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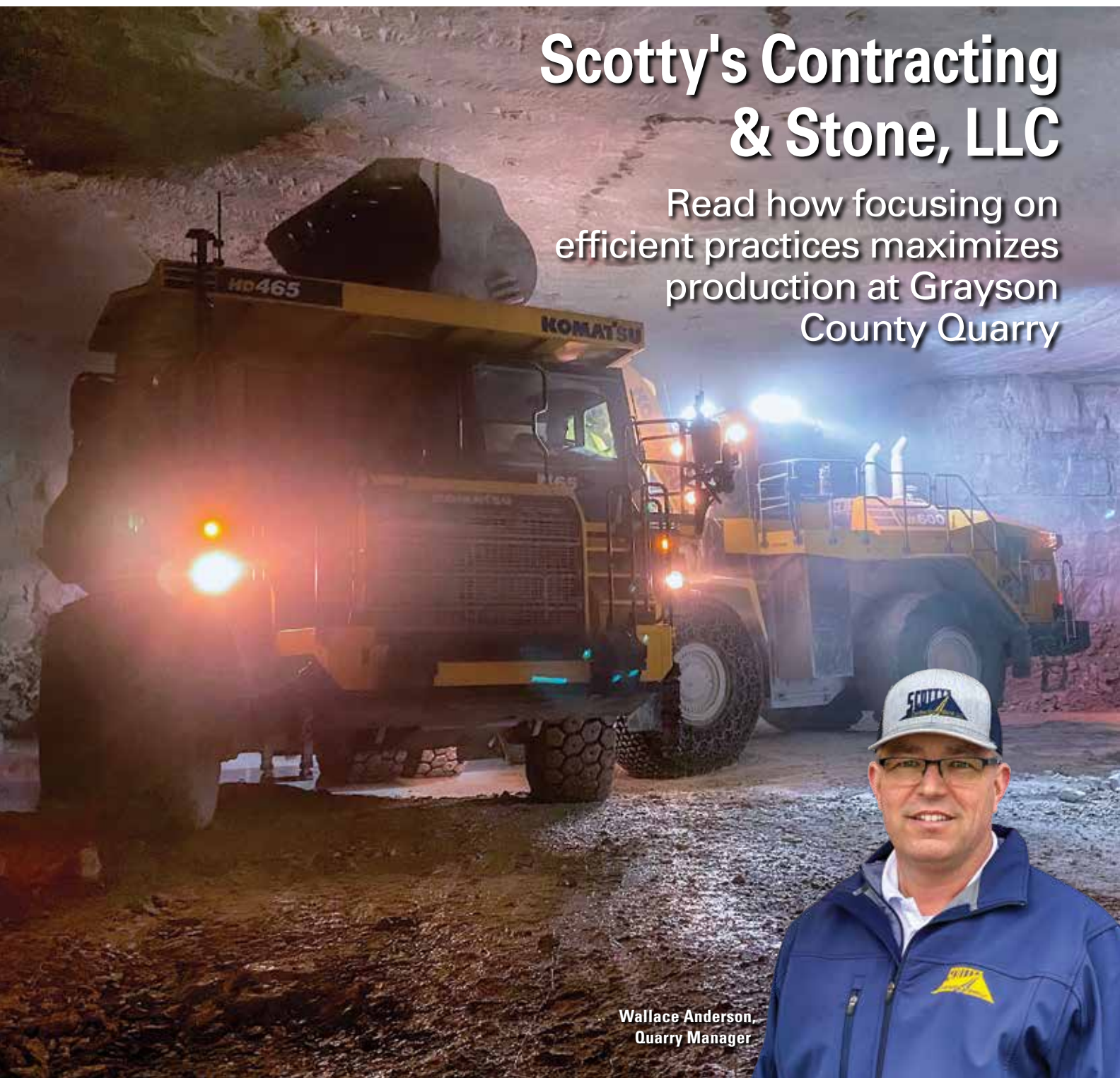
Solutions



A publication for and about Brandeis Machinery & Supply Company customers • www.BrandeisSolutions.com

Scotty's Contracting & Stone, LLC

Read how focusing on
efficient practices maximizes
production at Grayson
County Quarry



Wallace Anderson,
Quarry Manager

A Message from Brandeis Machinery



David Coultas

**CONEXPO
proves we are
aligned with
innovative
manufacturers**



Dear Valued Customer:

There is no show quite like CONEXPO. It continues to grow and get more impressive each time. Take a look at the CONEXPO recap article in this issue of your Brandeis Focusing on Solutions magazine for a glimpse of the event.

It's evident that technology plays an increasingly larger role in both the use and support of today's equipment and will continue to do so going forward. Additionally, it's clear that the manufacturers we represent are at the forefront of the industry.

It's gratifying to know that we have aligned ourselves with leaders in integrated GPS and other systems, which make today's machinery more efficient and productive than ever. Innovation goes beyond the machine as well, with companies like Komatsu working to connect the entire jobsite.

Technology is great, especially when coupled with quality equipment that performs to your expectations without significant downtime. Komatsu featured several of these dependable new products at CONEXPO. Look for information about some of them as you read through this edition. You will also find an article on how Komatsu's Business Solutions Group helped Scotty's Contracting & Stone maximize operations.

As your operations hit high gear, don't neglect routine maintenance. It's essential to keep your equipment running at peak performance. We're here to help if you need any assistance.

As always, if there's anything we can do for you, please call one of our branch locations.

Sincerely,
Brandeis Machinery & Supply Company

David Coultas
President

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Vice President/
Regional Sales Manager

Lee Heffley,
Vice President/
Regional Sales Manager

Keith Harlan,
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Barry Justice,
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Western Region
Operations Manager

Garrett Dykes,
Central Region
Operations Manager

Louisville, KY

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Lexington, KY

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Evansville, IN

17000 Highway 41 North
(812) 425-4491

Corbin, KY

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Fort Wayne, IN

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Indianapolis, IN

8410 Zionsville Rd.
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Scotty's Contracting & Stone, LLC focuses on efficient practices to maximize production at Grayson County Quarry



Wallace Anderson,
Quarry Manager

In 1972, Jim Scott started Scotty's Contracting & Stone, LLC with 10 employees. Today, the company boasts 430 staffers and is the largest heavy-highway contractor in Kentucky. In order to maintain that status, Scotty's requires a steady stream of high-quality limestone to keep its plants running and crews paving. Its Grayson County Quarry in Leitchfield, Ky., is committed to making that happen.

"We support our stone yards in Madisonville and Vine Grove," explained Quarry Manager Wallace Anderson. "Our primary focus is finish stone for asphalt and concrete. Having this quarry helps to guarantee that the company has a consistent, quality product for all of its projects."

The quarry originally opened in the 1970s, and Scotty's purchased it in 1989. While location is an important factor to the quarry's success, Grayson County also has direct access to a limestone seam, thanks to its underground mine.

"We are able to mine the product without having any shale, sand, dirt or other rock in it," said Anderson. "It's all stone. The quarry is permitted for 1,000 acres, and we have limestone that runs 400 feet deep. Currently, we are only at 45 feet. We're barely scratching the surface."



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A Scotty's Contracting & Stone, LLC operator uses a Komatsu WA500 wheel loader to manage a stockpile at the Grayson County Quarry in Leitchfield, Ky.



Ramping up

The abundance of quality limestone at the Grayson County site has helped fuel the growth of Scotty's Contracting & Stone. In 2017, the quarry increased production even further.

"The Vine Grove stone yard was bringing in material from our location and from another supplier," explained Anderson. "After evaluating the situation, it was determined that our quarry could handle the entire demand for Vine Grove. This allowed the organization to control both the quality of limestone and make sure it had enough on-hand at all times."

Company leaders knew Grayson County Quarry had the ability to supply the larger quantities. Delivering it, however, required some reinvention. With increased tonnage on the horizon; using tri-axle trucks to transport the limestone to both Vine Grove, which is 50 miles away, in addition to Madisonville – a distance of 75 miles – posed a significant challenge. Rail became the answer to the delivery equation.

"There was a spur already here, so we built a load-out facility and purchased our own rail cars," explained Anderson. "We typically ship 30-car sets that haul 120 tons per car on a loop. In order to move that much by truck, it would take 150 loads and about two-and-a-half-days. Now, we're doing it by rail as often as five times a week."

Utilizing rail freed up the quarry to deploy their trucks and drivers more effectively.

"Currently, there is a shortage for any type of trucking," noted Anderson. "Having more available trucks allowed us to better serve our paving crews. The move to rail actually allowed Scotty's to increase employment."

Ensuring efficiency

With the consistent growth of the organization and a greater demand for products, Scotty's reached out to Brandeis Machinery & Supply Company and Komatsu's Business Solutions Group (BSG) to evaluate its quarry operation in 2019.



► VIDEO

Nearly a mile from the entrance of the Grayson County Quarry underground mine, a Scotty's Contracting & Stone crew uses a WA600 wheel loader to fill a Komatsu HD465 truck. "The HD465s clear the mine's 27-foot ceiling, and we are easily able to charge them with the WA600," noted Quarry Manager Wallace Anderson.

"We were searching for ways to be more efficient overall," detailed Anderson. "With the growth that was happening, our Vice President of Material, Mike Law, and I wanted to know what equipment to purchase that would work together the best. We have a great relationship with Brandeis, and the BSG study made sense. They spent a couple of days here and took everything in."

After computing the data, the BSG returned with a fleet recommendation that surprised Anderson.

"We were running four, 40-ton articulated trucks with our Komatsu WA600 wheel loader in the underground mine, and the BSG suggested three, 60-ton trucks," said Anderson. "The HD465s clear the mine's 27-foot ceiling, and we are easily able to charge them with the WA600."

"It was huge for us," he added. "We were debating moving our jaw crusher and really making some changes to how we do things. Komatsu told us we could keep the jaw where it was and that we had about five years until it needed to be moved or add more equipment. Plus, they said this set up was going to increase production during that time."

It was reassuring for Anderson to know that Komatsu and the Brandeis team – including President David Coultas; Vice President



Regional Sales Manager Robert Krutsinger; PSSR Brandon Richardson; and Sales Rep Gene Snowden – all worked in Scotty's best interests.

"They didn't try to sell us more than we needed; they came to help," shared Anderson. "They predicted that we could decrease the amount of trucks we use and still increase output – and they were right. We picked up 10 percent production per day with one less truck in the mix. We've worked with Brandeis and Komatsu for several years, and we trust them because of situations like this."

Scotty's Contracting & Stone built its fleet with equipment that can work together – like the WA600 wheel loader and HD325 truck – without sacrificing productivity.

Continued . . .

Tier 4 Final equipment improves air quality

... continued

Komatsu tough

Anderson knows the quarry can count on Komatsu equipment from Brandeis and Snowden to perform every day. In addition to the WA600 wheel loader and HD465 trucks used in its underground operation, Grayson County Quarry has a Komatsu WA500 wheel loader and HD325 trucks above ground for its load-out operation. It also has a WA320 wheel loader for cleanup and an additional WA600.

While performance and durability of the equipment are priorities, it's the flexibility of the fleet that helps Grayson County Quarry avoid downtime.

"We charge the HD325s with WA500s, but they also pair well with the WA600, so we could use an HD325 in place of an HD465, if

we needed to," said Anderson. "Similarly, we could use the WA500 in place of the WA600 to fill the HD465s if necessary, without giving up too much production. The equipment can work above or below ground and still be efficient. That was something else we learned from the BSG study."

The upgraded fleet also enhanced working conditions for operators, in and out of the cab.

"The equipment we added after the BSG visit was Tier 4 Final, so the air quality in the underground mine has improved tremendously," explained Anderson. "We are about a mile from the entrance at some points, so air quality is a big concern. We have a ventilation system and circulate the air; however, reduced emissions from the equipment made a major impact.

"Our operators love the cabs," he continued. "Some say it's no problem running 10- or 12-hour days. The level of comfort has come a long way from the older trucks."

Deeper dive

As recently as 2017, the Grayson Quarry was producing 450,000 tons of material a year. Today, that number has nearly tripled to 1.2 million tons. By 2030, Anderson expects the quarry to generate 2 million tons annually.

To accomplish that goal, Anderson says the plan is to open another layer in the seam within the next five years. That will involve digging 75 feet below the mining area and beginning the mining process anew.

"I'm very excited for the challenge," shared Anderson. "We can do it. With the practices we have in place and people working here, we should be able to see consistent growth toward that number." ■



A crew member uses a Komatsu HD465 truck to dump its haul from Grayson County Quarry's underground mine into a jaw crusher.

The decision to transport material via rail instead of trucks improved production by nearly 60 percent at Scotty's Contracting & Stone's Grayson County Quarry.



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Hunter and Clint Shackelford
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Crowd pours into Las Vegas for CONEXPO-CON/AGG, IFPE triennial gathering

The crowd was much better than expected under the circumstances,” said David Price, Chairperson of International Fluid Power Exhibition (IFPE), which had a co-located event with CONEXPO-CON/AGG’s show at the Las Vegas Convention Center and Festival Grounds. “We were very pleased with the strong showing from the 300-plus exhibitors at IFPE 2020, and we are looking forward to the 2023 gathering.”

Even amid concerns about COVID-19, CONEXPO-CON/AGG and IFPE drew large daily attendance. The showcase featured the latest machinery and technology for the construction, mining, scrap handling, waste, forestry and other industries. Registrations for the show totaled more than 130,000.

“CONEXPO is a great way to see what’s new,” said Seth Wisney with McGuirk Sand-Gravel of Mt. Pleasant, Mich. “It’s very impressive.”

Despite the last day being cancelled, the event reached some key metrics according to organizers, including overall contractor and producer attendance growth of 14 percent. Attendees purchased a record-breaking 75,622 tickets for educational sessions, a 46 percent increase from three years ago.

“We refer to this as the ‘heavy metal’ show, but it’s much more than that,” stated Mary Erholtz, CONEXPO-CON/AGG Show Chairperson. “It has giant machines, incredible exhibits, fantastic education and huge expectations.

Organizers have a legacy of building and innovating on previous shows, and the 2020 gathering extended that record of success.”

Technology at the forefront

CONEXPO-CON/AGG highlighted technology in today’s and tomorrow’s construction industry with the Tech Experience. This exhibit emphasized the effects of artificial intelligence, autonomous equipment, big data, sustainability, smart cities and modern mobility.

“I’m amazed at what some of the minds at the Tech Experience think up,” said Helen Horner, Director of Education Programs at the Association of Equipment Manufacturers (AEM), the organization that co-owns and operates CONEXPO-CON/AGG. “What we’re seeing in bringing all of these ideas to one place is how some connect to form new ideas. Hopefully,

Continued . . .



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Roger Group Inc.’s Larry Crisp (center) meets with Brandeis Vice President - Regional Sales Managers Corey Wall (left) and Robert Krutsinger.

▶ VIDEO



A large contingent of people checked out the Komatsu booth during the co-located CONEXPO-CON/AGG and IFPE show in Las Vegas.

Looking to the future of the industry

... continued



Aaron Dudeck (left) and Joe Jonas of HRP Construction visit the Komatsu exhibit area.



(L-R) Brian and Becky Hite of Hicon Construction LLC tour the Komatsu booth with Brandeis Vice President - Regional Sales Manager Robert Krutsinger.



Owen Smith (left) and Glenn Henningfield from Walsh & Kelly Inc. check out the new Komatsu D71PXi-24 dozer.



(L-R) Mackenzie Nelson, Cohen Jestes and Charlie Nelson of Charlie Nelson Trucking & Excavating, LLC attend CONEXPO-CON/AGG 2020 in Las Vegas.

Attendees gathered information about equipment and technology from Komatsu personnel who answered questions and provided details about new machines, intelligent Machine Control 2.0, Smart Construction, MyKomatsu and much more.



those germinate after the show to give us even more amazing technology to explore at the next CONEXPO-CON/AGG."

Tech talk topics included Driving Decisions with Artificial Intelligence; Smart Cities; 3D Printing Buildings – Current Possibilities and Future Implications; Wireless Energy Transfer; and Prevention and Protection of Traumatic Brain Injuries.

"New ideas and connections are the core of what we want people to experience at CONEXPO-CON/AGG," said Show Director Dana Wuesthoff. "The big iron and big deals are definitely fun, but the technology, information and education are what secure the future of the industry and the continuing viability of the businesses that attend and exhibit here."

"Creating Connections"

Komatsu, with its exhibit theme of "Creating Connections" was among those making a strong showing with both equipment and technology. The company debuted machines for multiple industries, including the D71PXi-24, its newest and largest hydrostatic transmission dozer. It features Komatsu's intelligent Machine Control (iMC) 2.0, which also was introduced in Las Vegas.

Komatsu showcased its upcoming suite of 11 Smart Construction solutions that will roll out over the next year. By tapping into the Internet of Things, customers will soon be able to control construction planning, management, scheduling and costs, and optimize processes remotely and in near real time.

The D155CX-8 pipelayer, designed in conjunction with pipeline companies, made its global premiere in Komatsu's 40,000-square-foot exhibit space. Previously previewed machines that were formally introduced at the event included the PC130-11 excavator and the WA475-10 and WA800-8 wheel loaders.

"CONEXPO provides a unique opportunity for contractors to see not only where the equipment industry is today, but also where it's headed; and we believe Komatsu is leading the way," said Rich Smith, Vice President, Product and Services Division. "We wanted attendees to see Komatsu's commitment to advanced products backed by innovative solutions that can potentially reduce overall ownership and operating costs significantly. The feedback we received shows we achieved our objective." ■

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Conversations lead to redesigned wheel loader that lowers owning and operating costs

Any increase in fuel efficiency translates to reduced operating costs and a boost to your company's bottom line. When combined with greater productivity and lower maintenance expenses, the benefits can become even more significant.

"Those savings potentially make equipment users more competitive and more profitable," said Komatsu Senior Product Manager Bruce Boebel. "Feedback we received in the field guided us to improvements that make the new WA475-10 wheel loader up to 30 percent more fuel efficient compared to the WA470-8 model (production/fuel). We've incorporated next-generation technology with considerable benefits to make this machine ideal for quarry, waste, infrastructure, forestry and non-residential applications."

More muscle, simplified control

The WA475-10 has 18 percent more horsepower than the WA470-8 but achieves increased fuel efficiency with its Komatsu Hydraulic Mechanical Transmission (KHMT). Contributing to better economy and productivity is the independent work equipment control that simplifies operation by separating the accelerator pedal from the speed of the work equipment.

"If a few extra RPM are needed, a work equipment lever can be used to spool up the pump," Boebel explained. "That allows

the operator to concentrate on approaching the hopper or truck without the need to push the accelerator to speed up. It's a lot more fluid operation."

KHMT's dynamic braking reduces brake wear, extending component life. The loader's auto hill-holding function enables it to remain stationary on a slope without the brakes, so even if the operator does not apply the brake pedal, the machine won't roll back on uphill applications, such as stockpiling.

To further boost productivity, the boom lift force of the WA475-10 is bolstered by 20 percent and breakout force is increased by 8 percent. A new bucket design improves pile penetration and better retains material in load and carry applications.

"Further conversations with equipment users also led to an improved operating environment that includes an updated cab with floor-to-ceiling glass, ergonomically designed switch layouts and a fully adjustable five-axis console for enhanced operator comfort," Boebel said. "It is a true workhorse engineered from customer input." ■



Bruce Boebel,
Komatsu Senior
Product Manager



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BrandeisSolutions.com

Brief Specs on Komatsu's WA475-10 Wheel Loader

Model	Operating Weight	Bucket Capacity	Applications
WA475-10	56,240-60,400 lb	5.5-6.0 cu yd	Quarry, waste, infrastructure, forestry, non-residential

The WA475-10 wheel loader has up to 30 percent greater fuel efficiency compared to the WA470-8. It features increased breakout and boom lift force as well as a new bucket design that improves pile penetration and better retains material in load and carry applications.

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Unique 8-wheel-drive harvester keeps operators productive in challenging conditions

Forestry thinning is often done on varying terrain, including rough, soft, uneven and steep ground. These challenges can hinder production, making it vital to have machinery to meet the terrain head on and excel, according to Steve Yolitz, Manager, Marketing Forestry, Komatsu America.

“Our new 901XC (eXtreme Conditions) differs from other 8-wheel-drive (8WD) harvesters because of its unique drive system,” said Yolitz. “The exclusive ‘double Comfort Bogie axle’ provides excellent handling and follows the terrain more closely than the competition’s 8WD machines that have a fixed rear-axle design. The 901XC is truly a powerhouse for thinning.”

Yolitz added that Komatsu’s 8WD system generates 12 percent more tractive effort and reduces rear ground pressure – 53 percent lower psi with tracks and 19 percent with tires – compared to the 901 6WD model.

“It features many of the same proven attributes as the 901 6WD harvester platform, such as a three-pump hydraulic system (3PS), best-in-class ergonomic cab, 4-way cab/crane leveling and ± 180 -degree cab/crane rotation,” said Yolitz. “The 3PS provides higher hydraulic flow at low engine speeds, while lowering fuel consumption, and allows the operator to simultaneously feed, slew and maneuver. These hydraulic system interactions are all automatically controlled by Komatsu’s new MaxiXT control and information system.”

Easy maintenance

A range of harvesting heads are available to meet specific application needs. “The 901XC is ideally suited for the rugged Komatsu C124 ‘carry-style’ head, which has four powerful motors and four heavy-duty driven-feed rollers,” said Yolitz.

He added that operators will have excellent visibility in low-light conditions because the 901XC has 16 LED working lights. The harvester has an air suspension, air-vented seat; fully adjustable ergonomic armrests; and hand controls as well as an automatic four-season, climate-control system.

“All daily maintenance checks and fills can be performed at ground level or from inside the cab,” said Yolitz. “The one-piece hood opens rearward to fully expose the entire engine compartment for easy service access. An automatic central lubrication system and well-placed hydraulic tank platforms further facilitate serviceability. All filters are vertically mounted to ease replacement and minimize the potential for spills and environmental impact.” ■



Steve Yolitz,
Manager,
Marketing Forestry,
Komatsu America



Discover more



The Komatsu 901XC harvester features a “double Comfort Bogie axle” 8-wheel-drive system designed to tackle steep, uneven, rough and soft terrain. The system generates 12 percent more tractive effort and reduces rear ground pressure compared to the 901 6WD model.

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Next generation of HAMM pneumatic tire rollers – HP Series – is teeming with technical innovations and advances

In the 1960s, HAMM launched the GRW, a revolutionary pneumatic tire roller that dominated the market for several decades. Now, HAMM's new HP Series of pneumatic tire rollers are ready to carry the torch as the worldwide successor to the GRW.

The HP Series includes four models – HP 180 and HP 180i, which offer operating weights between eight and 18 tons, and the HP 280 and HP 280i with operating weights between 10 and 28 tons. All models will be in operation in North America by the end of 2020.

The flexible ballast is a standard feature on the HP Series rollers that allows end users to quickly adjust operating weight to suit the asphalt type, layer thickness and application. Prefabricated bodies made of steel or concrete can be inserted or removed from the large compartments between the wheel sets simply by using a forklift in the garage or on the jobsite.

HAMM locates the ballast spaces in the center of the rollers to ensure the weight is always evenly distributed over both axles in order to create conditions that optimize compaction quality.

The HP Series rollers also feature a supplementary water tank, which holds

approximately 400 gallons and an innovative sprinkling system that doses and mixes additives during compaction.

Operating efficiency

HAMM developed a common platform for all model variants of the HP series in every market throughout the world. The language-neutral system shortens the learning curve for operators and allows them to run multiple rollers within the series without the need to learn a new program.

The platform is one of many enhancements designed to maximize operator performance. A spacious, cabin delivers maximum visibility over the machine and construction site. HAMM's proven asymmetrical frame concept was carried over from the GRW rollers. This type of frame is a quality advantage because it follows the track offset between the front and rear wheel sets while also continuously allowing a clear view to the outer flanks and rear wheels.

Brake pedal access within the HP Series was improved as it was integrated into the seat-operating unit to deliver constant, reliable access to the brakes, which maximizes safety. ■



Discover more

(L-R) HAMM's new HP Series of pneumatic tire rollers – HP 180, HP 180i, HP 280 and HP 280i – have a common platform for operating efficiency.



Smart Construction offers solutions to digitally transform your jobsite, optimize processes



Jason Anetsberger,
Komatsu Senior
Product Manager



Renee Kafka,
Komatsu Product
Marketing Manager

From jobsite equipment to remote monitoring systems, bidding software and GPS grade control that makes earthmoving more efficient, today's construction industry is more innovative than ever.

"Those who embrace advancements and put them to best use tend to be more efficient, productive and profitable," said Jason Anetsberger, Komatsu Senior Product Manager. "Our Smart Construction suite of solutions can help customers digitally transform their operations to most effectively use equipment and technology in planning, management, scheduling, tracking and more. It's designed to help optimize processes and improve overall jobsite productivity."

From pre-bid through project completion, there is a solution that companies can utilize to improve their operations with digital technology, according to Komatsu Product Marketing Manager Renee Kafka.

"Smart Construction looks beyond the machine," stated Kafka. "We recognize that every contractor is unique. Some need help with bidding, others with implementing intelligent Machine Control and a third might be seeking

a way to identify bottlenecks on a project or how to calculate daily production using drone technology. We have a comprehensive list of options to meet their needs."

Komatsu will start releasing the following solutions through Smart Construction over the next year:

- Design – Go from rolled-up paper plans to 3D designs and more with 3D data generation.
- Remote – Send new design data to machines in the field or remotely support operators without traveling to the jobsite.
- Dashboard – Visualize and analyze design, drone and machine as-built data to measure cut/fills, quantities and productivity.
- Fleet – Collect the data needed to optimize fleets and track production, all on a mobile app.
- Drone – Provide a bird's-eye view of the jobsite, in a fraction of the time compared to a ground-based survey.
- Edge – Rapidly process drone data into a 3D terrain map without leaving the jobsite.

"There are several tools and devices for the construction phase, but customers need more. With Smart Construction, Komatsu looks beyond the jobsite at the whole construction process," said Kafka. "For example, before putting a machine in the dirt, you have to bid and win the job. From conversations with customers, we understood this was an area where we could assist. Helping customers capture data during construction gives them actionable information for use in future bids."

Kafka added that tracking production can be accomplished in several ways: you can take as-built data from Komatsu intelligent Machine Control dozers and excavators while they work and combine it with data from daily drone flyovers. She said this process, along with other Smart Construction solutions, can replace traditional calculation methods, such as using a counter or paper tickets to keep track of loads.

"You get a very accurate view of day-by-day progress and see production quantities

Komatsu's Smart Construction offers tools to optimize operations throughout the entire construction process, from pre-bid to completion. "Our suite of services can help customers digitally transform their operations to most effectively use equipment and technology in planning, management, scheduling, tracking and more," said Komatsu Senior Product Manager Jason Anetsberger.





► VIDEO

Komatsu and its distributor personnel assist customers with implementing digital solutions into their operations through Smart Construction.



Smart Construction solutions include a dashboard that helps to visualize and analyze design, drone and machine as-built data to measure cut-fills, quantities and productivity.

and stockpile volumes,” said Kafka. “In working with customers, we found that a picture is really worth 1,000 words, and you can access it remotely without visiting the site. It is also an easy way to look back at the progress of the site versus a month ago.”

Contact your local distributor

Anetsberger recommends that customers contact their local distributor to discuss the

suite of Smart Construction tools and which ones, or all, that may be right for them.

“Smart Construction is a mix of hardware and digital solutions as well as human-delivered services,” explained Anetsberger. “The latter involves Komatsu’s experienced personnel out in the field collecting feedback and knowledge from jobsites. Our goal is to redeploy that information to our customers, who can use it to positively affect practices.” ■



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Brian (left) and Thomas Cronin / Prosperity Construction / Jackson, MS

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Rod Schrader says jobsite meetings enable Komatsu to help customers increase their efficiency

QUESTION: Making connections was one of the main themes of the recent CONEXPO. What does that mean to Komatsu?

ANSWER: It means a couple of things. First, during the past few years we have emphasized meeting with customers at their jobsites in an effort to get to know them and their operations. Those face-to-face visits help us understand their needs so that – from an equipment and support standpoint – we can better meet those needs.

Another meaning relates to those conversations and how we use them to prepare for the jobsite of the future. The products are certainly the foundation, and we keep investing in ways to improve their quality, productively and technology. We have learned that the jobsite is about more than Komatsu construction machinery. It includes on-highway and other equipment, and we must connect everything – data, location, processes – to maximize efficiency. The connected jobsite is the future, and I believe Komatsu is at the forefront of making that a reality.

QUESTION: In what ways is Komatsu using technology to help with the jobsite of the future?

ANSWER: One area of concern is the lack of experienced operators. That means products need to be smarter, and maybe even automated in some cases, in order to ensure that contractors can continue to move dirt productively and efficiently. We have taken steps in that direction with intelligent Machine Control dozers and excavators that not only help inexperienced operators be proficient, but can also make those who have been moving dirt for years even better.

Our Smart Construction services provide jobsite mapping and setup, GPS hardware and 3D data services. During CONEXPO, we introduced an expansion that combines our technology with the technology of our strategic partners, to allow other equipment to communicate and collect data that can be used to take action to improve efficiency.

Continued . . .



**Rod Schrader,
Chairman and CEO**

This is one of a series of articles based on interviews with key people at Komatsu discussing the company's commitment to its customers in the construction and mining industries – and their visions for the future.

Rod Schrader began his career with Komatsu in 1987 as a Product Manager for utility equipment. Over the past 33 years, he served in several leadership positions within the company across multiple divisions, including utility, mining and construction.

"It seemed like every three years or so I moved into a different role," said Schrader. "My wife jokes that they couldn't find a spot that I was good enough in. All those positions provided great experience to help me understand the various market segments, customers and our distributors, which prepared me for this role."

Komatsu named Schrader Chairman and CEO in 2012. During his tenure, the company has completed several strategic acquisitions, including the purchase of Joy Global in 2017, which also brought P&H Mining Equipment and Montabert products under the Komatsu umbrella and expanded its mining-related product lineup. In 2019, it bought TimberPro, a small forestry machine manufacturer. He's also seen Komatsu acquire manufacturers such as Dresser and Demag, as well as technology entities like Modular Mining.

"It's exciting to watch how the company has changed and flourished in the last three decades and become a global leader in the equipment industry," said Schrader. "Next year Komatsu will mark its 100th birthday, and we will celebrate that achievement. At the same time, we continue to focus on the future and find ways to better care for our customers in a comprehensive way through innovative products and services that meet all of their jobsite needs."

Komatsu reduces impact with lower emissions, fuel usage

... continued

QUESTION: How do you factor sustainability and environmental awareness into these initiatives?

ANSWER: Greater efficiency leads to fewer passes to reach grade, which, in turn, equates to lower emissions and fuel usage and reduced impact. We have implemented stringent emissions standards throughout the years. Some would argue that the air coming out of the machines is now cleaner than what is going into them.



Connecting with customers in the field helps Komatsu understand their needs and implement ways to increase their efficiencies and provide better customer support, according to Komatsu Chairman and CEO Rod Schrader.

We recognize that mining and construction have an impact, and we want to be good stewards of the earth. We have partnered with Green Forests Work, a non-profit organization, to reforest 1,000 acres of national forest in West Virginia during the next three years. In some of the areas, the soil is overly compacted, so we are providing people and machines to loosen it and return it to its natural state to promote plant growth.

We also ran a company-wide contest for employees inviting them to create or join initiatives that support sustainability, and we received several excellent submissions to pursue.

QUESTION: Speaking of employees, could you share how Komatsu addresses diversity and inclusion?

ANSWER: I believe Komatsu is ahead of the curve as we have a wide cross section of individuals throughout the company, including in leadership positions. We are looking for the best people first, but also make a concerted effort to be diverse and representative of the global whole.

This can be a challenge. For a long time, people avoided the industries we serve because the jobs were viewed as low-paying and dirty. We are working hard to educate potential recruits – and have partnered with some schools on diesel tech programs – to change this perception. For instance, we are sharing the message that future technicians can get a solid education with little to no debt and graduate into well-paying jobs. ■

Komatsu has partnered with Green Forests Work to reforest 1,000 acres in West Virginia during a three-year period that began in 2019. “We recognize that mining and construction have an impact, and we want to be good stewards of the land,” said Chairman and CEO Rod Schrader.



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Care Plus programs provide maintenance, repair service throughout the United States



Felipe Cueva,
Manager,
Genuine Care



Discover more

Contractors sometimes work on jobsites outside of their local equipment distributor's territory. That can leave them guessing about how to get warranty repair and maintenance service on their machinery.

Komatsu aims to simplify those situations with its recently introduced Komatsu Care Plus and Komatsu Care Plus II programs that deliver consistent coverage across the United States. Under the initiatives, any authorized Komatsu distributor can perform repair and maintenance, regardless of where in the country the machine was purchased.

The Komatsu Care Plus programs provide model-specific detail, outlining maintenance items serviced, repair coverages, program benefits and terms and conditions. Both have automatic scheduling for maintenance services, genuine parts, certified labor, machine inspections and regular oil sampling. Komatsu Care Plus II also includes Komatsu's Premier Extended Coverage for customers seeking fixed repair costs.

Higher resale possible

"We developed our Komatsu Care Plus programs to offer a complete end-user

solution that is hassle-free, and encompasses other services Komatsu provides; such as financing, certified labor, genuine parts and telematics," said Felipe Cueva, Manager, Genuine Care. "Customers can purchase the programs when they buy new equipment or at a later date with some restrictions. Our pricing is standard across the country. Owners can work directly with their distributor to add one or both of the programs."

Once customers have Komatsu Care Plus and Komatsu Care Plus II, Cueva encourages them to use the complimentary MyKomatsu interface to view their machinery's program coverage, care reports and service completions.

"With Komatsu providing consistent and complete service records, machines will also be eligible for the Komatsu Care Certified equipment program, allowing customers to request a higher resale value for their equipment," said Cueva. "These repair and maintenance programs offer great benefits, and we plan to roll out additional options in the near future." ■

Komatsu Care Plus and Komatsu Care Plus II provide nationwide repair and maintenance service with work performed by any authorized Komatsu distributor.



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Marv Selge / Selge Construction, Inc. / Niles, MI

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Demolition event gives attendees opportunity to operate, compare equipment, attachments

Demolition contractors often say that taking down buildings and removing pavement is the first step to new construction. They want to handle these tasks in an economical way, using right-sized machines equipped with the proper attachments, according to Komatsu Senior Product Manager Kurt Moncini.

"The key to demolition is first determining the correct tools for the job, then mounting them on the appropriate excavators to handle the weight of the attachments and the materials during processing," said Moncini. "You may need auxiliary hydraulics, additional circuits for rotation or both. Added guarding is essential in this relatively tough application."

Hands-on experience

Attendees of the National Demolition Association's (NDA) annual exposition had the opportunity to see and operate several combinations of equipment and attachments during the live event, including three Komatsu excavators: a PC290LC-11 with a grapple, a PC390LC-11 equipped with a pulverizer

and a PC490LC-11 with a second-member shear attached.

"There is nothing like being able to run equipment in as close to an actual jobsite setting as possible," said Moncini, who was among a contingent of Komatsu personnel assisting attendees and answering questions. "Fortunately, NDA provides that opportunity in a great simulated working environment. The excavators and attachments on-hand showed Komatsu's ability to cover all phases of the demolition process."

In addition to participating in the live event, Komatsu had a booth during the show where attendees could get product information as well as try a virtual reality simulator.

"The simulator is a great tool for operator training," said Komatsu District Manager Isaac Rollor. "NDA is always a terrific event. We were happy to participate and exhibit Komatsu's commitment to the industry." ■



Kurt Moncini,
Komatsu Senior
Product Manager



Isaac Rollor,
Komatsu District
Manager



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► VIDEO

Attendees could operate equipment and attachments, including a Komatsu PC490LC-11 equipped with a shear, as well as step into the virtual world with a simulator in Komatsu's booth.



Operator Hunter Frisbie appreciates working in the outdoors, enjoys the power of heavy equipment



**Hunter Frisbie,
Operator**

**“Who doesn’t
like playing
in a sandbox
all day?”**

Hunter Frisbie took the initiative to make a major career change about a year ago. After working in the trades for several years, he decided to enroll in a heavy-equipment operator school. Within months, Frisbie was at the controls of several types of construction equipment.

“I worked in a cabinet shop for many years, and I liked it,” said Frisbie. “I really wanted to do something different, however. Who doesn’t like playing in a sandbox all day?”

Frisbie said the operator school taught him a lot about the basics of the machinery and was good preparation. After completing the course, he spent about three months learning how to move dirt before landing a full-time job with an earthwork contractor.

“I don’t think you’re really an operator until you have a ton of seat time,” he stated. “The

more experience you have, the better you are at moving dirt effectively.”

Allure of powerful machinery

What appeals to Frisbie about operating equipment?

“I like that I’m outside and not stuck in an office all day,” he said. “The sheer power of the machines is pretty cool, too.”

Frisbie encourages others to consider joining him in this career. While compensation varies depending on experience and location, the employment search engine, indeed.com, recently showed an average hourly wage of approximately \$20.

“If I come across someone who is looking for a direction in life, I would definitely recommend being an operator,” Frisbie said. “The pay is good, and it’s fun.” ■

Hunter Frisbie started a new career as an equipment operator recently. “I like that I’m outside and not stuck in an office all day,” he said. “The sheer power of the machines is pretty cool, too.”



Americans pay more for essential utilities, common conveniences than to maintain roadway infrastructure

Americans pay an average of less than \$25 per month to maintain roads and bridges, according to an analysis from HNTB Corporation, an infrastructure design firm. That amount is far less than consumers outlay for other bills, such as essential utilities in addition to cell phone and Internet services.

On average, American drivers pay about \$275 annually in federal and state gas taxes, the primary source of revenue for upkeep and improvements of roadway infrastructure. In comparison, they spend an average of \$1,340 for electric and \$840 for water services. Mobile phone bills average \$1,200 per year and broadband Internet service is roughly \$800.

"Think of it this way: the bills we pay for critical services like electricity and water largely go to the utility companies and municipalities that provide these services," said John Barton, Senior Vice President and National Department of Transportation Leader for HNTB. "That is not so when it comes to

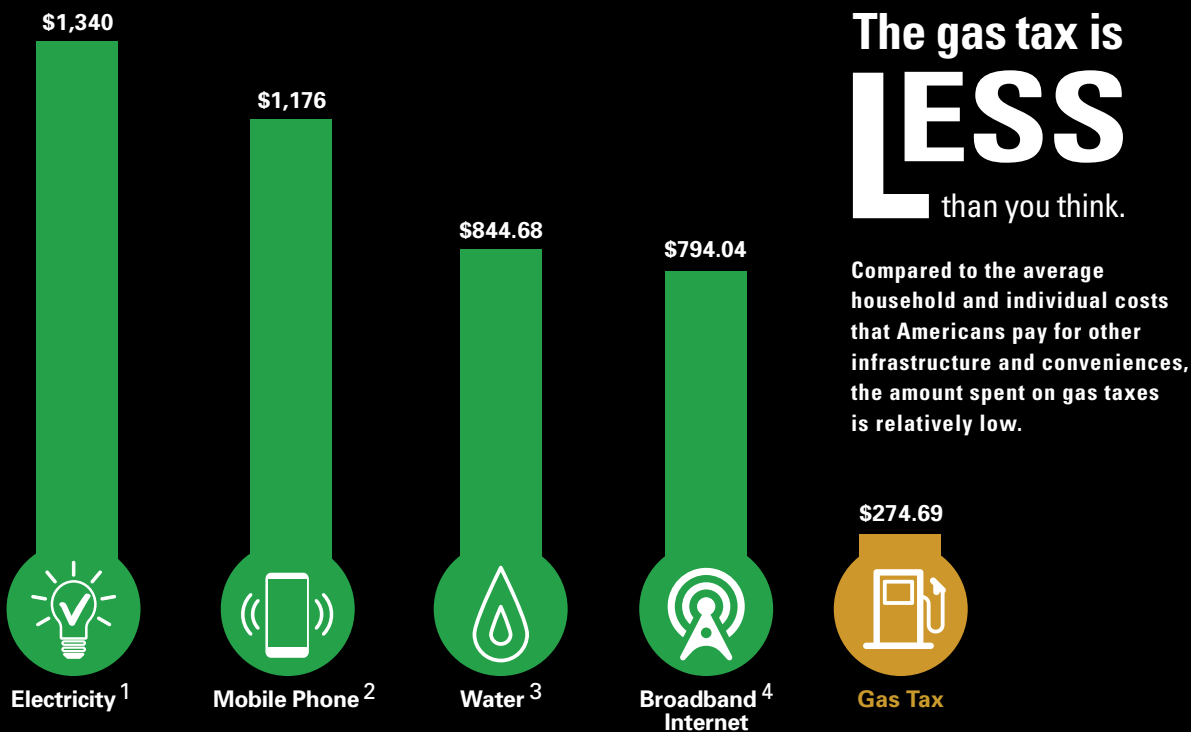
transportation. Typically, less than 20 percent of what we pay at the pump actually goes to fund our transportation system."

Taxes not enough to improve capacity

Several states have raised gas taxes to support transportation needs. However, those taxes, as well as annual vehicle registration and other fees, have not made up the shortfall in funding as more efficient cars use less gas and electric vehicles gain prominence. The federal gas tax hasn't changed since 1993.

"Congress needs to think differently, think big and pass a long-term sustainable reauthorization package for surface transportation funding. It can step up communication efforts that educate Americans about the important utility of our roadways and other ways to pay for them," said Barton. "A higher federal gas tax indexed to inflation can help quickly, but new ideas are needed too. Mobility is vital for daily life ... and it deserves investment levels which recognize that." ■

Editor's note: The figures are taken from averages of data provided by the Federal Highway Administration, the American Road and Transportation Builders Association and other sources.



1. <https://financeguru.com/news/average-electric-bill> 2. <https://www.cnbc.com/2019/04/30/americans-in-cities-spend-984-on-monthly-bills-heres-how-to-pay-less.html> 3. <https://www.statista.com/statistics/720418/average-monthly-cost-of-water-in-the-us/> 4. <https://www.forbes.com/sites/niallmccarthy/2017/11/22/the-most-and-least-expensive-countries-for-broadband-infographic/#315df6da23ef>

Future city designs must prioritize people's needs above technology advances



Rajkumar Suresh,
Urban Designer and
Architect

Rajkumar Suresh is a trained Urban Designer and Architect. He draws inspiration from technology, sociology, economics and film to create fictional works that are meant to educate, provoke and shock. He currently works at Atkins in London. This opinion piece previously appeared at www.infrastructure-intelligence.com.

Every day brings more change to our cities – electric vehicle charging points, augmented reality, mobile phone walking lanes, flexible working hubs, autonomous vehicles – the list is getting increasingly longer.

This less than gradual creep of technology has given rise to the concept of the “intelligent city.” We in the building industry have jumped on the bandwagon, outlining visions of a technology driven, hyper-connected city of the future.

Now, more than ever, we are planning our cities for an unknown future.

There is one thing that we do know. Cities are for people. That priority shouldn't change, it's been that way for centuries. People will always want places to interact, express themselves and make personal and real connections.

Focusing on people

So, amidst the ongoing drive to create an increasingly digital world, I want to bring us back to basics, to a people-centric approach that prioritizes social, economic and environmental benefits above all. I want our future city vision to be centered around people and a better understanding of what they want and need. Only then can we deliver the city that people deserve.

As with every big advance in civilization, we need to think not if we *can* do it, but *should* we do it? With technology advancing at the current rate, the world is our oyster – but why do we want to implement it? What outcomes are we hoping to achieve? What is the impact it will make on people's lives? As professionals in the building industry, we have a big part to play in this.

To build a true picture (or as close as we can get to it) of a future city, we first need to look at people, asking: How does the next generation want to live and work? Then we need to build scenarios, putting ourselves in people's shoes 20 years from now and thinking outside the box.

In the future, would there need to be a commute? Would permanent and fixed layouts be a thing of the past? How do we design for a rental rather than ownership economy? Do we need to create more space where people can connect and build communities outside the virtual world? By putting people at the center of the narrative we're more likely to create a consistent story of where we're headed, one that we can all aspire to, one that's grounded in and closer to reality.

Technology should only be an enabler. Let's shift the conversation from simply intelligent cities to ones that have a heart – cities that are designed around people first and foremost. ■

Urban Designer and Architect Rajkumar Suresh emphasizes that people should be the top priority when planning future intelligent cities. “Technology should only be an enabler. Let's shift the conversation from simply intelligent cities to ones that have a heart – cities that are designed around people first and foremost,” said Suresh.



Construction firms hold COVID-19 safety stand-downs

Hundreds of construction businesses across the country stopped work to hold safety stand-downs focusing on ways to protect workers and the public from COVID-19. Organized by the Associated General Contractors of America (AGC), the events were designed to ensure that companies and employees are taking measures outlined by public health officials to protect both workers on active construction sites and the public.

“Construction firms across the country understand that the public is counting on them to protect workers and nearby communities from the spread of the coronavirus,” said Stephen E. Sandherr, AGC’s Chief Executive Officer.

Association officials noted that construction has been allowed to continue in most parts of the country because Department of Homeland

Security guidance has identified the industry as essential. At the same time, state and local government officials appreciate that the industry has a long history of complying with complex and ever-changing safety procedures. The stand-downs highlighted the importance of consistently following new COVID-19 safety procedures and practices. The organization has also shared safety suggestions and tool kits for members and organized a webinar focusing on ways to protect workers and the public.

“There is no margin for error when it comes to protecting workers and the public from the spread of COVID-19,” Sandherr said. “Construction contractors understand that the only way to work amid the current pandemic is to work safely, and that is precisely what these stand-downs are helping to guarantee.” ■

OSHA warns of headphone use on the job

Listening to music through headphones while working on a jobsite could be a potential safety hazard, according to the Occupational Safety and Health Administration (OSHA). It also said headphones are no substitute for traditional hearing-protection devices.

“By masking environmental sounds that need to be heard – especially on active construction sites where attention to moving equipment, heavy machinery, vehicle traffic and safety – warning signals may be compromised,” the agency said in a letter of interpretation that it issued in response to a query about

employees using headphones. OSHA has no specific ban on using the devices.

“The key takeaway from the letter is that employers must address employee use of headphones to listen to music on the work site, even if there is not a specific OSHA standard prohibiting it,” said Attorney Trevor L. Neuroth of the law firm Jackson Lewis PC in a recent EHS Today article on the subject. “Employers should evaluate their worksites and determine whether a policy prohibiting listening to music on the job is appropriate.” ■

FHWA awards grants for innovative roadwork projects

Several states and local governments received \$8 million in grants from the Federal Highway Administration to study innovative roadwork techniques. Departments of Transportation in Alabama, Illinois, Michigan and Minnesota each received \$1 million grants, with Alabama and Michigan both employing accelerated bridge construction.

Other projects funded by the new federal grants will look at compacted concrete pavement to improve surfacing; and a road project to expand safety, mobility and access for drivers and bicyclists. Another funded project uses a robot-driven crash truck to protect road workers from traffic during routine maintenance activities. ■

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