and worry from the job site," Sardinha says. "They've told us that they offer so many advantages that they have truly transformed their operations."

800-567-9182; [www.oxfordplasticsusa.com](http://www.oxfordplasticsusa.com)

# Working With OSHA

## CONSULTING PROGRAM PREVENTS PENALTIES AND ALLOWS CONTRACTORS TO HEAD OFF ISSUES BEFORE THEY BEGIN

BY JARED RANEY

**R**eporting incidents to regulatory and oversight organizations like OSHA can be harrowing, but ironically, it turns out that the best way to avoid such negative interactions is to be proactive in contacting the agency.

Fortunately for contractors who may be hesitant to broach the subject of working conditions lest they incur the wrath of OSHA, there is a way to preemptively avoid punitive measures through the On-Site Consultation Program.

“OSHA understands that working with stakeholders is a great way to achieve the mission of ensuring safe and healthful working conditions,” says Kimberly Darby, an OSHA spokesperson. “The consultation program offers no-cost, voluntary and confidential occupational safety and health services to small and medium-sized businesses.”

It may be tempting to believe that government organizations want to catch contractors red-handed, but the reality is that it’s in everyone’s best interest to prevent accidents whenever possible.

“This program provides an opportunity for employers to work with the agency to find and fix hazards, achieve compliance, and establish or improve safety and health programs,” Darby says. “Consultation services are separate from enforcement and do not result in penalties or citations.”

As a no-cost program, the only commitment by those seeking consultation is the time it takes to do the review and the commitment to correct any serious issues found — which it’s worth reiterating that the company will not be penalized for during the consultation.

“No citations or penalties will be issued. The employer’s only obligation is to correct serious safety and health hazards,” Darby says. “They will be provided information about potential hazards at their work sites, receive advice on complying with OSHA standards, and receive assistance with establishing and improving safety and health programs.”

### THE CONSULTATION PROCESS

To initiate an OSHA review, contractors and subcontractors should coordinate to provide input across the breadth of the work area and project, and because it is a voluntary process, the employer must request the service.

Once the request has been made, the regional consulting office will initiate a review based on the scope indicated by the employer. It can be as specific or broad as the company desires.

The consultant will discuss the employer’s specific needs and set up a visit based on the priority assigned to the employer’s request, work schedule and amount of time needed for the consultant to adequately prepare to provide assistance.



“DON’T UNDERESTIMATE THE COST OF A WORKPLACE INCIDENT, AND **DON’T ASSUME THAT THE COST OF HAZARD ABATEMENT WILL BE EXPENSIVE.** THE SOLUTION MAY BE AS SIMPLE AS RELOCATING MATERIALS THAT ARE BLOCKING AN EXIT OR CORRECTLY LABELING CHEMICALS.”

Kimberly Darby

A consultation itself consists of an opening conference, a walk-through of the work site or facility, as well as a review of written injury logs and safety programs. The closing conference will entail a final review with the employer of the OSHA consultant’s findings, wherein they will discuss any necessary safety mitigation or remedies.

Detailed written reports follow the review, again explaining the findings and confirming hazard correction dates.

“When deciding to use the consultation program, employers must determine the scope of the safety and/or health assessment desired; contact their state’s consultation program office to request the assistance; and agree to correct serious and imminent danger hazards identified during the consultation visit,” Darby says. “Based on the scope of the request for assistance, consultants will conduct safety and health assessments of the employer’s entire facility or a portion of the facility.”

It is recommended that employers have injury and illness logs, written safety and health protocols, and workplace policies ready for review. They will be provided information about potential hazards at their work sites, receive advice on complying with OSHA standards, and receive assistance with establishing and improving safety and health programs.

### DON’T PROCRASTINATE ON SAFETY

While committing to an unknown level of hazard mitigation can be daunting, delay in assessing health and safety concerns will cost exponentially more.

“Don’t underestimate the cost of a workplace incident, and don’t assume that the cost of hazard abatement will be expensive. The solution may be as simple as relocating materials that are blocking an exit or correctly labeling chemicals,” Darby says. “Improving workplace safety and health also brings fewer accidents, lowers injury and illness rates, decreases workers’ compensation costs, reduces equipment damages and limits product losses.” ▼

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## THE LATEST: News

### GapVax launches new website

GapVax announced it completed its rollout of a new website. The site design is mobile responsive and works on a variety of screen sizes, from smartphones and tablets to traditional desktop computers. The improved [www.gapvax.com](http://www.gapvax.com) contains concise product information and easy-to-use navigation; conversational quoting process; more useful tools for those who shop for and own GapVax products and services; a product-centric focus on helping users accomplish key activities such as identifying the right machine for their use or locating a dealer; and easy spec-to-spec comparisons across GapVax models. The site features 20 new pages and hundreds of full-screen images of GapVax products.

### Felling Trailers announces 2019 Trailer for a Cause beneficiary

Felling Trailers has selected Children's Cancer Research Fund as its 2019 Trailer for a Cause auction beneficiary. Felling Trailers will be hosting its seventh annual Trailer for a Cause online auction of an FT-3 utility trailer to benefit the nonprofit organization. Felling Trailers' goal is

to bring awareness to various non-profits that are making a difference by donating 100% of the winning bid from the auction to a different non-profit each year.

### Vermeer MV Solutions welcomes new regional sales manager

Vermeer MV Solutions announced the addition of Jason Dewitt as the new West Coast regional sales manager. He will be based out of Exeter, California. In his new role, Dewitt will manage sales activities within his region and provide quality support to the dealers in those territories by determining dealer sales and marketing needs. Previous positions included roles at Vermeer Pacific and Vermeer Rocky Mountain. He has also served in the U.S. Air Force and as a police officer in Billings, Montana, and Visalia, California. ▼



Jason Dewitt

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## Happenings

### CALENDAR

**Aug. 21-22**

**Water Finance Conference**, Washington Court Hotel, Washington, D.C. Visit [www.waterfinanceconference.com](http://www.waterfinanceconference.com)

**Sept. 9-11**

**Breakthroughs in Tunneling Short Course**, Knoebel School of Hospitality Management, University of Denver, Denver. Visit [www.tunnelingshortcourse.com](http://www.tunnelingshortcourse.com)

**Sept. 21-25**

**92nd Annual Water Environment Federation Technical Exhibition and Conference (WEFTEC)**, McCormick Place, Chicago. Visit [www.weftec.org](http://www.weftec.org)

**Oct. 1-3**

**International Construction & Utility Equipment Exposition (ICUEE)**, Kentucky Exposition Center, Louisville, Kentucky. Visit [www.icuee.com](http://www.icuee.com)

**Nov. 6-7**

**Pipeline Leadership Conference**, Hyatt Regency Houston Intercontinental Airport, Houston. Visit [www.plconference.com](http://www.plconference.com)

**Nov. 6-7**

**National Utility Contractors Association (NUCA) Safety Directors Forum**, Fairfield Nashville Downtown/The Gulch, Nashville, Tennessee. Visit [www.nuca.com/sdf](http://www.nuca.com/sdf)

**Nov. 11-13**

**WJTA - IMCA Conference and Expo**, Ernest N. Morial Convention Center, New Orleans. Visit [www.wjta.org](http://www.wjta.org)

**Nov. 15**

**Utility Construction Career Fair**, Dulles Expo Center – North Hall, Chantilly, Virginia. Visit [www.nuca.com/careerfair](http://www.nuca.com/careerfair)

**Jan. 26-31, 2020**

**Underground Contractors Association of Illinois Annual Convention**, Grand Fiesta Americana, Puerto Vallarta, Mexico. Visit [www.uca.org](http://www.uca.org)

**Jan. 28-30**

**Underground Construction Technology (UCT) International Conference & Exhibition**, Fort Worth Convention Center, Fort Worth, Texas. Visit [www.uctonline.com](http://www.uctonline.com)

Dig Different welcomes your contributions to our Happenings column. To recognize members of your team, please send notices of new hires, promotions, service milestones, certifications or achievements. We also invite your national, state or local associations and organizations to post notices, news items and learning opportunities. Send contributions to [editor@digdifferent.com](mailto:editor@digdifferent.com). ▼



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The mighty X-Cavator™ from Vac•Con® provides you the ability to safely excavate around delicate underground utilities with precision and performance never before seen.

- Available with high-performing 3-Stage Fan or PD Blower
- Customized builds to meet your needs
- Air Compressor Systems up to 185 CFM with Air Knife for Air Excavation

 **VAC•CON**  
MORE POWER TO YOU