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ON THE COVER

14 Safety Source

- 14 Automated Speed Enforcement Saves Lives
- 17 Latest Data on Work Zone Crashes
- 18 Safety Training For Busy Workers
- 20 Safety Helmets vs. Hard Hats
- 23 It's Getting Hot Out There! Are Your Workers Ready?
- 24 Behavioral Health: A Leadership Imperative

FEATURES

- 27 Q&A With Utah Department of Transportation Executive Director Carlos Braceras
- 30 # Infrastructure Investment at Work: Project Profiles
- 33 A Busy Year for Advocates at the State Level
- 35 Meet the ILDP Class of 2023



INSIGHTS

- Chair's Corner, p. 8
- Dave Bauer: The Arena, p. 10
- From the Foundation Chairman, p. 12
- Eye On Economics, p. 38
- ARTBA On the Road, p. 43
- AEM Corner, p. 45



ADVERTISER INDEX

Brite-Line LLC, p. 41

Common Infectious Diseases
Including COVID-19 in Roadway
Construction Course, p. 34

Contractors Materials Company, p. 44

GOMACO Corp., p. 48

Gregory Industries Inc., p. 16

Heritage Construction & Materials, p. 32

Hill & Smith Inc., p. 9

John Deere Construction and Forestry
Company, p. 2-3

MAX USA CORP., p. 11

PSS, p. 29

Roadway Construction Focus Four
& Heat Hazards, p. 22

Stalker Radar / Street Dynamics, p. 7

TraFFix Devices Inc., p. 19

Transpo Industries Inc., p. 21

Transurban, p. 26

Valtir, LLC, p. 4

Wirtgen America Inc., p. 47

ARTBA:

Advertise With Us, p. 46

Interactive ARTBA Dashboards, p. 39

Membership, p. 42

National Convention, p. 36

Regional Meetings, p. 46

Safety Center, p. 13

Transportation Construction Market
Intelligence Service, p. 40

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"Transportation Builder" (TB) is the official publication of the American Road & Transportation Builders Association (ARTBA). We bring together all facets of the transportation construction industry to responsibly advocate for infrastructure investment and policy that meet the nation's need for safe and efficient travel. ARTBA also offers value-added programs and services providing its members with a competitive edge. TB is the primary source of business, legislative, regulatory, safety and economic news that matters most to transportation development professionals.

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Getting the Message



Beth McGinn
Editorial Director
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Somewhere, many moons ago, I read a report offering advice on how to communicate the value of transportation infrastructure investment to the traveling public. The authors “message tested” a variety of words and images to see which evoked positive and negative feelings. Orange cones and work zone signs elicited a negative reaction. The takeaway—people do not want their commute interrupted; do not remind them that road construction is disruptive to their daily lives.

For people who work in the transportation construction community, those same images elicit a much different reaction. When I see moveable, concrete, and mobile barriers or orange cones, I think to myself, “Slow down—someone is working there.” In this issue, we address the use of automated speed enforcement (ASE). ARTBA recently published a white paper on the issue. The takeaway? Speed cameras are effective in getting motorists to obey speed limits—and we need more of them. Building public and political support for these programs requires careful and consistent messaging.

We also highlight two important highway improvements made possible with help from the federal infrastructure investment law, aka the 2021 Infrastructure Investment and Jobs Act (IIJA). Once completed, the Highway 404 expansion in southern New Mexico and realignment of US-95 Thorn Creek Road to Moscow in Idaho will reduce accidents and save lives. These stories are the first in a multi-year campaign to highlight how states are using their IIJA funds to improve quality of life in communities across America. Check them out on pages 30-31.

As more of these IIJA-supported projects get underway, we will see an increase in positive protection measures and changeable message signs on our roadways. They are not there to inconvenience us. Rather, they protect the lives of men and women navigating and working hard to make our infrastructure safer and more sustainable. That is the real takeaway.

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SCOTUS Agrees with ARTBA on WOTUS

Transportation improvements and environmental stewardship are not mutually exclusive. Synergies between the two can yield significant benefits, such as protection of wetlands and waterways or a reduction in traffic congestion with accompanying improvement in air quality.

But for that to happen, all involved need to work from a clear and consistent set of rules. And this is precisely what has been missing in the application of the Waters of the United States (WOTUS) rule for nearly two decades. Changes to the definition of WOTUS under the Clean Water Act (CWA) by each new administration have complicated long-term planning for transportation projects.

ARTBA's concern has been that an overly expansive WOTUS definition creates permit obligations for transportation construction features such as roadside ditches, which serve the necessary safety function of collecting water during and after rain events. Such overregulation could serve to delay critical infrastructure improvements and increase costs without providing demonstrable environmental benefits.

On May 25, the U.S. Supreme Court sided with ARTBA issuing a favorable ruling in *Sackett vs. Environmental Protection Agency (EPA)*. The court said EPA's most recent definition exceeded its authority. It means the agency will once again need to rewrite its WOTUS rule.

This favorable court outcome did not just happen. It is the result of partnership, perseverance, and member engagement over many years. Since 2005, ARTBA has advocated tirelessly for reasonable CWA jurisdiction through multiple administrations.

Our federal district court litigation began eight years ago with the National Stone, Sand & Gravel Association (NSSGA) joining us in the legal trenches as part of a multi-industry coalition. Our involvement was supported by ARTBA member contributions to the Transportation Makes America Work (TMAW) program.

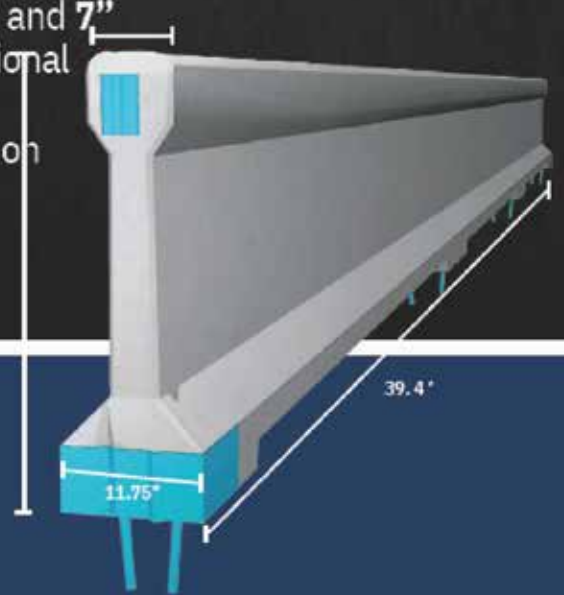
In its efforts to build projects safely, efficiently and with environmental concerns mind, *Sackett* is a victory for the industry, but it is by no means the end. A North Dakota federal court in April temporarily blocked the WOTUS rule from taking effect in 24 states while it considers the case brought by ARTBA and its allies.

With the clarity provided by the *Sackett* decision in hand, our coalition plans to ask the lower court to vacate the rule, since it is now legally invalid. Via TMAW, we will continue advocating for a clear and commonsense definition of the CWA's reach.

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ARTBA's Brand: Pursuing Safety Excellence

Nike founder Phil Knight has forgotten more about successful branding than most of us will likely ever know. I recently watched the movie "Air" and marveled at the origins of the company's partnership with Michael Jordan. The shoe empire that followed became synonymous with product excellence and winning, and that brand identity remains strong 20 years after Jordan's NBA retirement.

When I think about ARTBA's safety policy advocacy at federal and state levels, robust worker training programs, or the National Work Zone Safety Information Clearinghouse (workzonesafety.org), we aim to have our brand synonymous with similar excellence. Our members shoot to do the same.

ARTBA's seasoned and diverse safety team lives Phil Knight's mantra daily by sharing their expertise with elected leaders, agency policymakers, the news media, and via classroom instruction for industry professionals. The issue requires urgent focus, with nearly 1,000 motorists and workers killed in road construction zones annually, and many thousands more injured.

"The best way to reinforce your knowledge of a subject is to share it."

- Nike Founder Phil Knight

During my 25 years at ARTBA, I have never forgotten the words of former U.S. Senator Kit Bond (R-Mo.). Bond served on the Environment and Public Works Committee, which was holding a hearing on the impacts of a federal policy that allows highway funds to be withheld to meet air quality requirements. When it was his turn to question the witnesses, Bond shifted the narrative to illustrate the dire consequences of this approach by simply asking, "If a bridge falls down, isn't that a safety issue?" Touché!

As we work to improve and modernize the nation's roads and bridges through 2021's Infrastructure Investment and Jobs Act (IIJA), we are really renewing our commitment to safety. ARTBA's new series on IIJA project success stories, featured on pages 30-31, spotlights how ARTBA members and state agencies are doing this in Idaho and New Mexico. Expect similar vignettes from other states in future issues.

It's also important to note that the IIJA boosted funding for the Highway Safety Improvement Program and gave states flexibility to make targeted safety enhancements for "vulnerable road users," including construction workers, pedestrians, cyclists, and persons with disabilities.

The 40,000 IIJA-related projects initiated by state DOTs to-date will make commutes, vacations, and business travel—and perhaps that next trip to the mall to pick up some Air Jordans—a lot safer. We should all strive to connect with such brand identity; it's a slam dunk.

David Bauer

AS THE INDUSTRY CHANGES, SO SHOULD YOUR TOOLS

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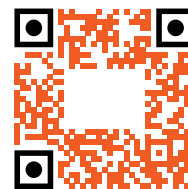
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FROM THE FOUNDATION CHAIRMAN

PAUL YAROSSO | Director, HNTB

Something for Everyone When it Comes to Safety

“Safety first!” “Safety is a core value!” You’ve heard these phrases before. Safety truly is a top priority for our industry—and for obvious reasons.

Most importantly, keeping our workers and people who travel through our construction sites safe is simply the right thing to do. Safe projects also mean profitable projects as we avoid fines, delays, litigation, and other costs that arise from unsafe conditions.

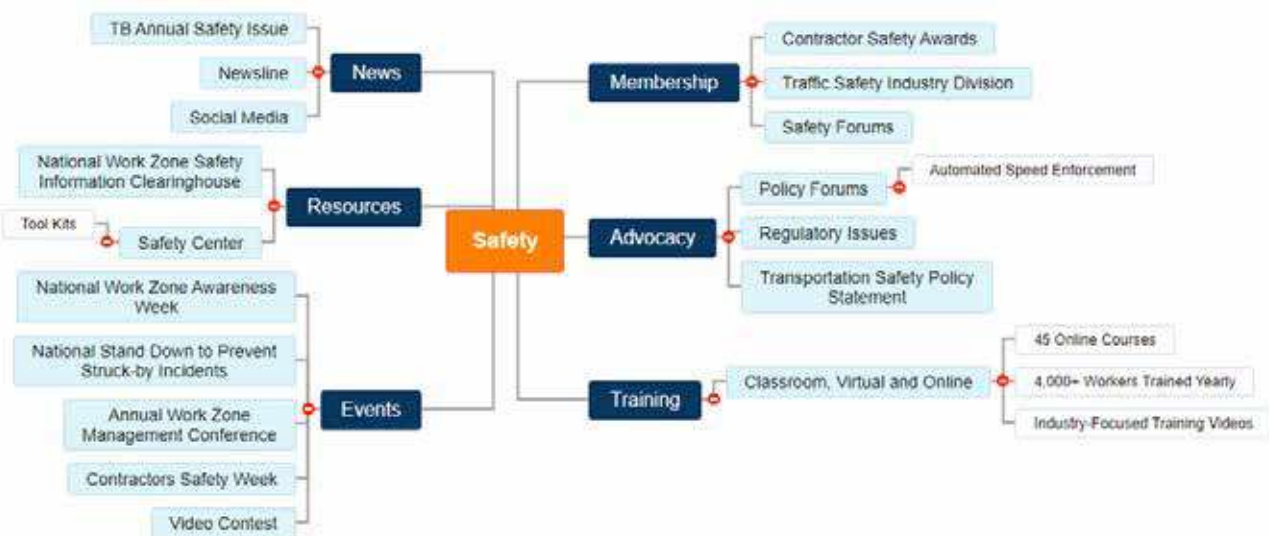
In an industry and membership as diverse as ours, however, safety means different things to different people. When contractors hear the word, they might think about keeping their workers safe while laboring on a site. Traffic engineers or DOT officials may think about road user safety—employing the best techniques to keep motorists safe as they navigate work zones. Manufacturers may focus on safe equipment operations, and building machines that complete jobs in a safer, more

efficient way. Construction workers may focus on safely completing a task or wearing the right personal protective equipment (PPE).

Safety touches every aspect of the transportation construction industry. As chair of the Foundation, I have come to appreciate ARTBA’s multi-faceted view of safety, and its wide scope of services. Whether in the legislative and regulatory arena, member services, or training and products, the Foundation offers a comprehensive approach and expert voice on many safety topics via artbasafetycenter.org. I encourage you to take advantage of its expansive offerings which are tailored exclusively to the unique hazards of transportation construction.

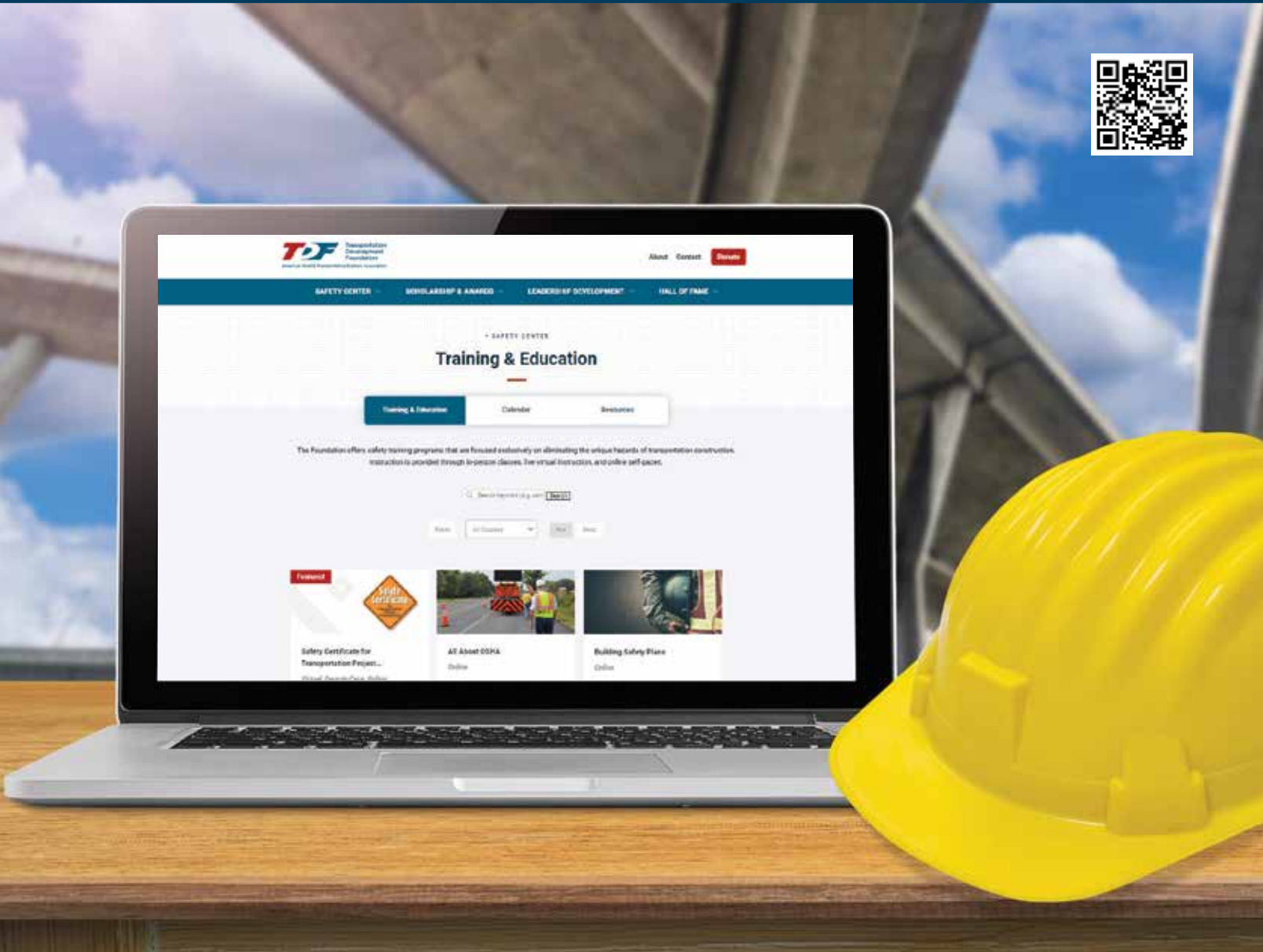
No matter your definition of safety, ARTBA is your partner and committed to helping you improve your organization's operational plans and better protect your greatest assets.

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Automated Speed Enforcement Saves Lives

BY BRADLEY SANT
bsant@artba.org

How do you react when you see a law enforcement officer parked on the side of the road? Slow down? Change lanes? Do nothing?

If you or someone you love works in the transportation construction industry, your answer is likely "nothing," because you obey the posted speed limits. Sadly, hitting the brakes is a common response for too many drivers who speed through work zones, placing themselves, their passengers, other drivers, and workers at great risk. Excessive speed and speed variability are primary factors contributing to work zone crashes.

Years of research and observation show the best way to get drivers to obey work zone speed limits is to ensure law enforcement is present.¹ When it is, drivers slow down as much as 15 miles per hour (mph).² Use of automated enforcement in Maryland was shown to reduce excessive speeding by 54 percent. The U.S. Federal Highway Administration (FHWA) acknowledges that automated speed enforcement (ASE) in work zones is successful in reducing speed, aggressive driving, fatalities, and injuries.³

The challenge, as is the case for many things in life, is lack of resources. There simply aren't enough personnel, nor funding, to place a police officer in every work zone in America. But hope is on the horizon.

Growing Recognition Among States

Last year, ARTBA lent its voice to the conversation encouraging the use of ASE (aka Speed Safety Cameras) in roadway work zones. The association's *White Paper on Automated Speed Enforcement in Work Zones* was the result of many stakeholder meetings. The document calls these

cameras "proven strategies to improve the safety and health of workers and roadway users as they navigate roadway construction work zones." It also calls on the transportation construction industry to "seek authorization and begin implementation of this proven safety strategy."⁴

When ARTBA released its paper in January 2022, 10 states—Colorado, Connecticut, Delaware, Illinois, Louisiana, Maryland, New York, Oregon, Pennsylvania, and Virginia—legislatively authorized speed cameras in highway or construction work zones. While each law has different specifications, the goal is the same: change driver behavior. Recently, many more states have initiated such enforcement programs.

A survey sent by ARTBA to its affiliated state chapters reveals a growing number of states have either passed enabling legislation or have efforts underway to advocate for work zone speed safety cameras. These include Washington, Indiana, Kentucky, Arkansas, Tennessee, Michigan, Wisconsin, California, North Carolina, New Jersey, Oklahoma, Minnesota, and Ohio.

Infrastructure Law Funds Incentivize Safety

An incentive to adopt ASE lies in 2021's Infrastructure Investment and Jobs Act (IIJA), which significantly expands the amount of money available through FHWA's Highway Safety Improvement Program (HSIP). The grant program is traditionally geared toward infrastructure improvements that make roads safer for motorists. Under the new law, HSIP funds can now be used to implement automated speed enforcement in work zones. States that once lacked financial resources to purchase speed cameras now have access to a new pool of federal funding.

Funding is not the only hurdle, however. The use of cameras to enforce speed limits requires a change to the legal code. In most cases, state legislatures must first pass authorizing legislation, which is no easy task. Several advocacy groups traditionally push back. These include state and local politicians, police officers and their unions, driver associations (e.g., AAA), and groups who oppose camera enforcement for “privacy” reasons.

Keys to Success

Industry groups that have successfully navigated the treacherous waters of state politics have some sage advice. The Associated Pennsylvania Constructors recommends: “Focus on the safety of the motorist rather than workers... [Share the] message that the goal is accident reduction—not to raise money.” The Maryland Transportation Builders and Materials Association emphasizes the importance of assembling good safety information: “Gather data from your state and local DOTs and contractors willing to share near misses and other incidents.” New York contractors agree: “Cite positive examples of states that have already enacted programs.”

The ARTBA white paper, developed by the Safety Forum, also provides suggestions to jurisdictions seeking to implement work zone speed cameras. Campaign messaging must be clear:

- ASE is a safety tool designed to reduce crashes and improve mobility.
- Enforcement protects all road users, including motorists, cyclists, pedestrians, and workers.
- It is targeting known, unsafe driving behavior.
- Automation reduces risks to law enforcement and emergency responders.
- It promotes unbiased enforcement.

When developing advocacy campaigns to support passage of ASE-enabling laws, it is critical to build coalitions and bring partners in early, including:

- State DOTs or equivalent
- Turnpike commissions/toll authorities
- State police/highway patrols
- Governor’s offices/safety representatives
- Industry associations and leading contractors
- State attorney’s associations

- Insurance industry representatives (for crash data/statistics)
- Motorist and trucking associations
- Other traffic safety stakeholders with strong influence (e.g., MADD)

It is also important to write the new law so that it is enforceable by police and the courts:

- Consider fines that deter poor driving behavior but may not warrant court appearances.
- All citations may not result in “points,” or negative driving record citations.
- Consider an initial administrative appeal process before court appearances.
- Avoid authorizing authority that has an end date, e.g., pilot programs or sunset provisions.
- Replace with reporting requirements after program has matured, or provisions that require legislative action to terminate the program.

Finally, to help with compliance, work to counter any public perception that you are creating “speed traps.” Ensure transparency by doing the following:

- Ensure speed limits and citation amounts are correlated and constant.
- Provide information on where ASE is being deployed.
- Use proper, ample, and visible signs.
- Set signing and speed limits standards early; work with state police to decide speed thresholds.
- Share information on multiple platforms such as Waze, Google, Apple Maps, etc.
- Clear, consistent communication is key.

The use of ASE can help reduce the nearly 1,000 preventable fatalities that occur each year in America’s roadway work zones. As more and more states adopt these programs with help from the IIJA, the goal is to see these numbers drop.

ARTBA is continuing to work with state and federal partners and the private sector to further advocate for ASE use and give work zone safety advocates the tools they need. Together, we will save lives.

Bradley Sant is ARTBA’s senior vice president of safety and education.

¹ARTBA/FHWA Guidelines on Managing Speeds in Work Zones: workzonesafety-media.s3.amazonaws.com/workzonesafety/files/documents/training/courses_programs/rsa_program/RSP_Guidance_Documents_Download/RSP_Speed_Guidance_Download.pdf

²Ibid.

³safety.fhwa.dot.gov/provencountermeasures/speed-safety-cameras.cfm

⁴artba.org/wp-content/uploads/2022/02/Automated-Enforcement-White-Paper-Jan.-2022.pdf

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Work Zone Crashes Upward Trend

New report highlights steps to mitigate intrusions

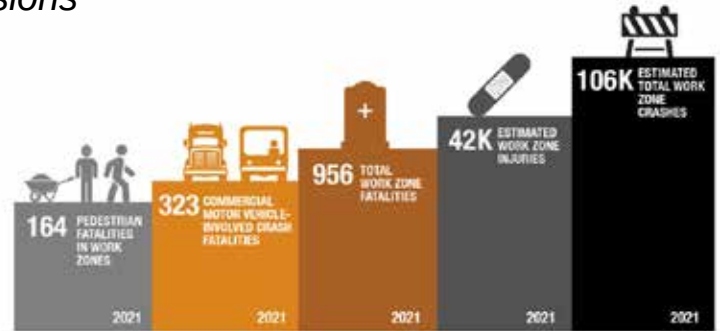
BY DR. GERALD ULLMAN, Ph.D.
g-ullman@tti.tamu.edu

Earlier this year, the National Highway Traffic Safety Administration released fatal crash data for calendar year 2021. For those of us focused on roadway work zone safety, the news was not good.

Fatal work zone crashes once again exceeded the previous year's numbers. Nationally, 956 people lost their lives in 874 fatal crashes, representing an increase of 11 and 12 percent, respectively over the previous year. About 90 percent happened on interstates or other major roads where speed limits and traffic volume are higher. Speeding was a contributing factor in approximately one-third of the fatal work zone crashes. Driver distraction and inattention also appeared to be problematic, as one-fourth were the result of a rear-end collision.

Fatal work zone crashes involving commercial motor vehicles (CMVs) also saw a dramatic jump. Whereas CMVs were involved in 210 fatal work zone crashes in 2020, that number climbed to 291 in 2021—a nearly 40 percent increase.

Meanwhile, fatalities involving highway workers or other persons on foot increased almost four percent, from 158 in 2020 to 164 in 2021. Unlike workers in other construction industries where falls, caught-in or -between, struck by objects or equipment, and electrocutions are leading causes of workplace fatalities, workers in the highway construction industry are killed most frequently by



Source: National Work Zone Safety Information Clearinghouse

motor vehicles. According to the Bureau of Labor Statistics, over 49 percent of highway workers killed in 2021 were struck by a motorized vehicle.

The extreme risk that traffic poses to the highway construction workforce was unfortunately demonstrated once again this spring in Baltimore, Md., where a crash on I-695 caused a car to careen into a workspace, killing six workers. The tragic incident drew national media attention and put a powerful human face on these sobering statistics.

As concerning as these statistics are, there is a real risk that they will climb even higher in the years to come as the increased funding for transportation improvement projects in the bipartisan infrastructure law results in more road construction. It is imperative that government and industry continue working toward safer work zones through improved engineering, driver education, and enforcement efforts.

Towards this end, the Federal Highway Administration recently released the *Identification of National Work Zone Safety Objectives and Activities: Summary Report*. It outlines needs, objectives, and activities for enhancing safety in and around roadway work zones. Among them: expanded availability of data-driven analyses; better accommodation for pedestrians, cyclists, and other vulnerable road users; and improved connectivity with autonomous vehicles.

The report also identifies specific activities for each stakeholder group, such as training, outreach, and technology development. Overall, 72 activities and performance measures are identified. These are concrete steps we can take now to help save the lives of workers, pedestrians, and motorists in the future. Scan the QR code at the right to view the report.



Photo: Federal Highway Administration

Dr. Gerald Ullman, Ph.D., is senior research engineer at Texas A&M Transportation Institute.

Accessible Safety Training

BY BETH STINSON
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As work zone crashes and injuries continue to climb, offering transportation construction workers safety training has never been more imperative. In 2021 alone (the last year of available data), there were an estimated 106,000 crashes in work zones, resulting in 42,000 injuries, and 956 deaths, according to the National Work Zone Safety Information Clearinghouse (workzonesafety.org).

And with record numbers of transportation construction projects breaking ground because of historic, new levels of infrastructure investment, the number of people needing safety training will only increase. Between April 2022 and March 2023, states initiated 41,000 transportation improvements across the U.S.—a 14 percent increase over the previous year. More projects mean greater risk exposure and increased vulnerability for workers out in the field.

“Now is the time for companies to take a hard look at their safety programs and give their employees the tools they need to best protect themselves and their colleagues,” said Brad Sant, ARTBA senior vice president of safety and education. “Incident-free jobsites start with the right tools and training.”

Breaking Down Barriers

While training employees helps companies maintain incident-free jobsites, barriers to education remain. Transportation construction workers typically work long hours at physically demanding jobs.

To help them access essential training, ARTBA retooled its Safety Certificate for Transportation Project Professionals (SCTPP) program. The comprehensive, 14-hour course still covers all major aspects of jobsite safety—from preventing runovers and backovers to trenching hazards and wearing the right protective gear. The improved SCTPP removes barriers and gives workers more options and flexibility to complete the training. Among the updates:

- Three available formats: classroom, virtual, and online self-study.
- Enrollment is open to everyone; no application process or prerequisites required.
- Assessments are conducted within the training modules; no need to travel to a testing center and sit for a two-hour exam.



High-Quality Materials

While the program is more accessible, what has not changed is its high-quality materials and instruction. The course incorporates the OSHA-10 Hour for Construction objectives and four additional hours of industry-specific topics, including temporary traffic control and risk assessment. Participants who attend in-person or virtually receive an OSHA-10 Card.

The SCTPP is not just for those receiving training for the first time. David Allain, technical director of the Asphalt Contractors Association of Florida, first received safety training while completing his degree in engineering. He found the course to be a helpful reset.

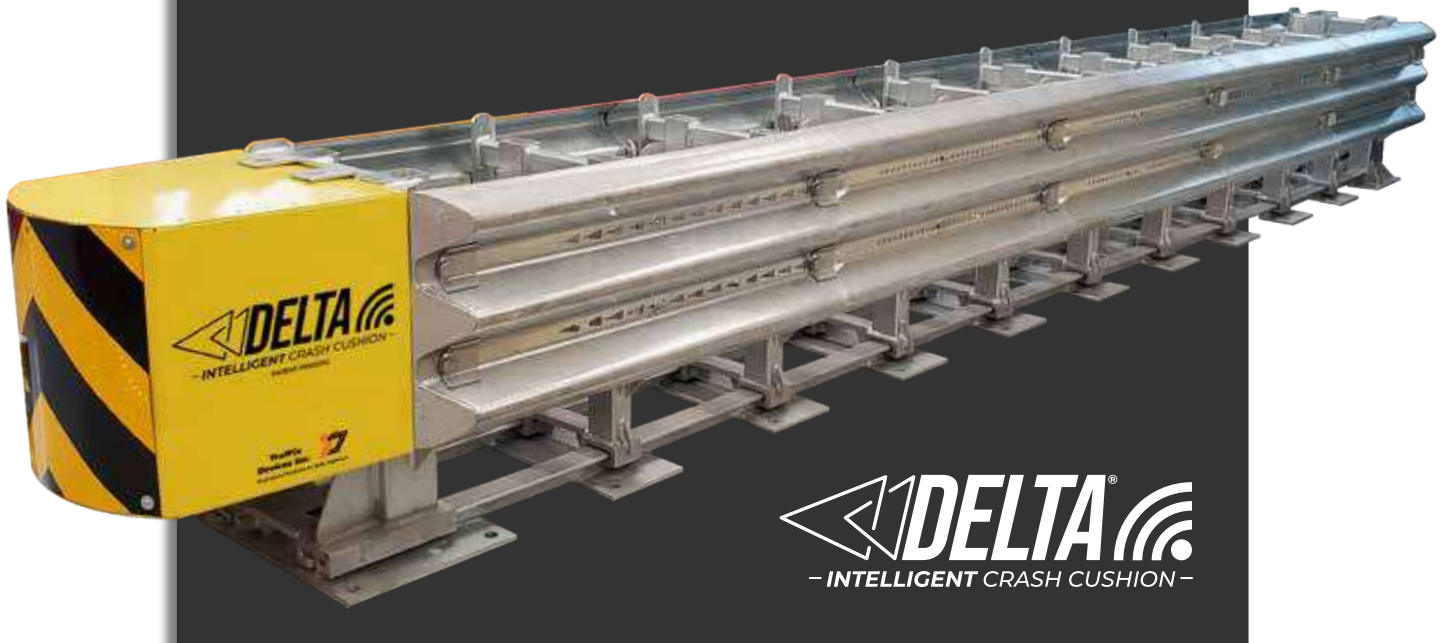
“ARTBA’s online course refreshed my safety knowledge and awareness, preparing me for upcoming construction site visits,” said Allain. “Over time, everyone needs a refresher, and as a new hire, my employer recommended ARTBA’s certificate program to fortify my safety knowledge bank.”

Learn more about the program at: artbasafetycenter.org.

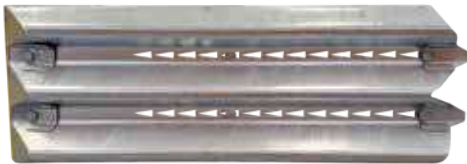
Beth Stinson is ARTBA’s vice president of education operations.

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Why Safety Helmets?

BY JAMIE BREME AND O'BRIEN MILLS

jbreme@aldridgegroup.com; omills@aldridgegroup.com

In an industry known for building some of the most transformative structures in the world, why are we so resistant to change when it comes to our personal protective equipment (PPE)—namely our head protection? Today's safety helmets offer better protection, and yet here in the U.S. are vastly underutilized. Traditional hard hats, which have changed little over the last 100 years, remain the norm. To understand this dynamic, and how we as an industry can change this mindset, we must first understand the hard hat's evolution.

History and Regulation

The hard hat has been part of our national DNA for over a century. Its origins date to 1919, when a young soldier named Edward Bullard returned from WWI and replicated his military-issued helmet using boiled canvas, leather, and glue. Bullard's "hard boiled hat" was designed to protect miners from falling rocks and Navy shipbuilders from overhead construction debris.

Over the next few decades, little innovation took place. While the materials used to make hard hats improved with the introduction of plastic in the 1950s, their overall form and function—protection from falling hazards—remained unchanged for decades. In 1961, the first major improvement came with the Topgard and V-Gard hard hat, which included adjustable support for a better fit. In the six decades since, we have continued to see these relics of the past used throughout our industry.

While hard hat technology was slow to adapt, regulation of head protection lagged as well. The American National Standards Institute (ANSI) Z89.1 industrial head protection standard for both type I and type II hard hats remain centered around protection from falling hazards. Retention systems such as the chin strap are optional. The Occupational Safety and Health Administration (OSHA) has only addressed minimal standards for head protection, leaving much to the discretion of employers.

A Better Way

Over the last decade, however, awareness of the effects of traumatic brain injuries in high-impact sports grew. Safety helmet manufacturers began working on innovations and improvements geared toward protecting athletes from side-blows and other rotational forces.

Meanwhile, studies revealed the prevalence of traumatic brain injuries on construction jobsites. According to the National Institute for Occupational Safety & Health (NIOSH), construction workers in America sustain more traumatic brain injuries than any other type of employee. From 2003-2010, 2,210 fatal traumatic brain injuries occurred on construction sites at a rate of 2.6 per 100,000 full-time workers.¹



Photo courtesy of Aldridge Electric

These statistics, while shocking, were accepted as the industry norm until 2015, when business leaders started looking for better solutions. They noticed European companies had already adopted safety helmets that offered 360-degree protection. These helmets were shown to prevent and reduce brain injury because, for the first time, they offered top and lateral impact protection and top and lateral penetration and helmet retention—using a simple chin strap to keep the helmet on. Today's safety helmets are ushering in a new era of technology and innovation.

At Aldridge, we are on a never-ending quest to create a world-class safety program that better protects our employees. We remain focused on our IIF—Incident and Injury-Free commitment. After analyzing head injury data in the construction industry and looking to peer companies, we proudly became one of the first organizations within the U.S. to supply every employee with a safety helmet. We selected the Kask Zenith because they are at the forefront of industry standards providing an ergonomic fit. The strategically placed foam padding offers critical frontal, rear and side impact protection and the chin strap keeps it in place.

Change is Good

Change does not always come easy. Our workforce is comprised of people with the passion, talent and grit needed to get the job done. This deep-seated determination often means that old habits die hard.

¹Tiesman H, Konda S, Bell J. (2011). The Epidemiology of Fatal Occupational Traumatic Brain Injury in the United States, *Am J Prev Med*, 41(1):61-7. and Konda S, Tiesman H, Reichard A (2015). Nonfatal occupational traumatic brain injuries treated in U.S. hospital emergency departments: 1998-2007. *Inj Prev*, 21:115–120.

In the early days of our switch to safety helmets, the chin strap was a major point of contention. Many workers pleaded their case that it was uncomfortable and looked odd. However, a connected chin strap is critical to the helmet staying on and thus preventing injuries. Over time these concerns lessened, and crews embraced the straps after seeing first-hand how well they protected colleagues during incidents.

Crews also came to appreciate their advanced comfort features. The materials inside are made of quick-dry fabric designed to wick away moisture. Ventilation inside allows for airflow. And a more ergonomic and streamlined fit combined with adjustable sizing and interior suspension offer enhanced comfort and improved work performance.

The helmets also come with more than 1,000 customized options and interchangeable components depending on the job at hand. These technologies include eye and face protection, hearing and weather protection, headlamps, and other specialized safety accessories. Successful transition rollouts have included a “make it yours” campaign. Allowing employees to choose their own accessories and customize the look, feel, and fit of the helmets has been shown to increase acceptance and adoption across the field.

The Path Forward

While a companywide transition to safety helmets is a significant investment from the standard hard hat, which costs approximately \$20, it's important to remember the cost savings

realized over time. Typically, a worker will wear a hard hat for no more than two years. Safety helmets are a longer-term investment with replaceable parts and accessories that extend wearability for several years past a traditional hard hat.

As more companies embrace safety helmets, costs will continue to drop. Much of the “premium” is the result of importing the product from Europe. U.S.-based manufacturers will adapt to the changing industry if we adjust our mindset. And, if OSHA and ANSI regulations are updated to meet the performance requirements of EN12492 for working at height, we will see an influx of safety helmet suppliers in the U.S., pushing the cost per helmet further down.

First, however, we must align as an industry and commit ourselves to providing employees with the best PPE possible. Company leaders can start within their own firms and inspire others to embrace the move to safety helmets, even across competitive boundaries. Instead of asking, “Why safety helmets?” we need to be asking, “Why are they NOT choosing safety helmets?” In making this cultural shift, we will better protect our employees and ensure everyone goes home safely to their families at the end of the day.

Jamie Breme is Aldridge Electric's director of business development. O'Brien Mills is Aldridge Electric's vice president of safety.

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It's Getting Hot Out There! Are Your Workers Ready?

BY BRADLEY SANT
bsant@artba.org

As the summer months get underway, transportation construction projects across the country are moving forward and more workers are laboring under the hot sun. Our industry is usually well-prepared for these conditions, as there are few reports of heat-related injury and illness among employees.

Nevertheless, government leaders, expressing concern for warmer outdoor temperatures, are looking at this topic with greater scrutiny. This led to a “National Emphasis Program,” or NEP, by the Occupational Safety and Health Administration (OSHA) where inspectors will be targeting jobsites at which they see employees laboring in the heat.

To ensure workers are safe from heat illnesses—and help employers stay in compliance with OSHA requirements—ARTBA’s Safety Forum partnered with the National Asphalt Pavement Association (NAPA) to develop a customizable **Heat Injury and Illness Plan (HIIP)**. The document gives ARTBA members a framework to create their own heat safety program specific to each work environment. The template contains charts, images, and key information employers can use to “make it their own.” Here are a few highlights:

DRINKING WATER REQUIRED PER DAY (GALLONS)			
	Work Shift		
Crew Size	8 hours	10 hours	12 hours
1	2	2.5	3
2	4	5	6
3	6	7.5	9
4	8	10	12
5	10	12.5	15
6	12	15	18
7	14	17.5	21
8	16	20	24
9	18	22.5	27
10	20	25	30

Source: ARTBA/NAPA Heat Injury and Illness Plan



Hydration: Employees should have access to one quart of drinking water per hour per worker. The entire quantity is not required at the beginning of the shift but should be replenished as needed. It should be fresh, pure, cool, and accessible near the work area.

Rest: Rest breaks should be allowed, depending on the heat index at the jobsite. The duration of the rest period will be determined by the geographical location and the worker’s acclimatization status. Unacclimatized workers should be closely observed and gradually increase their workload over seven to 14 days.

Acclimatization: New and returning workers need to build heat tolerance and take frequent breaks by following the 20 percent rule. On the first day, work no more than 20 percent of the shift’s duration at full intensity. Increase the duration by no more than 20 percent a day until acclimatized.

Shade: Establish readily available shade areas when the heat index equals or exceeds 80 degrees Fahrenheit. Shade areas are for workers to take breaks, drink cool liquids, and recover from exposure.

Training: Employees must be trained in heat illness prevention prior to their initial work assignment and annually thereafter. Tailor the training to site-specific conditions. This includes all new employees regardless of their previous work experience.

To download your copy of the customizable HIIP, visit:
artbasafetycenter.org.

Bradley Sant is ARTBA’s senior vice president of safety and education.



Behavioral Health: A Leadership Imperative

BY CAL BEYER
cbeyer@holmesmurphy.com

Historically, behavioral health was a taboo topic and rarely discussed in the workplace. Behavioral health challenges include stress, burnout, anxiety, depression, alcohol and substance misuse, addiction treatment and recovery, as well as suicide and overdose prevention.

Even before the onset of the pandemic, the construction industry faced challenges with mental health, substance misuse, and suicide risk. The pandemic exacerbated these challenges and helped expose the magnitude of the problems affecting the industry.

The impact of behavioral health challenges is clear:

- Rising rates of alcohol misuse during the pandemic culminated in a 25.5 percent increase in deaths attributable to alcohol from 2019 to 2020 and another 10 percent increase from 2020 to 2021.
- Quest Diagnostics reported positive drug tests hit a 20-year high in 2021.
- The National Safety Council reports 19 percent of construction workers have a substance use disorder (SUD) and that each untreated case of SUD costs employers \$8,817 annually.
- The construction industry continues to be adversely impacted by the opioid crisis from prescriptions for on- and off-the-job injuries and surgeries.
- The construction industry has the second-highest rate of suicide among major industries that is almost four times higher than the rate for the general population.
- The Bureau of Labor Statistics reported that 2021 was the ninth consecutive annual increase from unintentional overdoses at work/job sites from nonmedical use of drugs and alcohol—this constituted eight percent of all occupational fatalities.

- Actuarial consulting firm Milliman reported in August 2020 that behavioral health claims have a disproportionate impact on the cost of medical benefits. Five and a half percent of claimants account for 44.8 percent of medical health claims.

Taking Action

However, the news is not these statistics; rather, the news is what the construction industry is doing about them. Momentum has shifted, and mental health is becoming mainstream in construction culture. The construction industry is tackling behavioral health head-on. There are many examples of the progress being made, including:

- The Construction Industry Alliance for Suicide Prevention ([preventconstructionsuicide.com](https://www.preventconstructionsuicide.com)) was founded in 2016, became a 501(c)(3) nonprofit in 2018, and hired its first executive director in May 2023.
- For the past three years, National Construction Safety Week has addressed workplace mental health through separate but interrelated themes.
- In March 2023, the second annual national construction industry mental health and suicide prevention summits drew 65 sponsors and over 400 attendees. The third national summit will be held in Kansas City Feb. 6-8, 2024.

Tools for Change

Behavioral health is more than just a buzzword. It is a leadership imperative. To help transportation construction professionals address these issues within their own firms and agencies, ARTBA recently hosted a three-part webinar series. There were two co-presenters for this series: Youturn Health CEO Hamilton Baiden and me.

The recordings and slide decks for each of the three webinars are available on the National Work Zone Safety Information Clearinghouse website: [workzonesafety.org](https://www.workzonesafety.org). They cover:

1. ***We Have a Problem... Help!*** Moderated by ARTBA's Brad Sant and Katie Chimelewski Roller. A quick overview of the scope of the industry's workforce behavioral health challenges.
 2. ***Reframing Behavioral Health Treatments to Reach Workers and Families.*** Moderated by Brandon Anderson, vice president of safety for AGC of Missouri. Explaining why traditional treatment methods frequently fail in reaching and sharing innovative approaches to help those with behavioral health challenges.
 3. ***Let's Talk About it: Behavioral Health Town Hall.*** Moderated by Vince Hafeli, president of Ajax Paving of Florida. An open forum responding to questions submitted by the audience.
- Two members of the joint Washington State Department of Transportation (WSDOT) and Washington Asphalt Pavement Association Work Zone Risk Reduction Committee shared how their state gained legislative approval for photo enforcement of speed in work zones in the 2023 legislative session. Mark Ottele, senior project manager for Granite Construction in the Northwest Region was joined by W. Brian White, assistant regional administrator of construction and development for WSDOT's South Central Region.
 - Bob VandePol of VandePol Crisis Response Services, LLC, and I spoke about the human responses to a crisis and the importance of managing such incidents with empathy to provide effective leadership. I highlighted the importance of including critical incident response protocols into crisis management plans and emergency action plans.

Another learning event took place during the 2023 Work Zone Safety Awareness Week and was a partnership between the National Work Zone Safety Information Clearinghouse and ARTBA. Martha Kapitanov, transportation specialist for the Federal Highway Administration, served as moderator for *Critical Incident Response: Addressing the Emotional Wellbeing of Workers*. A series of panelists shared important messages relating to work zone safety, including:

- Jenna Jares, a multi-year recipient of the Lanford Family Highway Worker Memorial Scholarship, poignantly shared her experience losing her father in a work zone maintenance incident when she was nine weeks old. Her father worked for the Texas Department of Transportation.

Cal Beyer, CWP, SCTPP, is vice president of workforce risk & worker wellbeing for Holmes Murphy. He's been dedicated to construction risk and safety management since 1996. He was director of risk management and safety for a paving contractor in the Pacific Northwest from 2014-20. He serves on the Executive Committee of the National Action Alliance for Suicide Prevention, the Lived Experience Advisory Committee of the Suicide Prevention Resource Center, and the advisory board for Youturn Health. Beyer helped to launch the Construction Industry Alliance for Suicide Prevention. He can be reached at cbeyer@holmesmurphy.com or 651.307.7883.

Ajax Paving of Florida: Uniting Industry on Suicide Prevention



Vince Hafeli, pictured at left, president of Ajax Paving of Florida, asserts that, "Ajax strives to be an industry leader with a caring culture for our employees." Hafeli continued that by "supporting industry initiatives around opioid addiction, mental health, and suicide awareness, we can maintain our commitment to our employees and the industry as a whole."

Hafeli said he is proud that the Ajax leadership team is promoting "open conversations around the topics" and encouraging toolbox talks. Hafeli also explained that Ajax is providing "professional training for employees on warning signs and how to discuss the topic, and company leadership is actively educating industry partners on the topics."

At the February 2023 annual meeting of the Florida Transportation Builders' Association (FTBA) in Orlando, Hafeli challenged industry leaders to sign a proclamation unifying the transportation industry on around the cause of suicide prevention. ARTBA President & CEO Dave Bauer was among special guests in attendance signing the proclamation. The electronic proclamation has since been expanded nationally and all construction industry stakeholders are encouraged to sign it at: artba.org/suicide-awareness.

Hafeli and the Ajax Paving team organized the Construction Hike for Hope in April 2023 in conjunction with the southwest Florida Chapter of the American Foundation for Suicide Prevention ([AFSP.org](https://www.afsp.org)). Forty-two different teams registered with a total attendance of almost 650 participants joining the hike in five locations statewide. This event raised \$163K for suicide prevention support, training, research, and advocacy.



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Q & A With Utah Department of Transportation Executive Director

Carlos Braceras



A Man with a Plan

Carlos Braceras has been executive director of Utah's Department of Transportation (UDOT) since May 2013, and is responsible for a \$2.6 billion annual budget that funds 1,600 employees and the design, construction, and maintenance of Utah's 6,000-mile system of roads and highways. He recently launched a redefining of agency goals and oversaw completion of several massive projects, like the Utah County I-15 Corridor Expansion (I-15 CORE) and the Mountain View Corridor in west Salt Lake County. Both used innovative contracting methods that allowed each to be completed in record time.

Braceras has a unique view among state transportation officials about how to harness the investments in the Infrastructure Investment and Jobs Act (IIJA). He shared those views in a wide-ranging conversation with ARTBA Vice President of Public Affairs John Schneidawind.

Q: What does Utah's transportation environment look like in 2023?

A: I would say that transportation is in a great place in Utah. We have the most diverse economy in the country. We're the eighth-most urbanized state. We have a lot of wide-open spaces, but 65 percent of Utah is owned by the federal government, with another 10 percent owned by state and local governments. That forces more population density than most people expect; 85 percent of our population lives in urbanized areas. I came out here to ski one year after college and we were less than one million people. We're just under 3.4 million right now.

Since the early '90s, we've been very focused on building the infrastructure that allows Utah to be able to attract good businesses and continue to build for the future. When Brigham Young led the Mormons into this valley, he was very intentional about the layout of the city and all the cities in Utah. The blocks were all the same length, the roads were all wide enough to turn a team of oxen around... They were very intentional about having that consistency of infrastructure to allow us to grow very much into planning for the future. That is a big part of the culture here. Infrastructure is seen as one of those fundamental roles of government.

Q: Now that we are in year-two of the IIJA, how have the historic levels of new federal investment helped shape your state program?

A: I think of the IIJA in two parts—the formula program and the grant program. The formula program is a very good reauthorization. Every state had to make assumptions when we

were waiting for reauthorization—will the federal program grow, or will it stay flat? We decided to be conservative. We assumed a pretty flat federal program. We put all our federal (funded) programs on those “bread and butter” projects—the simpler projects, the ones that are more rehabilitation, maintenance type of jobs, pavements and bridges. That's really what our federal program is about—pavements and bridges.

Q: Why is that?

A: We want to shape the transportation system. We don't want the federal program to shape our transportation system. That's because we want the state's strategies—the state goals—to be what shapes the direction in how we use the IIJA.

Q: What else about the IIJA benefits your transportation strategy? What's your approach to using it?

A: The new bridge formula program is one of the single best things. It expanded eligibility to allow us to help our local governments on bridges. Most of our posted bridges—bridges we can't allow legal loads to go on—are on the local system and we didn't really have mechanisms to help the locals. With this federal program, there's no match required. We've programmed probably 50 bridges, almost all of them on the local system... If I were to pick one thing in the federal program that I hope continues in the next authorization, it would be that piece.

See **Q&A**, 28

Q: You also mentioned the IIJA grant program. How is that working out?

A: The IIJA has absolutely exceeded expectations in terms of the levels of money as well as I think some of the programs have been great. A lot of the money is in grants and they're like a sugar rush. They're great when you get them, but they should not be driving their strategy. Lots of times you get the grants notification, and you're sitting down there trying to figure out what in the heck will qualify for this and we try to use our plan, and you know say, 'okay I think this project on our plan could qualify for this.' The time it takes to award all of those makes the grant program really hard to administer and deliver on expectations. That being said—we love the money. We just wish it was a little more consistent and faster.

Q: How are you balancing demand for new capacity with maintaining and improving existing facilities?

A: I don't know of any states that were really building capacity at the expense of taking care of what they have; that's a fundamental responsibility we all have. It's basically the agreement we made under the Interstate system where every state made the commitment that we're going to maintain the system. We actually get more than 20 percent of the statewide sales tax just for capacity projects. That has very specific statutory restrictions on where and how we can use that money. So that's how we do all our big capacity projects, all our big projects are done with state sales tax.

Q: Workforce needs are a challenge for many. What trends are you seeing and what are you doing to attract and retain talent?

A: This is the biggest challenge we're having, and probably for most states. But it's not exclusive to states. It's our contractors, it's our consultants. Part of our challenge we've created as a state, out of necessity, was we got rid of the pension, the defined benefit plan, in 2012. I called them the golden handcuffs. It was tough for employees to leave. In 2012, the state got rid of that, and that has created a new dynamic for us in that employees are more mobile, and we're having a harder time attracting people. We are very slow to change pay and the market is more nimble than we are. Some of our engineers are 80 percent behind the market, so it's tough for young engineers to come to the department.

We're recognizing that we're not going to be able to ever be competitive on pay, so we want to be competitive on culture. We work hard at being a place where people want to work and are proud to say where they work.

We work on things like being a strength-based organization. I don't know if you've read Clifton Strength Finders, but every one of our employees goes through this and they know their top five strengths. As a supervisor, you're focusing on what your employees are good at, not necessarily what they're weaker at.

We want to be a place where people feel good about where they work.

Our employees told us they want to be trusted. They want to have flexibility to be able to go to their kids' soccer game if we can make that happen, and they want to work in teams. So, we're working hard to try to create that place where people feel appreciated and welcomed.

Q: What are some of the ways you maintain positive working relationships with industry? Do you meet regularly?

A: Yes, and yes. I think those formal meetings are important. And we have those structured formal meetings both with our consultants and our contractors and suppliers, down to the asphalt suppliers, the concrete delivery folks. But it's more about those friendships, those individual friendships that you develop because our industry recognizes that they need to have a strong owner that can make decisions.

We spend a lot of time working together. We're pretty pushy on project delivery and how fast we expect jobs to be done at night and on weekends. Contractors are having a harder time finding employees who are willing to work under those conditions, so we're having to be more flexible in what we are asking our contractors to do. It's really important to know each other as people and to be able to have trust between each other to have difficult conversations. I prefer to have a hard conversation with my contractors than to have our contractors have that conversation with elected officials.

Q: When you started out in your career, did you envision yourself running a state DOT someday, or did you take an unexpected path to your current position?

A: It may be a long story, but I did not take a straight road to this position by any means. My first degree was as a geologist and I ended up in the oil and gas business, and our company went out of business when the price of oil dropped like crazy.

I went back to school and got a civil engineering degree. And I pictured myself doing groundwater; that'll be a good combination of geology and civil engineering. And I saw on the walls of the engineering building, they're advertising for rotational engineers at the Utah Department of Transportation. I was bartending at the time to put myself through my second degree and my wife was working a full-time job; we had just bought a house and we were struggling.

And I said, you know what? That's probably a better job than bartending. It worked out better. But I could tell you I made more money bartending that first year than I did as a rotational engineer. It'll be 37 years. And I spent 12 years as the deputy director, and I'm now in my eleventh year as director. I think John Cooper from Alabama is the only director that's been around longer than me. So that's why I tend to speak more freely. Probably. Maybe.

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A “Scary” Road Gets Safety Improvements

Challenge: Highway 404, also known as the Anthony Gap in southern New Mexico is a busy, 9.7-mile stretch of road between the Franklin Mountains that some locals describe as “dangerous” and “scary.” First built in 1952, and with only one lane east and west, cars attempting to pass into oncoming traffic have caused serious and sometimes fatal accidents.

Solution: With help from the bipartisan infrastructure law, commuters, truck drivers, and travelers crossing through Anthony Gap will have a much safer trip. The existing road will be widened from two lanes to four allowing slower traffic to stay right. A median barrier throughout the corridor will prevent people from weaving in and out of oncoming traffic, and enhanced lighting at the interchange with I-10 will improve visibility.

What They're Saying: “For years, you know, that area has been scary, since I can remember,” said a local resident who drives through the Anthony Gap every day for work. (KFox14, 2/24/23)

- **Estimated Cost:**
- \$39.8 million
-
- **IIJA Funds:**
- \$25.26 million
-
- **Designer:**
- Bohannon Huston, Inc.
-
- **Contractor:**
- Mountain States Constructors, Inc.
-
- **Start Date:**
- December 2022
-
- **Estimated Completion Date:**
- Winter 2023-2024
-

Since the IIJA became law November 2021, ARTBA has been committed to ensuring its proper implementation and sharing its benefits with the American public. This effort includes documenting IIJA-related project success stories with members of Congress and their staffs, Biden administration officials, state DOTs, better roads groups, the news media and other stakeholders.

As part of the Transportation Makes America Work (TMAW) program, ARTBA June 2 began a multi-year campaign to spotlight these project vignettes through the Newsline, Transportation Builder magazine and short-form videos for social media.

If you have an IIJA project in your state that should be featured, please contact ARTBA's Beth McGinn at bmcginn@artba.org.



Moving a Highway to Save Lives

Challenge: A 6.5-mile stretch of Highway 95 running through the rolling hills of north-central Idaho is often treacherous. The road connecting Thorn Creek and Moscow saw 172 crashes between 2012 and 2021, according to Megan Jahns of the Idaho Transportation Department (ITD). She told the *Idaho Capitol Sun* at least three of the crashes resulted in fatalities and 65 resulted in serious, minor, or suspected injuries.

Solution: Moving the highway three-quarters of a mile east allows ITD to build a safer route. With help from the IIJA, lanes will be added, shoulders widened, curves made easier to navigate and the grade will be less steep. New ditches will keep rain from collecting and a 30-foot clear zone will provide a safe area if a vehicle goes off the road.

What They're Saying: "...I'm glad we're moving forward. The bottom line is that we want to save lives." - Ken Helm, ITD, project manager (*Lewiston Tribune*, 1/24/21)

- **Estimated Cost:**
- \$57.6 million
-
- **IIJA Funds:**
- \$24.9 million FY 2022 (Phase 1)
-
- **Contractor:**
- M.A. Deatley Construction
-
- **Letting Date:**
- Nov. 9, 2021
-
- **Start Date:**
- Preliminary work began June 2022;
- Construction started Spring 2023
-
- **Estimated Completion Date:**
- Fall 2024
-



Save Time. Money. Lives. Sustainably.



COMPARATIVE EFFECT ON SAFETY

Work zone safety incidences are on the rise, leading to an increasing number of injuries and deaths among roadway construction workers. When J-Band® is used fewer repairs are needed.

Over the 15 to 20 years of a road's lifespan, maintenance crews will make fewer and shorter trips, reducing the number of safety incidents for both workers and drivers. In ClimeCo's study, safety metrics were calculated based on expected man-hours for each phase of work, combined with BLS and FHWA safety data.



LIFE CYCLE COST ANALYSIS (LCCA) SAVINGS

Life cycle Cost Analysis or LCCA was utilized to show that J-Band has a lower lifetime cost, with its upfront costs surpassed by reduced asphalt materials, fuel, and labor costs. J-Band has demonstrated that roads last 3 to 5 years longer.

This translates to potential Pavement Management System savings of \$3.9M for an initial investment of \$1,250,000 if you pave 100 miles of HMA with VRAM per year.



COMPARATIVE LIFE CYCLE ASSESSMENT (LCA) SUSTAINABILITY

An LCA offers a framework for quantifying the potential environmental impacts of a product from cradle-to-grave. J-Band was evaluated against other traditional approaches to solving the longitudinal joint issues, such as joint adhesive, pave wide trim back (PWTB), and infrared (IR) heaters.

Over the long term, there are fewer pavement rehabilitations and replacements required with the use of J-Band. This results in a reduced use of maintenance materials.

In addition to the air quality and greenhouse gas benefits shown in their analysis, the reduced use of maintenance materials is accompanied by a significant reduction in emissions from asphalt manufactured compared to the other alternatives.

LCCAs, LCAs and improvements to safety will be increasingly important for grants and bidding, and will likely evolve to become determinants in bid selection. J-Band has been used successfully to optimize tax dollars, reduce maintenance and save lives. What can J-Band do for your roads? Let's find out.



Scan the QR code to access our online calculator, safety studies, interactive map and ClimeCo's full study & article on the sustainability of J-Band.

J-Band® was created in the labs of the Heritage Research Group (HRG) and is a VRAM product of Asphalt Materials, Inc. (AMI). To learn more about J-Band, visit our website, www.thejoinsolution.com.





A Busy Year for Advocates at the State Level

BY CAROLYN KRAMER SIMONS
csimons@artba.org

From general fund transfers to electric vehicle (EV) registration fees, 2023 has turned out to be a busy year for state transportation funding advocates. As of May 19, states approved 24 measures for a combined \$13.5 billion in new transportation revenue. Several other states are also considering bills to increase their transportation investment.

One of the most significant pieces of legislation was signed into law by Minnesota Gov. Tim Walz (DFL) May 24. The plan institutes a new retail delivery fee (50 cents per delivery of \$100 or more, with exceptions), raises the metro sales tax for transit funding, increases the motor vehicle sales tax, and indexes the gas tax to inflation (Minnesota Highway Construction Cost Index, offset by removing the minimum markup on gasoline). The package also includes several one-time funding provisions, and in total is expected to generate \$1.3 billion over the next two years.

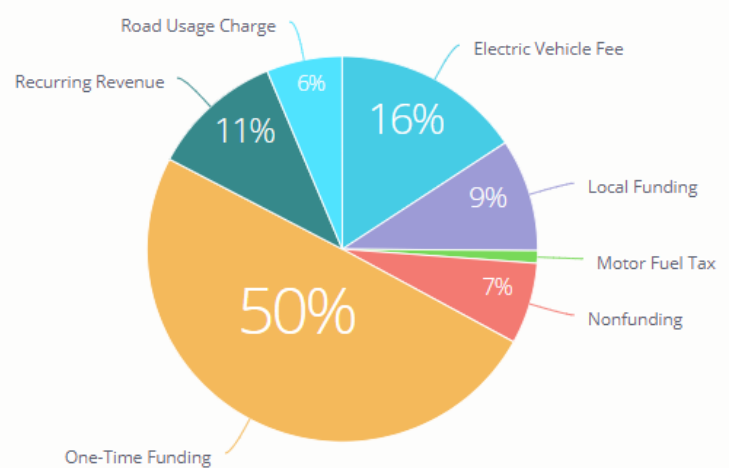
Other notable measures approved this year:

- Florida: \$4 billion general fund transfer
- Hawaii: New EV road usage charge
- Missouri: \$2.8 billion general fund revenue and bonds for I-70
- Indiana: Three-year continuation of gas tax indexing (no more than 1 cent per year)
- Montana: New EV registration fee
- Texas: New EV registration fee
- Georgia: Tax on EV charging sales
- Montana: Tax on EV charging sales
- Utah: Tax on EV charging sales
- Tennessee: \$3.3 billion general fund transfer

One-time funding measures again represent half of all bills introduced this session (111 bills) as states tap surplus general funds, COVID relief revenue, and bonds to meet federal matches and jumpstart projects.

Recurring revenue models have taken several forms, but legislation to implement or increase EV fees—including charging fees and registration fees—is the second most popular category

Types of Bills in 2023



explored by state legislatures. They represent 35 bills (16 percent of 2023 transportation funding legislation) introduced in the first five months of this year, a sizable increase when compared to the eight bills tracked in the previous year.

Willingness among lawmakers to pass transportation funding measures and explore new revenue models is growing as states seek to diversify revenue streams. In many cases, new revenue helps states meet federal match requirements and become eligible for potential grant opportunities.

If you want to keep on top of these developments, visit the ARTBA Transportation Investment Advocacy Center (TIAC) at: transportationinvestment.org. Our state legislative dashboard tracks funding measures as they move through the legislative process, and our blog gives readers additional context on state and local initiatives.

Carolyn Kramer Simons is ARTBA's senior director, state funding policy, and managing director of its Transportation Officials Division.

Common Infectious Diseases Including COVID-19 in Roadway Construction

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This course covers industry best practices to prevent the spread of infectious diseases. It provides information about the causes, prevention, and treatment of COVID-19 and other infectious diseases, plus additional resources, videos, and a tool to customize your infectious disease safety plan.

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- Characteristics of an infectious disease.
- Transmission of the most common infectious diseases.
- Ways to mitigate infectious disease transmission at home and on the work site.
- Reliable information sources.

4
PROFESSIONAL
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HOURS



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Industry Leader Development Program

Over three dozen industry executives participated in the annual Industry Leader Development Program (ILDP), held May 15-17 in conjunction with ARTBA's Federal Issues Program and Transportation Construction Coalition Fly-In in Washington, D.C. The ILDP provides participants with a solid understanding of industry economics, how transportation work in the U.S. is funded and financed, how actions by the federal government impact the industry, and how they—and their company or agency—can become politically engaged. Participants also met with their members of Congress to discuss transportation policy issues. The 2023 class included:

Conrad Althoff, Branch Civil, Inc.,
Roanoke, Va.

Matt Baldwin, TranSystems
Corporation, Geneva, Ill.

Ricardo “Rick” Betancourt, Texas
Department of Transportation Odessa
District

Brian Binder, Branch Civil, Inc., Glen
Allen, Va.

Kyle Burdi, Union Paving and
Construction Co. Inc., Mountainside, N.J.

Jennifer Budd, Cohen, Seglias,
Pallas, Greenhall & Furman, P.C.,
Philadelphia, Pa.

Mark Campbell, Lane Construction,
Cheshire, Conn.

John Cappello, HCSS, Sugar Land,
Texas

Clayton Cross, Ajax Paving Industries
of FL, LLC, North Venice, Fla.

Matthew Doss, Commercial Metals
Company (CMC), Ellijay, Ga.

Daniel Drury, Skanska USA Civil,
Queens, N.Y.

Jason Duncan, Texas Department of
Transportation, Austin

Jaime Franchi, Long Island
Contractors' Association, Melville, N.Y.

Tabia Gamble, STV Inc., Owings
Mills, Md.

Gregory Gharib, Parsons, Pasadena,
Calif.

Scott Gutowski, Terracon Consultants,
Inc., Charlotte, N.C.

Michael Hadden, Skanska USA Civil,
Waltham, Mass.

Scott Harley, CDM Smith, East
Hartford, Conn.

Matthew Hearn, HNTB Corporation,
Washington, D.C.

Seneca House, Parsons Corporation,
Miami, Fla.

Alexander Jones, Rogers Group Inc.,
Columbia, Tenn.

Bryan Jones, HNTB Corporation,
Arlington, Va.

Erdal Karataylioglu, Parsons
Corporation, Richardson, Texas

George Lane-Roberts, J. Banicki
Construction, Inc., Phoenix, Ariz.

Stephen Lowrey, APAC-Atlantic, Inc.,
Knoxville, Tenn.

Crystal Lui, TYLin, San Francisco,
Calif.

Bryan Lutz, Texas Department of
Transportation, Tyler

Katie Peabody, HaulHub, Inc., Boston,
Mass.

Krista Putrino, AECOM, New York, N.Y.

Fernando Pizarro Quintanar, Cintra,
Austin, Texas

Ryan Russell, CRH Americas
Materials, Nampa, Idaho

Luke Schweinsberg, Ralph L.
Wadsworth Construction, Draper, Utah

Bryan Smith, Wagman Heavy Civil,
Inc., York, Pa.

Patrick Son, Gannett Fleming Inc.,
Washington, D.C.

James Thomas, Parsons,
Centreville, Va.

Harrison Wadsworth, AECOM,
Washington, D.C.

(Photo by Liz Roll for Max Taylor Photography)

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2023 ARTBA NATIONAL CONVENTION



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Sept. 10-13



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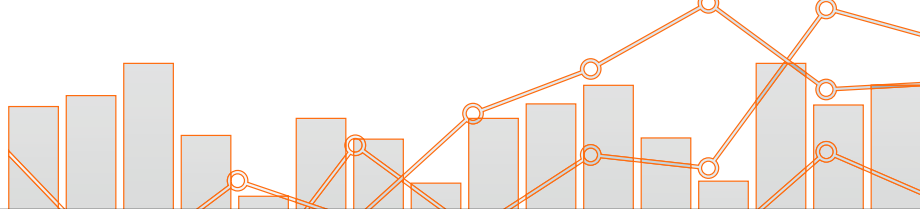
- 💡 Business insights from top executives about the state of the transportation construction industry.
- 💡 Progress reports on the ongoing implementation of the bipartisan infrastructure law.
- 💡 Informative and engaging sessions on workforce issues and behavioral health.
- 💡 ARTBA history with the election of the first chair ever from the Great State of Oklahoma.

\$50,000
CASH PRIZE

Featured Event:

ARTBA Golf Outing at Torrey Pines South Course with Hole-In-One and Skills Competition (Sept. 12)





Highway & Bridge Contractors Ramp up Employment, but Challenges Continue

BY DR. ALISON PREMO BLACK
ablack@artba.org

Highway and bridge contractors added 19,300 more workers to the payroll in April 2023 compared to April 2022, according to the latest employment data from the U.S. Bureau of Labor Statistics. This accounted for nearly one in 10 new jobs in the construction industry.

While the job gains are welcome news, additional data suggests construction contractors continue to have high levels of jobs openings and would be hiring more workers, if possible.

Highway & Bridge Contractor Employment

Total highway and bridge contractor employment was 367,800 in April, with 78 percent of those jobs classified as “production workers,” meaning they are non-supervisory employees working onsite.

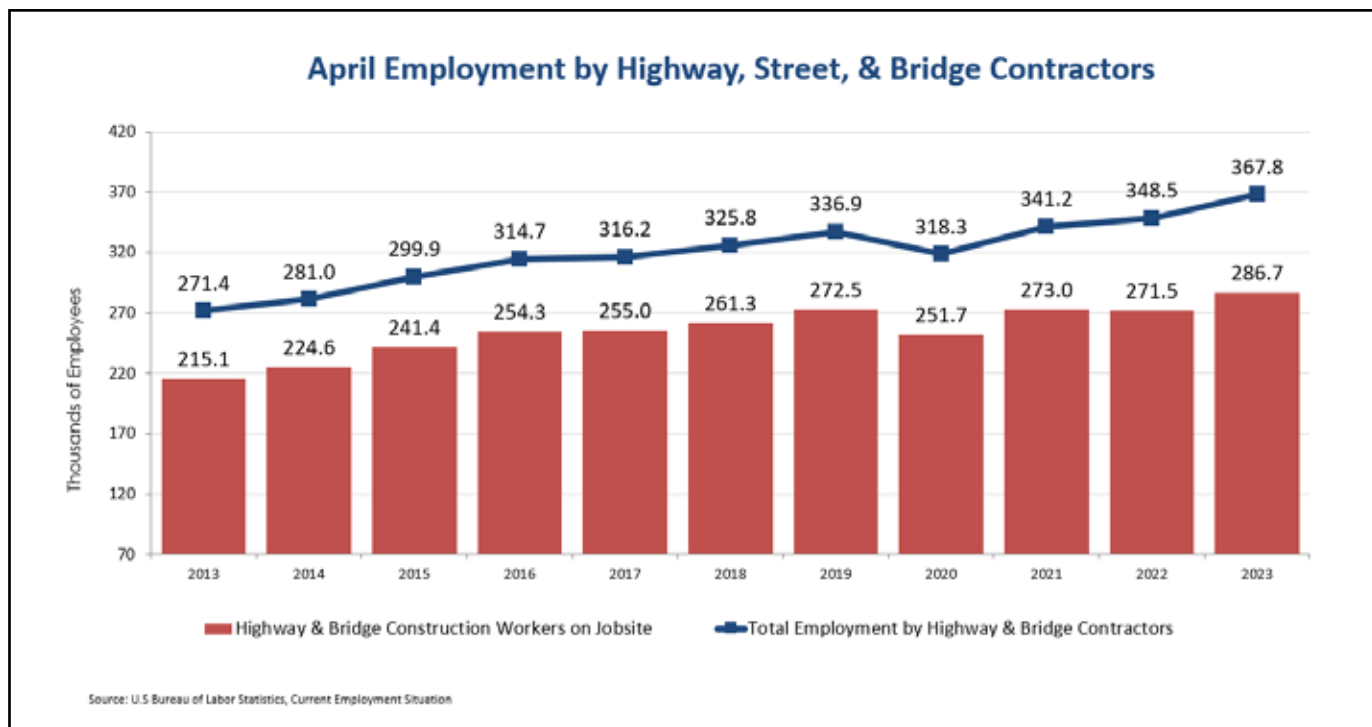
- New production workers for highway and bridge construction sites accounted for eight out of 10 new jobs in April.

- The six percent increase in April employment outpaced job growth in the broader economy (+2.7%); general construction (+2.6%); manufacturing (+1.7%); transportation and warehousing (+1.7%); and retail trade (+0.3%).
- Highway and bridge contractors increased average hourly wages by five percent, which was in line with wage gains in the broader economy (+5.1%) and other major industries.

Industry employment is one indicator of real growth in transportation construction activity.

As more projects get underway, contractors need more workers in the office and on the jobsite. Employment is expected to ramp up further over the summer construction season as businesses add more seasonal workers.

See Employment, 41



Access ARTBA's Interactive Dashboards:

Deficient Bridges
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artba.org/economics

Transportation Construction Market Intelligence Service

Empowering Smart Business Decisions



New Feature

The Missing Link: All 50 State DOT Budgets

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 - Construction Spending Trends
 - Federal Highway Funding Obligations
 - Materials Prices

For more information:

- ✓ Visit: economics.artba.org
- ✓ ARTBA members receive over 25% discount off \$9,500 annual rate.
- ✓ Contact ARTBA's Dr. Josh Hurwitz (jhurwitz@artba.org) to schedule a demo.



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Working Longer Hours

One sign of the higher demand for workers is the amount of time existing employees spend on the jobsite. Highway and bridge contractor employees worked an average of 43.7 hours per week in April, compared to 41.6 hours in April 2022. This additional 2.1 hours is twice as much time as put in by general construction workers (+1 hour) and private sector employees overall (+.09 hours).

The number of weekly hours worked was also up for utility system contractors (+2.2 hours); roofing contractors (+3 hours); and oil and gas pipeline construction (+5.6 hours).

Overall, highway and bridge contractor employees worked about 15.7 million hours per week in April, up from an average of 14.5 million hours per week in April 2022, an increase of 8.3 percent.

More Jobs Available

The number of unfilled job openings in the construction industry stood at 438,000 in April, one of the highest monthly levels. This means there are still more open jobs than workers to fill them.

Construction unemployment remains very low at 3.5 percent, indicating most workers looking for a construction job have found one.

Construction Materials and Planning & Design Firms


April employment was also up across major industries that supply goods, services, and materials for transportation construction compared to a year ago:

- Cement and concrete manufacturers added 8,300 jobs.
- Cement and concrete pipe manufacturers added 3,800 jobs.
- Employment was up by 4,500 jobs for ready-mix concrete suppliers.
- Construction machinery manufacturers added 5,299 jobs.
- Architectural, engineering, and related services increased employment by 79,300 workers, for total employment levels of 1.65 million.

April wages were up five percent for architectural and engineering firms and increases ranged from 1.4 to 1.8 percent for other major supplier industries.

These industries are expected to continue to add jobs in the next few months as highway and bridge construction work continues to grow.

Dr. Alison Premo Black is ARTBA's chief economist.



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WSP USA Senior Executive Paula Hammond joined ARTBA because of its singular focus.



For 120 years, the American Road & Transportation Builders Association (ARTBA) has worked exclusively to build and protect the U.S. transportation construction market.

Highway, public transit, airport, rail, port and waterway design, construction and maintenance generates \$650 billion in annual economic activity and sustains 4.4 million U.S. jobs.

ARTBA and its members:

- Led the industry charge resulting in 2021's Infrastructure Investment and Jobs Act—the largest federal surface transportation funding law since the 1956 Interstate Highway System.
- Have helped advance \$58 billion in approved, yet challenged, U.S. transportation projects via strong regulatory and environmental legal advocacy programs.

To meet today's business challenges, you need an organization singularly focused on your interests.

Contact **Allison Klein** at **202.683.1036** or **aklein@artba.org** to learn more about membership.



Transportation Construction Market Development & Protection is Our Mission

ARTBA On the Road

Members of the Strategic Planning Committee (SPC) met April 24-25 in Washington, D.C., to develop ARTBA's next business plan. Left to right: **Charlie Kilpatrick** (The Lane Construction Company), **Tim Merritt** (John Deere), SPC Co-Chair **Lisa Robert** (RS&H), **Tom Aber** (Impact Recovery Systems), ARTBA Chair **Paula Hammond** (WSP USA), SPC Co-Chair **Jeff Nelson** (David Nelson Construction), **Anne Noonan** (Summit Materials), **Tim Duit** (Duit Construction Company) and **Tom O'Grady** (HNTB).



← ARTBA Chief Economist **Dr. Alison Premo Black** updated the Illinois Road and Transportation Builders Association on the status of IIJA implementation during their May 25 Membership Meeting in Chicago.



Leaders and partners of the Illinois Road and Transportation Builders Association joined ARTBA General Counsel **Rich Juliano** (orange tie) at the U.S. DOT headquarters in Washington, D.C., for a May 9 meeting with senior policy staff from U.S. Secretary of Transportation Pete Buttigieg's office and the Federal Highway Administration.

ARTBA COO **Matt Jeanneret** (left) and Virginia Transportation Construction Alliance President **Ken Lanford** (right) met June 1 in Roanoke, Va., to discuss the Lanford Family Highway Worker Memorial Scholarship program.



← **Hammond** May 1 caught up with **Mike Pepper**, executive director of the Mississippi Road Builders' Association, during the group's convention in Dallas.



ARTBA Senior Director of State Funding Policy **Carolyn Kramer Simons** (third from right) was a June 6 panelist at the International Bridge, Tunnel and Turnpike Association (IBTTA) Road Usage Charging and Finance Summit in Salt Lake City.

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Steel Type	UNS	ASTM	EU NORM
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Duplex	S31803/S32205	2205	1.4462
Duplex	S32304	2304	1.4362

Specifications: A276, ASTM A955, BS6744

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AEM CORNER

TIPS TO AVOID THE MOST COMMON SAFETY MISTAKES ON THE JOBSITE

You've heard it before but let it sink in. More workers die in construction than in any other industry. Bureau of Labor Statistics show that 985 workers lost their lives in construction in 2021. Accidents involving heavy equipment often result in severe injury and death. Only by understanding how these accidents happen can we address solutions.

Safety Mistake #1: Failure to ensure equipment is safe

A study that looked at the factors contributing to accidents involving heavy equipment found that contributing factors were non-functioning seat belts, malfunctioning backup alarms, and poorly maintained equipment. In addition, many employees are injured or killed when the equipment they are repairing is turned on by a co-worker or when energy is released from the equipment.

Tip: Inspect equipment daily and follow lock-out, tagout procedures

Equipment inspections are not just to keep an eye on worn parts or productivity-related issues. They're also about safety. Among the equipment components that OSHA says should be checked daily are brakes, couplers, horns, seat belts, mirrors, lights, tires, and steering.

In addition, before any equipment maintenance or repair is performed, lockout/tagout procedures should be followed. Label the equipment with tags on the controls as required by OSHA to prevent accidental use of unsafe equipment. The lack of lockout/tagout equipment-specific procedures is one of the most cited OSHA violations.

Safety Mistake #2: Failing to protect workers on foot around heavy equipment

Operators of large heavy equipment simply cannot see people who are on foot in the blind spots of their vehicles. This presents a dangerous situation for people whose work requires they be on the ground near the equipment including surveyors, spotters, and grade checkers.

Tip: Try new technologies to increase visibility on the jobsite

New technologies boost visibility, making it safer for employees to work near heavy equipment. Features like 360-degree cameras and backup alarms on the equipment itself can help prevent accidents. Proximity detection technology sends alerts when an individual or object is within close proximity to another individual or object, which can help forewarn impending danger. A recent example is Leica's Icon PA-10, which offers greater awareness of the entire jobsite. Personnel on the ground are equipped with an electronic tag that emits lights, vibration, and sound when



any equipment is too close to the operator. Similarly, equipment operators can view the location of the worker from the cab.

Safety Mistake #3: Failure to plan ahead to prevent struck-by incidents

Struck-by accidents are a leading cause of death among construction workers, and since 1992 the leading cause of nonfatal injuries in the construction industry.

Tip: Plan ahead of time, and again right before you move equipment or materials

Actively investigate the jobsite well ahead of when the work will be completed, and again immediately before the work. Look for changes in the environment and inspect the equipment and the loads themselves to identify any changes from the plan. Employee training should emphasize keeping out from under-suspended loads and outside the swing radius of backhoes and cranes, lowering the bucket before exiting the cab, and following the manufacturer's instructions for operating couplers.

Safety Mistake #4: Failure to adhere to OSHA trenching standards

Excavating contractors need to pay more attention to safety standards for trenches. In 2021, OSHA announced enhanced enforcement initiatives after a rise in trench-related accidents.

Tip: Remember to slope it, shore it, shield it

According to OSHA, trenches five feet deep or greater require a protective system to prevent workers from trench collapse. Trenches 20 feet deep or greater require a protective system designed by a registered professional engineer. Three types of systems will protect workers:

You can *Slope It* by cutting back the trench wall at an angle inclined away from the excavation. You can *Shore It* by installing aluminum hydraulics or other types of supports to prevent soil movement. You can *Shield It* by using trench boxes or other types of supports to prevent soil cave-ins.

The Association of Equipment Manufacturers is the North America-based international trade group advancing the off-road equipment manufacturing industry in the global marketplace.

We Build Momentum

To learn more, visit aem.org

2023 ARTBA REGIONAL MEETINGS



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Nov. 1-3
Fort Lauderdale, Fla.



Western & Central
Nov. 8-10
Irving, Texas

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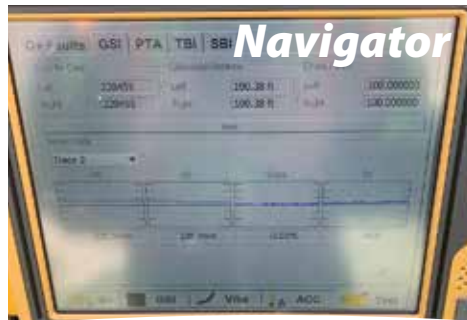
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