

Quarter 3 | 2021

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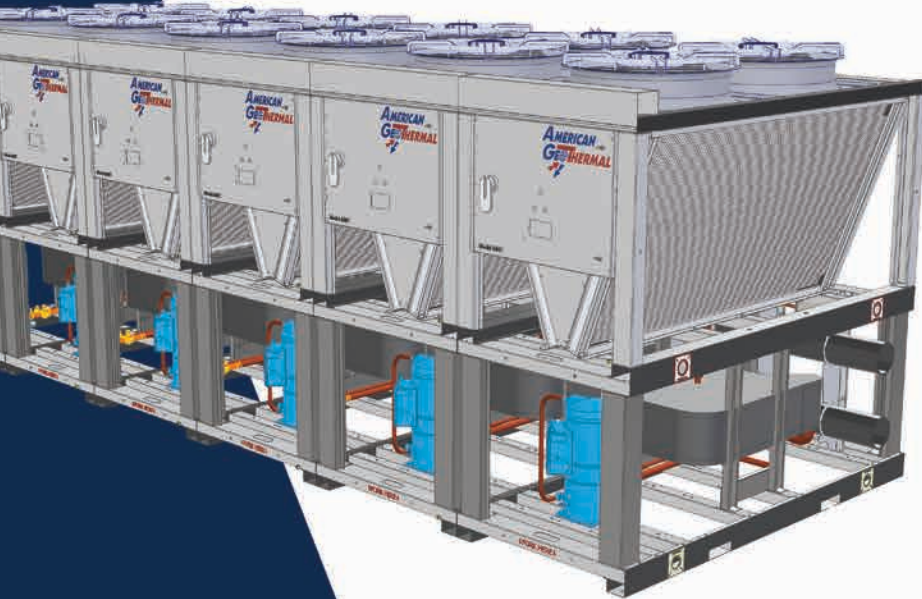
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ACPA NEWS

— TBD

Looking Forward, Things are on the Move at ACPA...



Jerry Voigt welcomes Laura O'Neill Kaumo

WE JUST COMPLETED ONE OF OUR MOST SUCCESSFUL MID-YEAR MEETINGS IN THE HISTORY OF ACPA, and for a moment it caused me to look back and think about what our association, our members, and our customers must have gone through these past 18 months.

And then, looking forward, recognizing the opportunities to strengthen our association, working diligently to ensure our programs and resources are being maximized, provides a motivation unlike many we have ever felt.

Our Mid-Year Meeting hosted over 125 people, making it one of the largest gatherings for this event in our ACPA history. Part of it was post pandemic, but a larger part was the need to engage, to contribute, to say hello to colleagues we hadn't seen in over a year, and to look forward. It was Jerry Voigt's last Mid Year Meeting as President and CEO, and he, along with the ACPA staff, put on a great event.

One of the things that made this event extra special was the introduction of the new ACPA President and CEO Laura O'Neill Kaumo. Having the opportunity to meet her and seeing how Jerry and Laura connected ensures that we will have a bright outlook here at ACPA.

This Mid-Year Meeting also provided an opportunity to see how the new committee/forum structure would work, and we are quite happy that it is working well. We've identified a couple of things to tweak, but our goal of additional member engagement shined through.

Everyone in the ACPA membership has heard about, or had to take action on, Sustainability as it pertains to the paving market. The Sustainability Initiative Workshop provided an excellent focus on problem solving and addressing issues that we can turn into opportunities. Concrete is quite sustainable, it's extremely resilient, and it helps the environment over the long term. Many thanks to those members who participated in the workshop; everyone's expectations were exceeded.

ACPA will continue to be the technical expert in the paving market, functioning as the conduit for education and resources for our engineers, consultants, and members. We welcome your input, engagement, and feedback. And, on behalf of our entire organization, we are excited welcome Laura O'Neill Kaumo on board as the new ACPA President and CEO.

Stay safe and have a great rest of the summer.

Scott J. Mueller
Interim Editor,
Vice President of Marketing

About the Author

Scott Mueller joined ACPA in April 2019 as the Vice President of Marketing. He brings over twenty-five years of concrete construction experience to the role. His experience includes strategic planning, marketing communications, CRM, social media (and PR), mergers and acquisitions, as well as promotion, product management and team building. At ACPA, he leads the marketing programs which also include the Promotion Plan, as well as the Sustainability Initiative, and the Healthy Competition Campaign.



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Meet and Greet: A Quick Interview with New ACPA President and CEO, Laura O'Neill Kaumo

We had a chance to sit down with the ACPA's incoming President & CEO Laura O'Neill Kaumo for a brief interview in Mid-July. Laura was introduced at the Mid-Year Meeting in Milwaukee in June, and officially started July 12th.



Scott: Laura, good afternoon, so glad to have you joining the ACPA Team.

Laura: Thank you Scott, its great to be here, I am looking forward to being a part of ACPA. This is a team that is highly dedicated to the cause and its an honor to be a part of it.

S: Laura, could you share a little bit about your background, and how it aligns with the ACPA membership?

L: Sure, I have been involved with trade association management, specifically in the transportation and infrastructure space for around 15 years. Government and legal affairs for nearly twenty years. I've worked with engineering firms, aggregates, and highway users – like the independent truck drivers. I love opening doors and developing opportunities for members who stand 100% behind their message or product with passion and conviction. Not only does that make the job a lot easier and more enjoyable, but it also helps me jump out of bed every morning. I see that passion in the concrete paving industry, and I plan to help carry that message forward to decisionmakers and lawmakers to elevate the overall brand.

S: We know its early, your first week, what is on your “to-do” list over the next 100 days?

L: Hearing more about how ACPA can be an even greater asset to its members and state partners. Then, developing a plan for growth, revenue diversification, and stability through improved communications, enhanced marketing, and strengthening of our ACPA Federation. ACPA is doing a lot really well, particularly on the technical side to help serve its membership, I plan to build upon that as well as shore up our government affairs efforts.

S: I noticed we are both Detroit Lions fans, I guess I will have someone to commiserate with (lol), are you originally from Michigan?

L: Fan is a strong word. Its more of a one-sided relationship where hope springs eternal season after season of crushing defeat – it's sort of like a Doctor Strange time loop.

Yes, I am a Michigan-native. I graduated from the Grand Ledge High School, attended Michigan State University, and received a BS from Eastern Michigan University before getting my JD at the University of Miami School of law.

S: You place a high value on teamwork, what are some of the things that make teams most effective?

L: Honesty, trust, and kindness are some of the traits I value most on a team. Also, respect – knowing that everyone has an important role to play and respecting the position they hold is the only way to achieve success. We all come together for a shared purpose – the advancement of concrete paving – lets get passionate about what it is we do and how to make that mission work.

S: When I think of teamwork, I think of everyone working in concert together, kind of like an England Premier League (EPL) Soccer/Football team, how did you become a West Ham Hammers fan?

L: Ha! Ok, based on your earlier sports question, you can tell I love the underdog and I don't give up on a situation even when the chips are down. I also love learning new things and as an avid sports fan, I decided to take an interest in the EPL. Not, wanting to simply jump on the bandwagon for Clubs with a lot of recent success like Man U, my husband and I debated between Liverpool and West Ham. We happened to see an episode of the IT Crowd where the IT guys were trying to pretend, they knew sports and they said they followed West Ham solely because there happened to be a ham in the room. So, there it is. It was that arbitrary. It was humorous. It's been delightful. I can't promise that in the early morning hours I am in my kit watching every match, but I do catch a few and am thrilled we came in 6th! David Moyes (Head Coach) had a great year (Coach of the Year nominee)! COYL.

S: What do you enjoy most about English Football?

L: The athleticism – 90+ minutes of just pure grit. Its impressive! Related, I love when the NFL plays an American Football game in the UK, and you see all the fans showing up in all different NFL jerseys besides the teams on the field. It's like you feel people from across the ocean making an effort to understand America. I watch EPL because I didn't really grow up with soccer, but I want to make an effort to understand why it's important to millions of people. I certainly get it now!

S: Washington DC seems to have several different views when it comes to infrastructure, do you see any opportunities that can benefit ACPA and the membership?

L: One of our main priorities is to continue to seek increased investment for highways and airports. We will continue to work with our partners in D.C. to advance that message, but moreover we are going to do what we do really well and that's talk about concrete paving. We are going to look for every opportunity to do just that with the Federal Agencies and on Capitol Hill. The

authorization and appropriations process are going to provide a good opportunity to talk about concrete paving for many years to come. We will also shore up existing efforts. The progress we have made for concrete pavement research and technology in recent years has been solid. We are going to continue to foster and develop contacts at key agencies as well, like FHWA and FAA. Our mission is to continue to be an effective advocate in DC for the concrete pavement industry, leveraging the opportunities that come with significant infrastructure investment to the benefit of our membership.

S: If you had to describe yourself in three words, what would they be?

L: Never give up!

S: It was great to meet you at the Mid-Year Meeting in Milwaukee, how was experience?

L: Well Scott, it was a whirl wind tour for sure, somewhat overwhelming, but definitely a good experience to meet the attendees. I am really looking forward to meeting our membership at the 58th Annual Meeting in Huntington Beach California (November 30-December 2, 2021).

At the annual meeting we have a great agenda planned and there will be more time to visit, listen and engage. I also will be discussing my 100-day plan and give an overview on the changes we've made and the course we are heading – getting everyone's buy-in on that vision is an important part of our success. Its exciting and I look forward to seeing everyone.

EDITORS NOTE: Registration is open, please visit ACPA.org and click on the events dropdown.

S: Laura, is there anything you would like to share with our members?

L: ACPA has great group of members. We are going to focus on increasing Membership Value Proposition. This includes strengthening our team, looking at our program goals and initiatives and proactively planning to ensure the highest level of success. If you want to hear more, join me in Huntington Beach California for our Annual Meeting.

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Innovation on Interstate Improvement Project

ALDOT Looks to RCC and Reduced Carbon Concrete

By Lori Tiefenthaler

THE ALABAMA DEPARTMENT OF TRANSPORTATION'S I-59 RECONSTRUCTION PROJECT near Trussville looked to be much like many other road improvement efforts. The project included bridge rail retrofits, ramp improvements, concrete rehabilitation and shoulder reconstruction along about an eight-mile stretch of I-59 around Trussville. Beyond the need to carefully manage work in order to keep traffic moving on the highway, the shoulder reconstruction effort was further complicated by pavement edge drains installed about six inches below the existing pavement.

The drains limited the depth of the new pavement to five inches to avoid damage to drains, and the need to minimize disruption to traffic called for a solution that was both durable and fast.

While ALDOT specified the use of concrete for the shoulders to address these issues, specialty paving contractor A.G. Peltz Group, realized that the I-59 project was an ideal project to demonstrate the value of roller-compacted concrete and a more environmentally friendly mix.

Rolling Forward

RCC is an effective means and methods approach that is raising the bar for roadway rehabilitation and construction in both speed, durability and sustainability. While RCC has been around for many years, it is most commonly used in industrial areas because of its ability to handle heavy loads. The concrete does not rut, shove or produce potholes and is resistant to hydraulic fluid and oil spills, and will not soften under high temperatures. RCC's value has also extended to include hundreds of miles of RCC shoulders and transportation facilities.

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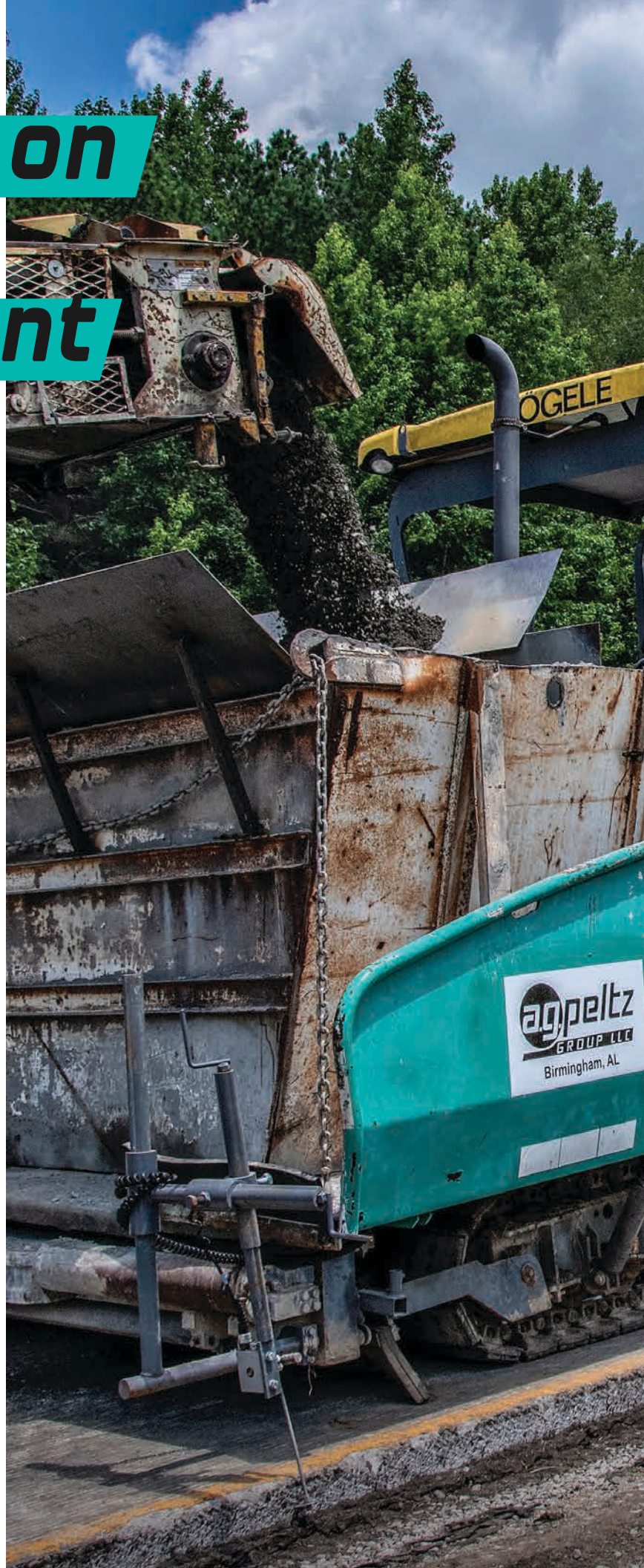




Photo by Lehigh Hansdon/Audrey K. Noe



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“Overall, RCC construction for roadways has come a long way in terms of quality and smoothness in the last decade,” says Will Gray, owner of A.G. Peltz Group. “It is especially effective in limited work spaces because equipment does not extend beyond a lane.”

Gray notes that RCC is typically 10% to 15% less expensive than traditional concrete construction because it does not require forming and finishing – a capability that proved especially important for the I-59 shoulder rehabilitation project. In this case, ALDOT required that the shoulder work for each segment had to be done in one operation to ensure that the interstate lanes could reopen for travel during high traffic periods.



“RCC worked well for our requirements,” says Gary Smith, construction engineer for the Birmingham Area for ALDOT. “The planer cuts the shoulder down five inches with the RCC equipment following right behind filling up, so there’s no drop off when the construction is complete. They can do the entire 5-inch lift with one operation.”

Inside the Mix

Besides the use of concrete compaction methods to rehab the I-59 shoulders, A.G. Peltz also adjusted the concrete mix. Instead of a conventional solution, the contractor chose a blended cement with a higher limestone content.



Photos by Lehigh Hansdon/Audrey K. Noe

I-59 TRUSSVILLE, AL

PROJECT SNAPSHOT

- » **Length:** about 8 miles
- » **Amount:** 128,000 sq yds of 5-in. RCC
- » **Sustainable innovation:** portland-limestone cement
- » **Contractor:** A.G. Peltz Group
- » **Cement Supplier:** Lehigh Hanson

The portland-limestone cement is approved in the AASHTO M-240 and ASTM C595 standards as a Type IL. It is produced using ordinary portland clinker ground with limestone. Compared to ASTM C150 and AASHTO M85 Type I portland cement, this innovative product contains as much as 10% more limestone using the same components and yields – with equivalent performance to ordinary portland cement.

Using innovative technology to increase the amount of limestone and decrease the amount of clinker reduces both the energy required to produce the cement and associated emissions, making it a greener alternative compared to traditional portland cement mixes.

“Prior to this project, the materials and testing lab in Montgomery had performed testing alongside traditional Type I-II cement to confirm effectiveness,” explains Dewayne Ehlers, materials and tests engineer for the Birmingham Area for ALDOT.

Durable Delivery

Ultimately, A.G. Peltz placed more than 128,000 sq yds of 5-in. RCC on shoulders ranging from 5 ft. (inside) to 10 ft. (outside) along the nearly 8-mile stretch of roadway.

On the I-59 project, A.G. Peltz was able to reduce the concrete carbon footprint by about 10% or about 550 tons.

The I-59 project is ALDOT’s second foray with RCC on a travel lane. The first was the McAshan Road project, also performed by A.G. Peltz Group in 2018. For the McAshan project, the contractor placed 9,727 sq yds for ALDOT on McAshan Road in McCalla. At the time, ALDOT was looking for a high structural value pavement that could withstand heavy loads and still allow interrupted access. RCC proved the right answer. In this case, the contractor placed 10-in. RCC in one lift.

If all cement used in the U.S. in 2019 had been converted to PLC, carbon dioxide emissions would have been reduced by 8.1 million metric

tons, which the U.S. EPA says is the equivalent of taking 1.75 million cars off the road for an entire year.¹ ALDOT, along with at least 32 other DOTs, allow the use of PLC in its concrete specifications.

“We see the addition of lower carbon alternatives such as PLC as a great option for the future work, particularly with growing use of RCC,” adds Gray.

The I-59 project was completed in early Fall 2021. ALDOT also initiated a second concurrent project for another seven miles of shoulder work on I-59 in St. Clair County. This highway, which averages 30,000 vehicles per day, will also use the same RCC design on the shoulders with portland-limestone cement, adding another 160,000 sq yds of environmentally-friendly concrete.

When asked about the overall opinion about the project, Ehlers says that after a number of trips to evaluate the pavement, it appears to be performing well. “What we’ve seen so far is that it is pretty durable and gives a good presence.”

Lori Tiefenthaler is senior director of marketing for Lehigh Hanson, Inc.

1. Portland-Limestone Cement and Sustainability. Portland Cement Association. www.cement.org/sustainability/portland-limestone-cement

Photo by Lehigh Hanson/Audrey K. Noe





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A Look Back: Concrete Bus Lanes Improve Travel in Los Angeles

Dedicated lane reduces congestion and supports heavy vehicles

By Sheryl S. Jackson

THROUGHOUT 2020 REMOTE WORK FOR MANY EMPLOYERS MEANT A DECREASE IN TRAFFIC CONGESTION and easier access to public transportation. As more employees return to the office, traffic volume will increase and use of mass transit, including buses will increase in urban areas as well.

As city, county or state agencies look for ways to repair roads to handle increased volume, the award-winning project completed six years ago for the Wilshire Bus Rapid Transit (BRT) serves as an example of how concrete pavements can be used alongside asphalt pavements to handle high volume, heavy, turning traffic.

With over 80,000 weekday bus boardings, Wilshire BRT was dealing with deteriorating curb lanes, with one of the most significant segments running 3.6 miles through a densely populated area. The poor condition of the curb lanes resulted in buses and other vehicles avoiding driving on them, which reduced the number of travel lanes to two in each direction, further increasing congestion.

The Bureau of Engineering, Department of Public Works of the City of Los Angeles led the design and construction of the Wilshire BRT, and Psomas provided design services. The design called for removal of the concrete curb, gutters and asphalt

curb lanes and for construction of monolithic concrete curb and curb lanes in their place. Bus stops and shelters were relocated from the nearside of the intersections to the far side of the intersections. Repairing, grinding and resurfacing the two east and two westbound travel lanes and the center median / left turn lane, and re-stripping the roadway to convert the east and west bound curb lanes to weekday peak period bus and right-turn only lanes were also components of the project.

“Concrete is the preferred pavement for the lane that served as a bus and right-turn only lane as well as the bus pads at the bus shelters and stops due to the heavy volume and the constant turn-

continues on page 14 »





Before Construction



WILSHIRE BLVD. BUS LANES

PROJECT SNAPSHOT

- » **Size of Project:** Total of 7.2 miles of monolithic curb and lane
- » **Total PCC Placed:** 16,200 cubic yds
- » **Cost:** \$11 million
- » **Engineer:** Psomas
- » **Contractor:** Griffith Company

» continued from page 13

ing of tires,” says Mac Tarrosa, division manager of the concrete division for Griffith Company. “The construction of a monolithic concrete curb and curb lane is a typical design in Los Angeles County to avoid intrusion of water into the subgrade through joints between the lanes and curbs,” he explains. This approach lengthens the lifespan of the concrete pavement and reduces maintenance requirements.

In addition to the typical safety concerns for the traveling public as well as pedestrians and

employees, the busy urban setting presented logistics challenges for material deliveries, says Tarrosa. “We did not want concrete truck drivers lost or stuck in traffic so we had to coordinate our pour sequence and schedule carefully with our supplier to avoid unnecessary cold joints and possible project delays,” he says.

Because Griffith was also tearing out the old pavement and curbs, and preparing the subgrade, weekly updated schedules were crucial. “We did not want to open up too much area for us to pour

“Concrete is the preferred pavement for the lane that served as a bus and right-turn only lane as well as the bus pads at the bus shelters and stops due to the heavy volume and the constant turning of tires.”



During Construction

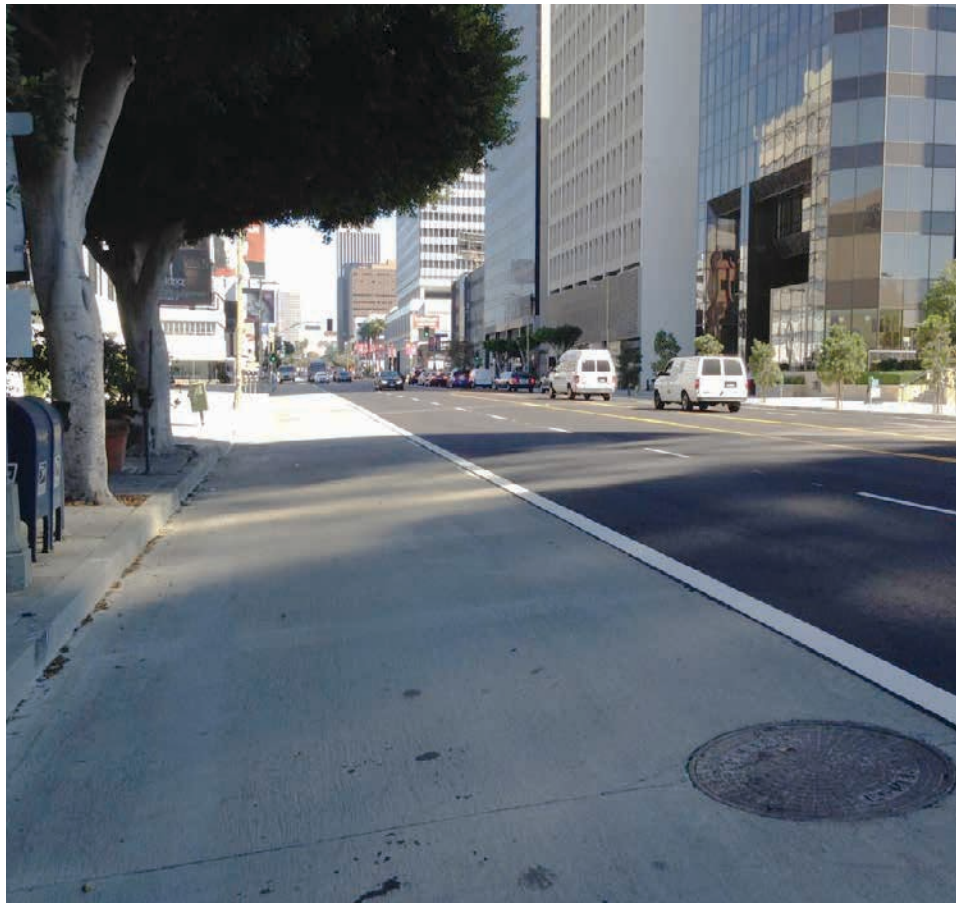


back. It all has to happen in proper sequence and coordination,” says Tarrosa. “We also did not want to open areas where there can be a huge risk to the traveling public.”

Pours were broken down to 700-foot-long sections and 5,000 and 6,000 psi high early mixes were used in order to open up the intersections and lanes as quickly as possible.

Along with concrete used for the 12-in. tall curb and 13-in. deep concrete pavement protruding 12 ft. from curbside to serve as the bus lane, Griffith Company also poured concrete bands and sub slabs for the intersection crosswalks – using more than 350,000 square feet of concrete.

The secret to success for this project, which won a transportation project award from the Los Angeles Section of the American Society of Civil Engineers was really the people, says Tarrosa. “We knew that this would be a high profile project so we assembled a team of veteran employees who worked well together and were experts in their roles,” he says. “They knew how to build the pavement so that water drained properly, and the ride was smooth due to good transitions from new to old pavement.”



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RCC and 60+ Concrete Pavement Team Up

Primary access road for aerospace company gets an upgrade

By Sheryl S. Jackson



WHEN AN 8-INCH CONCRETE TAXIWAY WAS FIRST BUILT AT WHAT IS NOW DONALDSON FIELD, it is likely that no one expected the pavement to still be in service 60 to 80 years later.

Donaldson Field, which is part of the South Carolina Technology & Aviation Center, was built in 1942 as Greenville Army Air Base, then was renamed Donaldson Air Force Base in 1951. The base was decommissioned in 1962 and returned to the city and county. Over the years the technology and aviation center has become home to a number of companies, including Lockheed-Martin.

Lockheed-Martin currently maintains and refurbishes the legendary Air Force C-130 Hercules cargo aircraft and Navy P-3 Orion patrol aircraft

at Donaldson Center and is about to expand to also work on the F-16 fighter jet. As part of this expansion, Hercules Way, the road leading to the Lockheed-Martin's facility was slated to be improved by Greenville County.

Hercules Way is the 8-in. concrete taxiway that was converted to a road after base decommissioning. The original concrete pavement is estimated to be 60 to 80 years old and had been overlaid with a couple of inches of asphalt at some point. The road handles employee traffic as well as heavy truck traffic delivering materials to the Lockheed-Martin facility.

"Hercules Way's original concrete pavement was overlaid with 1 ½ inches of asphalt that had com-

pletely oxidized," says Terry Bragg, program manager and engineer of record for the project and director of operations for CoTransCo, which manages road projects in Greenville County in South Carolina. "We looked at rubblizing the existing road to use it as the base for the new road but the total projected cost of \$1.3 million was too high."

Bragg asked Andrew M. Johnson, PhD, PE, the pavement design engineer at the Southeast Cement Promotion Association to help them evaluate the existing, 70-year-old+ concrete as a base for the new road. In addition to confirming that the concrete could serve as a base for the new road with minimal repair, Johnson also suggested roller-compacted concrete (RCC) as an option to save costs and time.

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HERCULES WAY, SC

PROJECT SNAPSHOT

- » **Size of Project:**
2,700 ft. by 36 ft.
- » **Total RCC Placed:**
11,760 sq yds
- » **Cost:** \$694,691.88
- » **Timeframe:** RCC placed over
two days, open to traffic
- » **Engineer:** CoTransCo
- » **Contractors:** King Asphalt
and Andale Construction

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“Hercules Way’s original concrete pavement was overlaid with 1 ½ inches of asphalt that had completely oxidized. We looked at rubblizing the existing road to use it as the base for the new road but the total projected cost of \$1.3 million was too high.”

“The new estimate included saving what was in place, using RCC and striping, and the final cost was \$694,691.88,” says Bragg.

Concerns about the deteriorating asphalt and how it would affect the performance of the bond break material led to a change order to completely remove the asphalt. Once uncovered, it was apparent that the original concrete was in surprisingly good condition, says Bragg. “We repaired 475 square yards of the existing concrete, which is 4% of the original concrete.”

Hercules Way was part of another project that King Asphalt was handling for the county. “This was our first RCC project, but we partnered

with Andale Construction to produce the RCC and handle the finish work,” says Loyd Amos, recycling market development manager for King Asphalt. “We have a high density paver and often handle projects that include paver-laid cement modified recycled base at depths that range from 6 to 12 inches, so our crew was accustomed to the increased lift thickness when it came to paving the RCC.”

Andale Construction was brought onto the project to provide the mix design, oversee production of the RCC and lay the geotextile fabric because the company has extensive experience with RCC projects, explains Matt Munsick, vice president of Andale Construction. “We worked



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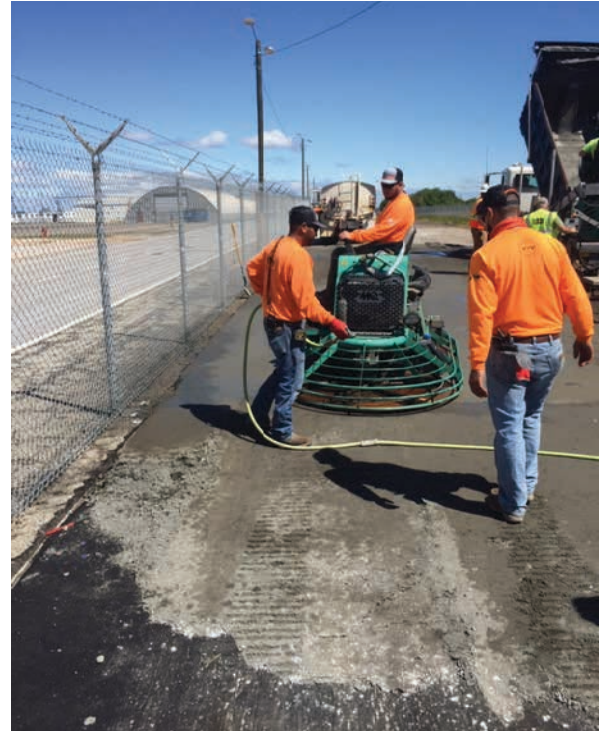
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with Carolina Concrete, a local concrete plant, to produce the RCC, but we provided the twin shaft mixer that is needed to produce the harsher, dryer RCC mix," he says. "This collaboration went well because King Asphalt wanted to learn how to work with RCC and already had the equipment needed to pave." After paving was completed, Andale also handled the sawing and trowel-finishing of the pavement.

The final pavement was 6 inches of RCC with a 6 ft. by 6 ft. panel size and a geotextile interlayer over the original 8 inches of concrete. The road has two 12-ft. driving lanes with 6-ft. shoulders on each side. Asphalt wedges were placed at the edges of the pavement to transition to the adjacent areas since the new pavement was higher. Re-routed employees and deliveries were able to drive on the road quickly – cars after three days and trucks after seven days.

"One of the lessons we learned during the project was the need to make sure our lines, which were laid over the fabric, did not shift even slightly," says Amos. "One step we took was to use pins and stringline on the outside edge." A transfer machine was used in front of the paver to avoid stops and starts in the paving operation, so some crew members stayed between the paver and transfer machine to constantly monitor the lines, he says.

Overall, RCC as an overlay to existing pavement is a good tool for a contractor's toolbox, says Munsick. "The flexural strength, speed of paving and cost savings make it a good choice for many projects," he says. "The technology is still evolving, and we are testing the use of steel fiber in 3-in. RCC for future projects."





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Project Changes: Creating a Roadmap to Obtain Additional Compensation and Time Extensions

1. Project Changes are Inevitable.

The reality is the project a contractor is *required to construct* is increasingly different than *the one it bid on*. **Project changes are inevitable.** This is true for a number of reasons, examples of which include:

- Owners are late providing site access (e.g. failure to obtain necessary permits or easements, delay in issuance of NTP);
- Late utility relocation;
- Unmarked/mismarked utilities;
- Material delivery delays;
- Differing site conditions;

- Estimated Quantity Errors;
- Design Busts; and
- Weather.

2. Unless Contractors and Engineers learn about the applicable contract provisions and how to use them, the impact of changes cannot be fairly addressed.

Each of these change issues can *significantly increase the cost and time of work*. Indeed, sometimes the issue can be so severe that it can affect

constructability. The good news is that contracts may include important *rights* for contractors to receive *additional compensation and time extensions* for these issues. The bad news, based on my experience, is that contractors and engineers alike do not fully understand:

- *Whether* the contract provides such a *right*;
- If such *right* exists, what is *procedurally required to exercise this right*; and
- *How* do you calculate the *impact in time and money*.

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FL DOT – Standard Specifications for Construction, 2019: Procedure for Changes*

Changed Work	Claims by Contractor § 5-12	Contract Time Extensions § 8-7.3.2
<p>Extra Work</p> <ol style="list-style-type: none"> 1. If Engineer requires any work that is <u>not</u> otherwise covered or included in the project by the existing Contract Documents; and 2. It's of the nature of additional work, altered work, deleted work, work due to differing site conditions, or otherwise, then . . . 3. The work is "Extra Work." (§ 1-3 Definitions) 4. If the extra work is authorized in writing by the Engineer, then . . . 5. It will be paid pursuant to Supplemental Agreement. (§ 4-3.2 and 4-3.2.2) 6. If Engineer and Contractor cannot agree to Supplemental Agreement, Contractor shall follow procedures set forth in 5-12.2 and 8-7.3.2 to preserve right to additional time and compensation for any "Extra Work." 	<p>Claims by Contractor § 5-12</p> <ol style="list-style-type: none"> 1. <u>Whenever</u> the Contractor deems that extra time or compensation is due beyond that agreed by the Engineer, follow the following procedures: <ol style="list-style-type: none"> a) Submit timely notice of intent to file a claim before beginning the work on which the claim is based (§ 5-12.2); b) Submit preliminary time extension request within 10 calendar days after commencement of a delay (§ 8-7.3.2); c) Submit time extension request within 30 calendar days after the elimination of the delay (§ 8-7.3.2); d) Submit certified written claim together with full and complete claim documentation within 90 or 180 days after final acceptance. 2. Failure to provide such within the time required shall constitute complete, absolute, and irrevocable waiver by the Contractor of any right to additional compensation or a time extension for such claim. 3. Afford Engineer opportunity for keeping strict accounting of actual labor, material, equipment, and time. 	<p>Contract Time Extensions § 8-7.3.2</p> <p>In General</p> <ol style="list-style-type: none"> 1. If a controlling item of work is delayed by factors <u>not reasonably anticipated or foreseeable</u> at the time of bid, then . . . 2. <u>The Department may grant an extension of Contract Time.</u> 3. <u>Submit time extension request</u> to preserve right to additional time and compensation. <p>Weather Delays</p> <ol style="list-style-type: none"> 1. If delays are caused by the effects of rains or other inclement weather conditions, related adverse soil conditions, or suspension of operations that prevent the Contractor from productively performing controlling items of work and result in: <ol style="list-style-type: none"> a) The Contractor being unable to work at least 50% of the normal workday on pre-determined controlling work items; or b) The Contractor must make major repairs to work damaged by weather, provided that the damage is <u>not</u> attributable to the Contractor's failure to perform or neglect, and provided that the Contractor was unable to work at least 50% of the normal workday on pre-determined controlling work items, then . . . 2. The Department will grant a time extension on a day for day basis. <p>Utility Delays</p> <ol style="list-style-type: none"> 1. If utility relocation and adjustment delays Contractor; and 2. Delays are the result of utilities not shown in plans or not completed on schedule; and 3. Utility work actually affected progress; and 4. Contractor took all reasonable measures to minimize the effect, then . . . 5. Submit time extension request to preserve right to additional time and compensation. <p>Request for Extension of Contract Time</p> <ol style="list-style-type: none"> 1. <u>Submit preliminary request for an extension of contract time</u> within 10 days of start of delay and include the commencement date of the delay, the cause of the delay, and the controlling item of work affected by the Delay. 2. <u>Submit a contract time extension request</u> within 30 days after elimination of the delay and include all documentation that the Contractor wishes the Department to consider related to the delay, and the exact number of days requested to be added to Contract Time. 3. If the delay is compensable, then the Contractor shall also be request to submit with the request for contract time extension a detailed cost analysis of the requested additional compensation.
<p>Differing Site Conditions (§ 4-3.7)</p> <ol style="list-style-type: none"> 1. If conditions are encountered at the site differing materially from those indicated in the Contract, or differing materially from those ordinarily encountered; and 2. If the conditions cause an increase or decrease in the cost or time required for the performance of any work under the Contract, then . . . 3. STOP WORK. Notify the other party in writing of the specific differing conditions before disturbing the condition or performing the affected work. 	<p>Claims for Delay (§ 5-12.2.2)</p> <ol style="list-style-type: none"> 1. If additional compensation or a time extension is due on account of delay, differing site conditions, breach of contract, or any other cause other than for work or materials not expressly provided for in the Contract (Extra Work) or which is by written directive of the Engineer expressly ordered by the Engineer pursuant to 4-3, then . . . 2. <u>Submit a written notice of intent to the Engineer</u> within 10 days after commencement of a delay to a controlling work item expressly notifying the Engineer that the Contractor intends to seek additional compensation, and if seeking a time extension, then . . . 3. <u>Submit a preliminary request for time extension</u> (§ 8-7.3.2) within 10 calendar days after commencement of a delay along with a reasonably complete description as to the cause and nature of the delay and the possible impacts to the work by such delay; then . . . 4. <u>Submit a request for contract time extension</u> (§ 8-7.3.2) within 30 calendar days after the elimination of the delay. 	<p>Disputes Review Board</p> <ol style="list-style-type: none"> 1. Review Special Provisions to determine whether contract specifies use of Dispute Review Board ("DRB"). 2. If so, Contractor is typically required to refer a dispute or claim to the DRB as soon as it appears that the normal dispute resolution effort is not succeeding and/or within the same time period for submission of certified written claim to the Department (i.e. within 90 or 180 days after final acceptance). 3. Special Provisions should also detail any specific procedures for the DRB.
<p>Significant Changes to the Work (§ 4-3.1)</p> <ol style="list-style-type: none"> 1. If the Engineer determines that the character of the work as altered differs materially in kind or nature from that involved or included in the original proposed construction; or 2. If a "major item of work" is increased in excess of 125% or decreased below 75% of the original Contract quantity, then . . . 3. The Department will apply a price adjustment for the change in quantity in accordance with 4-3.2. 4. Contractor shall follow procedures set forth in 5-12.2 and 8-7.3.2 to preserve right to additional time and compensation. 	<p>Content of Written Claim (§ 5-12.3)</p> <ol style="list-style-type: none"> 1. <u>Submit a certified written claim</u> to the Department which includes the information specified in § 5-12.3.1 to 5-12.3.6. 	
<p>Suspension of Work (§ 8-6.1)</p> <ol style="list-style-type: none"> 1. If the Engineer suspends operations wholly or in part, in writing, giving in detail the reasons for the suspension, then . . . 2. IMMEDIATELY COMPLY. Do <u>not</u> resume operations until authorized to do so by the Engineer, in writing. Failure will constitute an act of default. 3. If Contractor and Engineer are unable to agree on additional time or compensation as a result of the suspension, follow the procedures set forth in 5-12.2 and 8-7.3.2. 		

*NOTE: Required procedures may be modified by Supplemental Specifications or Special Provisions. Only the Engineer may approve extra work or exceptions to the above procedures (See, e.g., § 5-1.4.8)
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The reason for this failure is understandable. That portion of the contract documents which addresses these problems is typically set forth in the General Conditions or, in DOT Specifications, the first section. Therein lies the problem. Neither the contractor nor the engineer sufficiently knows what these Conditions or Specifications provide because neither prepared them, and neither has received any meaningful classroom education or training.

And what are the consequences of not knowing what the contract provides/requires for project changes?

- Contractors do not get paid/fairly paid for the related extra costs.
- Contractors pay liquidated damages for the related delay.
- Contractors and engineers' relationship suffer.

So how do you overcome this? How do you create a roadmap to obtain additional compensation and time extensions when the project requirements change?

3. Creating a Roadmap to Manage Project Changes

Insofar as the contract provisions which address project changes are set forth in the General Conditions or, in DOT Specifications, the first section, it is essential that contractors learn the *applicable provisions* and *how to use them*. I have found the most effect means to accomplish this is through *preparation of a flowchart*. The flowchart should describe:

- All of the applicable contract provisions which address project changes;
- Under what factual circumstances each provision applies;
- Whether there is a right to additional compensation or only a time extension;
- How to calculate the impact in dollars and time; and
- What are the related procedural requirements.

We have and continue to prepare contract-based flowcharts for clients which correspond to the

applicable contracts (e.g. DOT, AIA, EJCDC, etc.). Set forth below is an example. This is a portion of the flowcharts for the _____ Standard Specifications for Construction.

How to Use the Flowchart

After creating the flowchart, both the contractor and engineer now have a roadmap for *how to manage project changes insofar as they affect cost, time and constructability*. With this understanding, project changes can be timely, equitably and cooperatively addressed. Copies of the flowchart should be kept in the home-office, and given to all field personnel.

When a change issue arises, both the contractor and the engineer can pull out the flowchart to quickly determine if there is a right to additional compensation and/or a time extension, what are the applicable procedural requirements, and how to calculate the impact in time and money. With a common understanding of how to proceed, change issues are properly handled at the outset.

ABOUT THE AUTHOR

Thomas Olson

is the founding partner of Olson Construction Law. Tom's commitment is to provide guidance on how to resolve issues on the jobsite,

not in the courtroom. Tom has worked on highway heavy projects throughout much of the United States for more than thirty years. A prolific speaker and writer as well as attorney, his expertise is in concrete and asphalt paving, utility, earthwork and bridge construction, schedule analysis, material testing, and the technical and legal obligations of both engineers and contractors.



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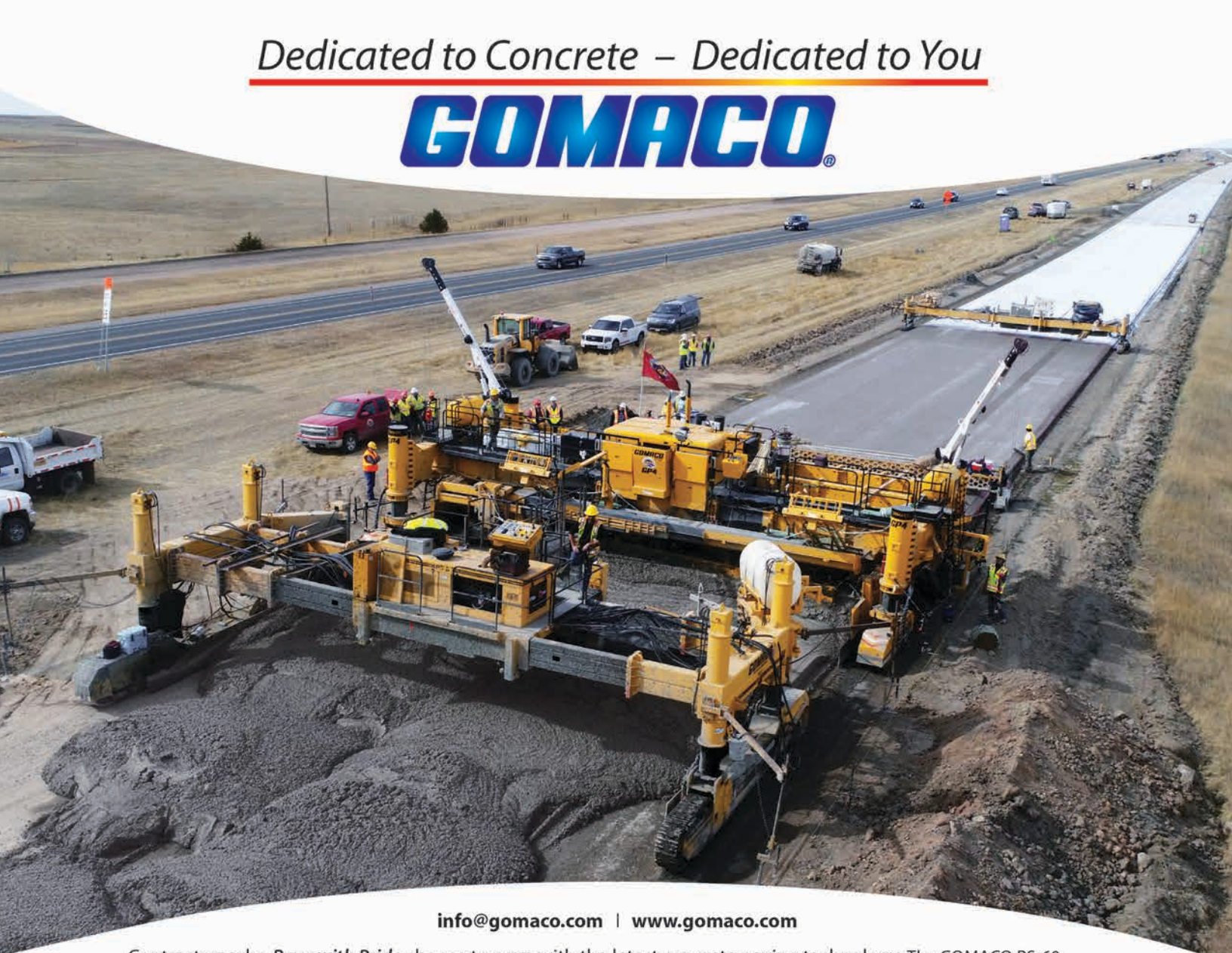
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