

Volume 38, July 2013

**Arkansas
Professional**

ENGINEER

Official Magazine of the American Council of Engineering Companies of Arkansas & the Arkansas Society of Professional Engineers



House Engineer

Bruce Westerman has two titles: P.E. and Majority Leader of the Arkansas House of Representatives. It's been a busy year for the engineer/legislator who is this year's ASPE Engineer of the Year.

Also inside: Full coverage of the ASPE Annual Conference and a wrap-up of this year's legislative session.

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24 *Bruce Westerman, P.E., ASPE Engineer of the Year, has been a busy man. For the first four months of this year, he spent almost all of his time at the State Capitol serving as majority leader of the House of Representatives. He helped craft legislation that affects all Arkansans. By the way, he's a pretty good engineer, too.*

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Brent Massey

Letter from the ACEC/A President

2033: An engineering odyssey

What will the engineering industry look like 20 years from now? You can bet technology will be faster, smaller, and even more accessible than today. No more Wi-Fi “hotspots” – everyone everywhere will have accessibility to the information superhighway, which will probably no longer be called the “World Wide Web,” but more likely a term describing a superconductor of information. Portable computing devices will be able to fit in your wallet and project an image in high definition on any surface. Automation will all but eliminate the “drafting” component of engineering, and only a few of the old-timers will actually remember the term “blueprints.”

America’s love of the automobile will keep cars on the road. Congested intersections and highway on-ramps could have automated queuing using the computer chip in your car. It’s likely that we will “fill” our natural gas or electric cars in the privacy of our own garage. We might sever our dependency on foreign oil by then – but I’m guessing you’ll still be able to fill up your ’69 Camaro with a shot of old-fashioned gasoline.

The day is coming when water will contend with energy for the top spot on America’s priority list. Rainwater harvesting, recycling and gray water usage will be as ordinary as the tap itself. (My grandkids will marvel in disbelief as I tell them how a glass of water used to be free with your meal.)

So, what will the heart of the engineering industry look like 20 years from now? It will be what we make it ... it’s up to us! The country faces many challenges right now, and 20 years from now there will be as many, if not more, to conquer. Engineers are problem solvers, so we will be

in demand. But we cannot sit on the sidelines and wait for society and policymakers to call on us like a baseball manager calling on a relief pitcher when the bases are loaded in the ninth inning. We must be involved in the whole game and do our part to keep those bases from getting loaded in the first place.

Just as Benjamin Franklin claimed the only certainties are death and taxes, we can expect considerable political gridlock associated with any such taxes. So 20 years from now, ACEC will continue to fight for the engineering industry and for infrastructure. The ACEC PAC will likely be a \$2 million organization with significant influence, if we do things right. Your ACEC membership dollars have an impact in Little Rock and in Washington, D.C., and your PAC contributions are actively shaping legislation for this generation and the generation to come. Be involved. Contribute.

As we look back on this year, I am grateful to a team that has taken its involvement seriously and helped move our organization forward. ACEC/A board members have been very active and committed to their responsibilities. The Government Affairs Committee was incredibly busy and incredibly responsive to the multiple issues raised during the state legislative session, and the ACEC/AHTD liaison committee has actively engaged the Highway Department throughout the year. Special thanks go to our executive director, Angie Cooper, who keeps the ACEC/A engine primed and firing on all cylinders.

My “thanks” to the entire team! I am hopeful that this year’s commitment and dedication can be replicated for the next 20 years!

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Paul Strickland

Letter from the ASPE President Engineers must recruit profession's next generation

There's an episode of "The Andy Griffith Show" where Aunt Bee goes on a trip, and Andy and Opie have to make sure the house is a mess when she returns. Otherwise, she wouldn't feel needed.

Engineers don't have to feel that way. We're always needed – often to clean up somebody else's mess. And in the coming years, we'll be needed even more. The American Society of Civil Engineers has estimated that the country needs to spend \$3.6 trillion on public infrastructure by 2020. Although elected officials will try to put off making those investments, significant work must be done. Meanwhile, private construction projects also will pick up steam as the economy recovers, and public and private entities alike will retrofit buildings to be more energy efficient, greener and more employee friendly. All of this will have to be done as cost-efficiently as possible. And once 2020 arrives, the needs will continue. The country will have to finish what didn't get accomplished by then, plus address new infrastructure challenges.

Sounds hard. Who's going to solve these problems? Engineers, of course. All of these needs must be met by generations of competent, dedicated professionals. And that's where you and I come in.

It's up to current engineers to make sure that engineering attracts its share of today's best and brightest students. We must be not just engineers but salesmen for the profession. And we do that by being mentors for young people just as others have been mentors for us.

A good start is the FIRST program. If you were at the ASPE's Annual Conference, you saw this program in action. Through FIRST, young people design and create robots that compete in a series of challenges. It describes itself as a "sport" where everyone has a chance to become a pro, but to make it work, teams need pro-

fessional engineers to help them overcome early roadblocks and learn to solve problems logically. Wouldn't it be fun to help kids build a robot?

How else can today's engineers recruit tomorrow's? Engineering firms can provide high school students opportunities to shadow them for a day to see what we do for a living. If you think engineers aren't cool enough to do this, what's cooler than building America's infrastructure? Firms also can provide college students internships during summer breaks so they can see what our profession is all about. The ASPE's Northwest and Central chapters provide scholarships to future engineers. Let's build on that. The University of Arkansas has an active ASPE student chapter, while there is talk of creating one at the University of Arkansas at Little Rock. They'll need speakers, mentors and role models.

A little encouragement can go a long way with those future engineers. We're going to need them. It's a messy world, and there's lots to fix and build.

Who will do that? Today's engineers, and tomorrow's.

...

This is my last column as ASPE's 2012-13 ASPE president. It's often joked that I now have the most coveted position in any organization: past president. But the truth is, I have enjoyed serving you this past year. To me, this has been the best office anyone can have. My board of directors has been wonderful, my employer has been supportive, and our executive director, Angie Cooper, does the job of 10 people. My president-elect, Lane Crider, is ready to lead this organization.

So thank you all for your hard work and support. I look forward to serving as past president and staying active in the ASPE.

In the News



Engineering associations move into new home

ACEC/A and ASPE have a new home: Three Financial Centre at 900 Shackleford, Suite 300. The phone number also has changed to 501.978.1157.

Angie W. Cooper, executive director of both associations, said the new location is a recognizable Little Rock landmark just off I-430. It has ample parking that, unlike the old location, doesn't require a valet service. It comes with a full-time receptionist shared by offices on the floor, which will improve visitors' first impressions. It offers four conference rooms instead of two as well as web conferencing, which wasn't available at the old location. It has a much larger and nicer break room. Plus, the rent is cheaper.

"We're saving money, and we get more amenities," she said.

Geographically, the new location is farther from the Capitol, but Cooper said travel time is about the same because the parking lot is easily accessible and the route doesn't involve a lot of downtown Little Rock stoplights.

Officers elected for 2013-14

The ACEC/A and ASPE have elected new slates of officers for 2013-14.

For the ACEC/A, the new **president** is Bert Parker, P.E., of Garver. Other officers are: **vice-president** – Brad Hammond, P.E., McGoodwin, Williams, and Yates; **secretary** – Dee Brown, P.E., Brown Engineers; **treasurer** – Andy Dibble, P.E., Mickle, Wagner, Coleman.; **state director** – Mike Burns, P.E., Crafton Tull; **state director** – Byron Hicks, P.E., McClelland Consulting Engineers; **national director** – Dan Williams, P.E., Garver; and **immediate past president** – Brent Massey, P.E., CEI Engineering Associates.

For the ASPE, the new **president** is Lane Crider, P.E., McGoodwin, Williams, and Yates. Other officers are: **president-elect** – Rob Bullen, P.E., Mid-South Engineering Company; **secretary-treasurer** – Brad Peterson, P.E., CFM, LEED AP, Crafton Tull; **state director** – Alan Pugh, P.E., CFM, City of Springdale; **national director** – Brian Moore, P.E., ESI; **Central Chapter state director** – Clint Bell, P.E., CWB Engineers; **Northwest**

Chapter state director – Michael Weir, P.E., ESI; **Hot Springs Chapter state director** – Paul Speers, P.E., Entergy Arkansas; and **past president** – J. Paul Strickland, P.E., Garver.

McClelland's Beranek named to magazine's '40 under 40'



Dan Beranek, P.E., president of McClelland Consulting Engineers' Little Rock office, recently was honored by Arkansas Business in its "40 Under 40" list.

The magazine each year spotlights 40 leaders under age 40 in business and politics.

According to the magazine, Beranek became president of McClelland's Little Rock office in 2008 after working on the Clinton Presidential Library, Heifer International's headquarters, the First Security Center in the River Market, and Dickey-Stephens Park. He earlier served four years of active duty with the Army as a platoon leader and executive officer. In that capacity, he helped manage infrastructure and defense projects in Louisiana and Bosnia.

Beranek also is a civil engineer representative on the Little Rock Main Street Revitalization Committee and helped found the 1836 Club, which encourages young professionals to be involved in the Old State House Museum.



MCE'S TIM BROCKWAY, right, is pictured with, from left, Daniel Phillips and Sherman Smith with Pulaski County, Pulaski County Judge Buddy Villines, and Sharon Priest with the Downtown Little Rock Partnership/MacArthur Park Group.

McClelland wins award for streets at MacArthur Park

McClelland Consulting Engineers (MCE) and Pulaski County were awarded the American Public Works Association – Arkansas Chapter's "Large Project of the Year" award for 2013 for street improvements at MacArthur Park.

Two streets, the new Pulaski County Lane and the reconstructed McMath Avenue, extend the park experience to the east by creating a shared street plaza. Traffic calming elements increase pedestrian safety. The designs also incorporate low-impact techniques such as pervious pavement and rain gardens. All of the lighting is LED. The streets create additional parking for a new dog park and fishing pond and for the neighboring UALR William H. Bowen School of Law.

Weir named Distinguished Alumnus at UA

Larry Weir, P.E., who co-founded Hawkins-Weir in 1981, received the University of Arkansas College of Engineering's Distinguished Alumni Award at its annual banquet April 13. The award recognizes accomplished graduates who have made important contributions to their professions and communities.

"Our alumni are one of our college's biggest strengths, and their accomplishments speak directly to the quality of our academic program," said Terry Martin, interim dean, in a press release. "We are proud of all our alumni, but this group is a sample of our very best."

Weir earned a bachelor's degree in civil engineering in 1967 and a master's degree in 1971. After working at the Arkansas Department of Health and with Rogers and Associates in Fort Smith, he co-founded Hawkins-Weir Engineers in 1981. The firm has completed projects in multiple states and has done significant work in Arkansas. Weir also serves as an adjunct professor teaching students about construction management in the UA's civil engineering department.

Weir has received numerous industry honors, including the ACEC's Distinguished Service Award and the ASPE's Engineer of the Year and Mentor of the Year awards. He also received the Water



Environment Federation's Arthur Sidney Bedell Award and was inducted into the Arkansas Water Works and Wastewater Environment Association's Glen T. Kellogg Water and Wastewater Hall of Fame.

Garver wins Grand Conceptor Award in Alabama

Garver's Water Design Center recently was awarded the Grand Conceptor award from ACEC-Alabama for its design of the Tuscumbia Water Treatment Plant, the state's first dual series membrane plant.

Precursors of disinfection byproducts, pollutants and pathogens are removed through a dual process: an ultrafiltration system, where water passes through a membrane at low pressure; and a nanofiltration system, where water is forced through a membrane at high pressure to remove dissolved species.

Garver has been working with University of Arkansas chemical engineering researcher Ranil Wickramasinghe, who is developing membranes less likely to become clogged or contaminated. According to a release from the UA College of Engineering, membranes are low cost and modular, which means they easily can be scaled up, but they are also vulnerable to contaminant species depositing on their surfaces.

Wickramasinghe is addressing that problem by introducing mixing on the surface of the membrane to keep the particles moving so they don't settle and block the membrane's pores. He also is working on applying chemicals to the membrane's surface to repel the species. Ultimately, better membranes could convert wastewater into drinking water.

Fortenberry elected to Hall of Fame

Alan Fortenberry, chief executive officer of the Beaver Water District serving Northwest Arkansas, was inducted into the Glen T. Kellogg Water & Wastewater Hall of Fame at the annual Arkansas Water Works & Water Environment Association (AWW&WEA) awards dinner in Hot Springs April 30.

Fortenberry has more than 40 years of experience in this industry. After graduating from the University of Arkansas with a bachelor of science degree in agricultural engineering, he went to



work for what is now referred to as the Arkansas Natural Resources Commission. He stayed there for the next eight years and helped develop the State Water Plan. He spent the next 10 years working for the private consulting firm McGoodwin, Williams, and Yates in Fayetteville.

In 1991, he began his career at the Beaver Water District as the facilities plant engineer, where he oversaw major expansion projects. He became CEO in 2001.

Fortenberry has a long history of service involvement. He was the AWW&WEA chairman in 2002. He was appointed and then reappointed, through the end of 2013, to the Arkansas Board of Health by Gov. Mike Beebe and served

Continued on next page

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as the board president in 2010. He has served on the Northwest Arkansas Council, the Northwest Arkansas Planning Commission, and the board of Ozarks Water Watch.

He was named manager of the year by the Arkansas Water and Wastewater Managers Association in 2006. In 2007, he was presented the AWWA George Warren Fuller Award, a national award established in 1937 that recognizes AWWA members for distinguished service to the water industry. In 2010, the AWWA's Southwest Section awarded Fortenberry the Glen T. Kellogg Leadership Award.

Crawford named to House freight transport panel

Rep. Rick Crawford, R-Arkansas, has been appointed to the House Transportation and Infrastructure Committee's Panel on 21st Century Freight Transportation. The



panel's purpose is to study the current state of freight transportation and how improving it could strengthen the U.S. economy.

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August 2

ACEC/A Board Planning Retreat
North Little Rock
Garver Headquarters

September 2

Labor Day
Executive Offices Closed

September 13

Application Deadline for
Emerging Leaders

September 26

ACEC/A Board Meeting,
Northwest Arkansas
To Be Determined

October 17

ACEC/A Board Meeting
To Be Determined

October 27-30

ACEC Fall Conference
Scottsdale, Ariz.
Fairmont Scottsdale Princess

Crawford, who represents eastern Arkansas' Fourth District, is one of 11 members of the panel, including six Republicans and five Democrats. He is a member of the House Transportation and Infrastructure Committee.

In June, some members of the panel traveled to the Memphis area, including West Memphis. They toured the Port of Memphis and FedEx and met with representatives of the South's freight transportation industry.

Burkhalter, P.E., in lieutenant governor's race

John Burkhalter, P.E., a businessman, entrepreneur and member of the Arkansas Highway Commission, is running to become the state's next lieutenant governor.

Burkhalter announced he was running for the seat as a Democrat during a



Burkhalter

conference call June 11, saying he would focus on current and potential industries and companies. He said he could not get a loan when he started his first business and now wants

to help other business owners get credit. Former Rep. Mike Ross, a candidate for governor, has said that, if both are elected, Burkhalter would chair a newly created Governor's Cabinet for Economic Development.

"As I travel the state, the most important thing I hear in Arkansans, over and over again, is finding a job and keeping the job that they have," Burkhalter said in his announcement. "As a small business owner, I know how tough it is out there. I know what people are up against day in and day out, and I'm worried about the same issues that they are."

The state's current lieutenant governor, Mark Darr, a Republican, has not announced whether he will run for re-election. Burkhalter faces Little Rock School Board President Dianne Curry in

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Snyder Environmental & Construction

the Democratic primary. David Dinwiddie has announced that he is running as a Libertarian.

In the governor's race, Ross faces former Lt. Gov. Bill Halter in the Democratic primary. Republican candidates include former U.S. Rep. Asa Hutchinson, businessman Curtis Coleman, and state Rep. Debra Hobbs of Rogers.

If elected, Burkhalter, who received his degree in civil engineering from the University of Arkansas in 1980, would be the second professional engineer holding a statewide office, joining Secretary of State Mark Martin, a Republican. In his announcement, Burkhalter said that his experience as an engineer would help him be a better lieutenant governor.

"I can make tough decisions," he said. "And I think being an engineer, we learn in college that what we do in life influences others, and you need to be right. You need to have good judgement, and I think that being an engineer prepares me to hopefully help others with my judgement."

Burkhalter is one of the state's five highway commissioners and was a member of the Arkansas Economic Development Commission.

UA says online courses will increase engineering grads

The University of Arkansas College of Engineering, the J. William Fulbright College of Arts and Sciences, and the UA's Global Campus will offer online classes to students at two-year schools starting in 2014 to prepare them for math and science-based courses at the university.

Four online courses in engineering, calculus and physics will be offered to students at two-year colleges at the same level of academic rigor as will be needed to complete a bachelor's degree at the UA. The goal is to increase the number of graduates with associate's and bachelor's degrees in so-called STEM fields – science, technology, engineering and mathematics.

While the university has submitted a grant proposal to the National Science Foundation for funding, it plans to continue the program regardless of whether or not the grant is approved.

The program is being led by Bryan Hill, assistant dean of student recruitment, honors and international programs at the College of Engineering.

The Global Campus supports the development and delivery of online and distance education programs and courses.

NSPE marketing campaign to help states recruit

The National Society of Professional Engineers is beginning a marketing campaign to help state associations add membership.

According to Kim Granados, NSPE membership director, the national association is emphasizing marketing to state societies for the first time in memory. The NSPE will be using lists from licensing boards to create direct mail pieces, and it will be looking at its database to see who has purchased material but is not a member. Those engineers will be sent targeted email

messages and reminded that the savings from joining can be significant. For example, the cost for the full set of engineers joint contract documents for nonmembers is \$3,400; members get a 50 percent discount.

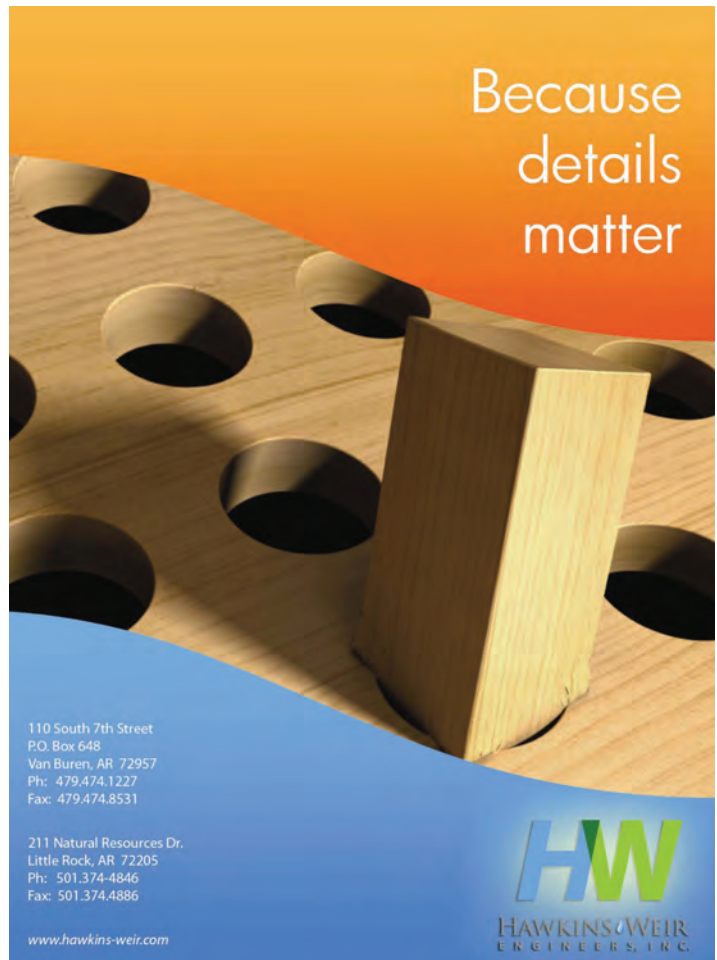
In addition to the direct mail campaign, the NSPE has set aside \$20,000 for states asking for help reaching new members.

"I would say we're definitely increasing anything we've spent in past years by 50 percent in membership marketing," she said.

The efforts are part of an attempt by NSPE to stop an ongoing membership decline. According to Granados, the society lost four percent of its membership this past year – part of a trend that is affecting other professional organizations.

"I've worked for associations for 20 years, and all of my colleagues, they're feeling it," she said. "Some of it is the economy. Some of it is the change in generations and what people have time (for) and want to belong to."

The NSPE hopes not only to reverse the trend but also to show a two percent gain. The leadership has been studying the book "Race for Relevance" by Harrison Coerver and Mary Byers about how an organization can thrive. The NSPE is changing to meet the changing needs of society, and it's relying on younger members to help it target that generation. According to Granados, research has shown that young engineers are not swayed by descriptions of ASPE's advocacy efforts. Instead, they are more likely to join because of the organization's opportunities for networking, mentoring and volunteering. One good sign: Student membership has tripled nationwide over the last two years thanks to an effort by NSPE to attract that age group.



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ACEC/A Member Spotlight

Miller-Newell celebrates 50 years

Newport-based firm was started by architectural engineers in 1963

Miller-Newell may have reached its 50th birthday, but it has never strayed far from its roots.

The company was started by architectural engineers Albert Miller and Robert Newell in 1963. Miller had come to the firm after designing granaries for grain companies. At first it focused on agricultural engineering but soon expanded into other types of design work.

It has remained in Newport all these years, but it's found a niche working for small towns across Arkansas.

"We're really versatile," said Wayne Menley, P.E., one of two engineers now working at the 12-employee firm. "We do all types of civil designs – drainage, transportation, water/sewer, and I also do mechanical, electrical and plumbing designs for buildings."

The firm works for a variety of clients. Its other engineer, Robert Chatman, designed a new terminal building and enlarged the runway and taxiways for the Searcy airport – one of several airports in Arkansas that are regular clients. Menley designed a pressure sewer collection system and treatment facility for Highland. The firm also recently finished a treatment plant upgrade and line extensions for the Independence-Jackson Regional Water system.

Menley and Chatman both graduated from Arkansas State University with degrees in agricultural engineering. The company also employs two draftsmen. Chatman and one of the draftsmen, Gary Bowen, have each been with the firm more than 40 years.

According to Menley, the firm does a lot of work in eastern Arkansas but also serves other clients, mostly in smaller communities. For example, it replaced a bridge in Conway County and is working on a water treatment plant in Newport. Being based in a small town means the company has to be aggressive in search-



REALLY VERSATILE. Some of Miller-Newell's recent projects include a pressure sewer collection system and treatment facility at Highland, top two pictures, and an enlargement of the runway and taxiways at the Searcy airport, left.

ing for business. However, there are certain advantages, such as low overhead.

"We do just about any type of engineering," Menley said. "If we don't do it, we've got consultants that we use, and we

sub it out to them. In Newport, you have to be versatile. You can't be picky."

For more information, contact Miller-Newell at miewengr@aol.com or 870.523.6531.

Cotton: Infrastructure a state concern

Editor's note: This is the fourth in a series of articles by members of Arkansas' congressional delegation for Arkansas Professional Engineer.

Government of all levels plays an important role in infrastructure development and maintenance. Everything from a city council repaving a town's main street to maintaining the MKARNS system of locks on the Arkansas River involves input from elected officials. For various reasons, the federal government's role in infrastructure has grown considerably over the last several decades. Unfortunately, Arkansas' infrastructure is suffering for that reason.

Today's federally funded transportation system is inefficient and wasteful – a relic of the approach to building the Eisenhower interstate system, which was certainly needed 60 years ago as the country was drastically less developed. Politicians in Washington are more focused on personal political gain than the true infrastructure needs of the country. Arkansas is a perfect example: Because the state is largely rural and lacks any dense urban constituencies, it has received only 1.26 percent of federal transportation dollars over the past six decades. While updated locks on the waterways and projects like I-49 are needed here in Arkansas, those projects repeatedly have been pushed aside for things like the light rail project in Charlotte, North Carolina, and Gov. Jerry Brown's "Rail to Nowhere" in California's sparsely populated interior.

Further, with a \$17 trillion national debt, our current reliance on federal funds for transportation projects is unsustainable. Federal trust funds are rapidly being depleted to pay for improvements and new construction while more and more tax revenues are paying for Medicare, Medicaid, and Social Security as the baby boomers retire. Without an infusion of cash from the Treasury's general fund, it is estimated that the Highway Trust Fund will be bankrupt in 2015.

As a solution, President Obama and other Washington liberals have proposed a national "infrastructure bank" to fund projects. But this proposal falls short and fails to account for the exploding costs, delays, and bureaucracy that are now



by Rep. Tom Cotton

endemic to the current federally funded model. The federal government simply cannot keep spending money that it doesn't have, or financial markets may lose faith in our ability to manage our debt, precipitating an even greater economic crisis than we've seen in recent years.

The role of the federal government in infrastructure should be limited, and I believe the best way to confront our infrastructure challenges is to return control to the states. States should have the ability to enter into bilateral and regional agreements to identify and prioritize infrastructure needs; to determine the most effective way to pay for the improvements; and to execute those projects in a timely, cost-effective manner. Arkansans should not have to rely on Washington bureaucrats to provide them with a new

“The role of the federal government in infrastructure should be limited, and I believe the best way to confront our infrastructure challenges is to return control to the states.”

road, or for the Army Corps of Engineers to dredge the Arkansas or Ouachita Rivers. Instead, they should have the freedom to address infrastructure needs as they see fit.

The numbers support this approach. It is estimated that states spend nearly 30 percent of all federal transportation dollars dealing with onerous federal regulations, including inflated Davis-Bacon wages for union bosses and National Environmental Policy Act regulations. Freeing states from these burdens means they can build 30 percent more roads and dredge 30 percent more rivers with the same level of funding. Finally, returning the power to the states allows Arkansans to know their tax dollars are being spent in their state – not halfway across the country.

Arkansas' public infrastructure certainly needs upgrades, but it's clear the current system isn't working. Changes to the 1950s-era system must be made because our crumbling infrastructure and ever-growing national debt demand it. I look forward to working with my colleagues and advocating for empowering the states while improving our infrastructure system for the benefit of commerce and Arkansans' long-term prosperity.



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RANDY THURMAN, a lobbyist with Government Solutions who works with ACEC/A and ASPE on engineering issues, discusses the legislative session with attendees of the ASPE Annual Conference in April.



Win some, lose some

No big wins, no big losses for engineers at this year's General Assembly

By **Steve Brawner**
Editor

State legislators this year didn't pass major bills that would have helped the engineering profession, but they didn't pass bills that would hurt it, either. In other words, it wasn't the best legislative session, but it could have been worse.

The top priority of the ACEC/A and the ASPE was legislation requiring plaintiffs suing design professionals to obtain a certificate of merit from a third party professional certifying that the plaintiff has a case. Rep. Andy Davis, R-Little Rock, a professional engineer and owner of New Water Systems, introduced House Bill 2231 to accomplish that.

A number of states, including Arizona, Texas and California, have enacted some type of certificate of merit statute.

But Davis' bill faced an uphill climb because of Arkansas constitutional issues, according to Randy Thurman of Government Solutions, the engineering associations' lobbyist. At this year's ASPE Annual Conference in April, Thurman said a similar bill passed during a previous legislative session had required medical plaintiffs to obtain certification from a doctor or a doctor's panel, but it had been struck down by the Arkansas Supreme Court. The court said it represented an unconstitutional intrusion by the legislative branch into the court system. "Frankly, 2231 is unconstitutional until tort reform happens," Thurman said.

Davis said in an interview that he had tried to shop the bill around the House Judiciary Committee, which was composed of 14 attorneys, but he kept running into that constitutional concern and finally decided not to run it.

The remedy for that is a constitutional amendment, but neither of two compet-

ing tort reform proposals could gain the support of enough legislators. Sen. Eddie Joe Williams, R-Cabot, introduced a proposal backed by business groups that would have given the General Assembly the power to regulate compensatory and punitive damages. Meanwhile, Sen. Jeremy Hutchinson, R-Benton, an attorney, submitted a proposal that would have limited punitive damages to nine times compensatory damages while requiring those found to have filed a frivolous lawsuit to pay \$10,000 in court costs to defendants.

In response to the failure of Williams' proposal, the Arkansas State Chamber of Commerce is considering a tort reform initiative for the 2014 ballot. According to Jeff Thatcher, director of communications, the Chamber's efforts will not include a certificate of merit provision.

The session was eventful and historic. This was the first General Assembly since shortly after the Civil War where both

chambers were controlled by Republicans. The GOP controlled the House, 51-48-1, and the Senate, 21-14. Legislators passed a \$4.9 billion budget, enacted tax cuts that will be worth \$140 million by the 2016 fiscal year, approved incentives for a new steel mill near Osceola, and enacted the so-called private option that could provide health insurance subsidized by the federal government for up to 250,000 Americans.

A bill that would have distributed new and used car sales tax revenues to highways stalled in the House Transportation Committee despite having 67 co-sponsors in the House and 23 co-sponsors in the Senate. House Bill 1418 by Rep. Jonathan Barnett, R-Siloam Springs, would have sent 70 percent of those revenues to the state Highway Department with the rest split between cities and counties to use as they saw fit. Traditionally, highways have been funded through fuel taxes, though voters in 2012 approved a half-cent general sales tax to support a \$1.8 billion highway program.

The bill failed in committee under opposition from Gov. Mike Beebe and interests representing higher education, public education, and human services. Those opponents feared it would result in a cut of their own general revenue dollars.

Legislative successes

All of the news wasn't bad for engineers. The state's engineer associations helped stop House Bill 1778 by Rep. David Kizzia, D-Malvern, that would have required engineers to be on site during the construction of a trench to ensure workers were complying with safety laws. That bill was sent to interim study after ASPE -ACEC/A's executive director, Angie Cooper, and incoming ACEC/A president Bert Parker, P.E., met with Kizzia several times.

Elsewhere, ASPE and ACEC/A successfully opposed bills that would have required a preference for U.S. steel and other materials in the construction of public buildings. Such requirements would have increased the cost of construction, resulting in less of it. Another bill would have required a legislative review of large local government contracts, but it died in the House. Engineers opposed it for fear that



REP. ANDY DAVIS, R-Little Rock, a professional engineer and first-term legislator, tried without success to pass certificate of merit legislation. The legislation would have required plaintiffs suing design professionals to find a third party professional to certify that the suit has merit. A similar law for medical providers had been declared unconstitutional by the Arkansas Supreme Court.

it would have endangered qualifications-based selection practices.

Davis did pass Act 954, which requires the Arkansas Department of Environmental Quality to remove the drinking water designation for bodies of water that don't in fact provide drinking water. Davis said that under the federal Clean Water Act, states were required to designate a use for every body of water, but Arkansas never made any distinctions and simply considered everything to be drinking water. The result was that streams and ponds

were placed on an "impaired list" because they contained dissolved minerals, which occur naturally and are very difficult to remove. Industries and municipalities that wanted to discharge into those waters were forced to undergo costly and lengthy "use attainability" studies to determine if their discharges contained the minerals.

According to Davis, none of those studies resulted in an industry or municipality having to take action, but they still had to spend the money for the study itself. Davis said that was an impediment to industry, a burden on the taxpayers, and a waste of ADEQ's resources. The law won't affect water that comes out of anyone's tap and pertains only to dissolved minerals.

"Nothing's wrong with the water," he said. "It's just that we had an arbitrarily low standard set. There's not a state surrounding us that has that same standard. In fact, most states around us don't have a dissolved mineral standard at all."

Act 589, by Rep. Mark Perry, D-Jacksonville, clarifies that the State Board of Licensure for Professional Engineers and Professional Surveyors can establish the fees it deems necessary. It was passed in response to a 2011 law that required agencies to have specific authority to set fees and did not include the term "examination fees."

Steve Haralson, P.E., executive director of that board, praised Thurman along with Government Solutions for their work during a discussion at the ASPE Annual Conference. "He's about as low-key a person as you will ever see, but he's always in the right spot," he said. "And if somebody needs to know something about something, they know about it."



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From the Governor

Virtual technology with real potential

By **Governor Mike Beebe**
Guest Writer

Arkansas has an impressive new tool to use in its quest to improve education and boost economic development. Recently, the University of Arkansas at Little Rock unveiled a new data-imaging system that is the first of its kind in the world. The state-of-the-art George W. Donaghey Emerging Analytics Center (EAC) has a wide range of applications and capabilities, including 3-D visualization. With a flood of new data being generated every second, the EAC has data-based solutions for every endeavor.

Using high-definition screens and monitors, the EAC can simulate real objects by converting large amounts of data into a visual format. This technology not only allows users to direct these virtual objects with a hand-held device, but it also simulates the weight and feel of the object being viewed. It's like a flight simulator for everything you can imagine.

From medicine to manufacturing, there are endless applications. In medical education, for example, this technology will allow a resident in neurosurgery to practice drilling a hole in a virtual head before performing brain surgery on a real patient. Graduates in many disciplines will be better prepared and more adept, and students will be drawn to this experiential learning procedure.

Businesses will be able to use the technology as well, and some already have. Dassault Falcon Jet, which recently announced the addition of a new hangar in Little Rock, used the EAC to help design that hangar. The local availability of this unique advanced technology can save Arkansas businesses time and money. And because it is the first of its kind in the world, the EAC also provides a competitive edge to businesses that locate here.

For that reason, we expect the EAC will attract new businesses to Arkansas. The Arkansas Economic Development Commission plans to capitalize on it to add jobs in knowledge-based fields.

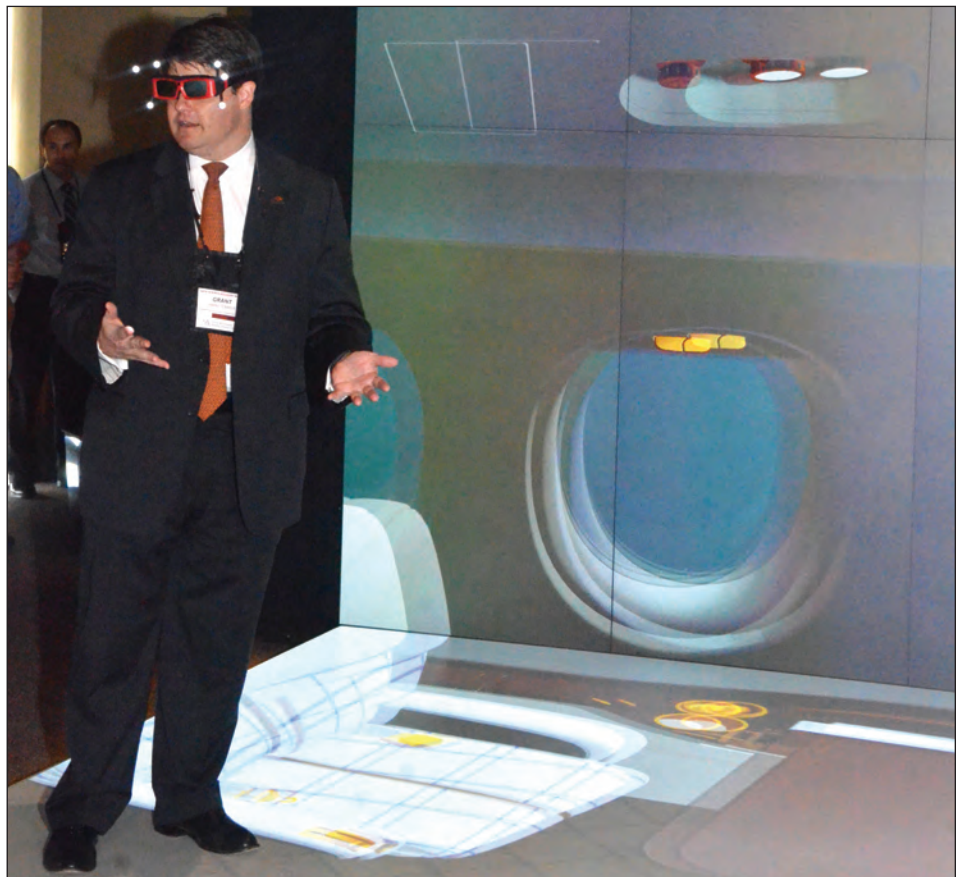
The center was made possible by the George W. Donaghey Foundation, which



gave UALR a grant of \$5 million to fund a project that would be a “game-changer.” This came after UALR already had more than a decade of expertise. In 2001, the university began operating a 3-D Virtual

Reality Center, and it later established the first information quality program in the United States. With this new EAC technology, UALR and Arkansas have made an even greater name for themselves in the field.

For years, I have linked the importance of education and economic development to Arkansas’ future. The new Emerging Analytics Center at UALR also links those fields in a powerful new way. Arkansas is the only place in the world with this technology, and its impact should be significant. This facility will allow leaders in the private and public sectors to organize, analyze and interpret all kinds of data. The results the EAC generates will in turn help to generate more jobs and prepare more skilled professionals in Arkansas. The innovations it helps bring to life can improve lives today and help future generations to come.



3-D, BUT NOT A MOVIE. Grant Tennille, executive director of the Arkansas Economic Development Commission, demonstrates how the EAC would be used to design the interior of a Dassault Falcon luxury jet at the EAC’s unveiling June 3.

Best marketing plan: involved engineers

As your executive director, I have many opportunities to see how ACEC/A and ASPE directly impact the professional goals of our members and how together we advance the engineering profession.

We offer professional development opportunities, price discounts on needed services, advocacy efforts on behalf of the industry, and information that gives our members an advantage over others in the profession. That's true for industry veterans as well as the next generation of professionals. Not every Arkansas engineer is involved with ACEC/A or ASPE, but every Arkansas engineer should be.

I could list all the programs we offer, but programs are only part of the story, and truly not the most important part. What matters most are the individual engineers who make these organizations special. We can organize great seminars and invite interesting speakers, but without personal involvement on the part of our engineers, it wouldn't amount to much. Basically, we would have a series of meetings where one person was talking behind a podium while audience members checked their emails until they had sat there long enough to get their professional development hours credit.

During the next year, we'll be working with the National Society of Professional Engineers to increase our membership. I'm excited about the variety of marketing efforts our parent organization is undertaking.

But our best marketing plan is the involvement of our member engineers. The way you conduct yourselves and the enthusiasm you have for our organizations are our real selling points.

So how can engineers get more involved?

In the next month, we'll be hosting a planning retreat with ACEC/A's leadership to consider our goals and priorities for the next year. Meanwhile, ASPE's president, Lane Crider, P.E., and I will be meeting with the local ASPE chapter officers to talk about where that organization needs to go as well.

The results of those meetings will lead to plenty of volunteer opportunities this year. Engineers are needed for commit-



Angie W. Cooper
Executive Director

tees, to organize fundraising activities, or to serve with the FIRST program, which introduces young people to engineering principles through robotics-based competitions.

Will this take some time? Yes. Any investment does. Will it bear fruit? More than we can gather. Involvement leads to growth – both for our industry and for our individual engineers. You will get more out of your involvement than you put into it. You'll learn about the engi-

neering profession, make professional contacts, and be a powerful influence on the next generation of engineers who will keep our industry strong.

Programs are important. People are what really matter. And we have great people in the ACEC/A and the ASPE.

...

For our organizations, it's been a busy past few weeks. On July 1, we moved our offices to Three Financial Centre, 900 Shackleford, Suite 300. This is a much nicer building that is easy to find just off Interstate 430. It offers ample parking that, unlike our old location, doesn't require a valet or coins for a parking meter. We also have a receptionist for our floor, which enhances our organizations' credibility and gives us the equivalent of a part-time employee. Unlike our old location, web conferencing is available. Even with all those advantages, the rent is cheaper.

In addition to our new address, we have a new phone number: 501.978.1157. Don't hesitate to call!



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FUTURE ENGINEERS?

Members of Break-away, a FIRST Robotics Challenge student team from Harding Academy in Searcy, demonstrate a robot they constructed for the competition. FIRST is an academic competition for students of all ages where engineers often serve as mentors. Teacher Brian Jones describes the action from the podium.



Engineers converge for conference

Westerman named ASPE Engineer of the year at society's annual meeting

By **Steve Brawner**
Editor

Bruce Westerman, P.E., of Mid-South Engineering, the House majority leader during this year's state legislative session, was named Engineer of the Year at the ASPE Annual State Conference April 18-19 at the Peabody Hotel in Little Rock.

Westerman took a break from his duties at the Capitol to accept the award during the conference's concluding luncheon.

"I'm ready to get back and be an engineer and get out of politics for a while. I said from the well of the House one day that I was trained to think with reason and logic, and this may not be the best

place for me," he said to laughter from the audience. "But an engineering background is good for anything, and even it's beneficial in politics sometimes."

Claire McKinney, a traffic engineer with Garver, was named Young Engineer of the Year. The conference also recognized this year's newest PE licensees as well as the graduates of this year's ASPE Emerging Leaders program.

The ASPE's incoming president, Lane Crider, P.E., of McGoodwin, Williams, and Yates challenged engineers to make a difference outside of their own professional responsibilities.

"It's easy for us to be comfortable in our own abilities as engineers, and it's comfortable for us to kind of pigeonhole ourselves into our abilities and not get out there and stretch our own limits, not only of education but of civic service and interaction with other groups," he said.

"And so I challenge us this year as an organization to that very thing, to get out of our comfort zone ... as individuals but especially as a group."

Raul Pena III, P.E., National Society of Professional Engineers southwest director, told attendees that the NSPE's overall numbers declined by five percent



PENA

in one year, from 36,337 members to 34,297. That kind of reduction was consistent chapter to chapter and region to region. He said states that successfully



EMERGING LEADERS. Graduates of the ASPE's Emerging Leaders program receive their plaques at the annual conference. The program teaches engineers so-called "right brain" skills such as those involved in communication and creativity. Pictured from left are Chuck Wipf, P.E., Crafton Tull; Adam Roberson, P.E., Garver; Blake Martin, P.E., Garver; Adam Lesso, P.E., CEI; and Max Good, P.E., Brown Engineers.

maintain their memberships focus on the local level by looking at drop lists, phoning former members, and asking local chapters to review progress.

Pena said that, while NSPE financially is strong, it is taking steps to remain more relevant and become more efficient. Starting in January 2014, new members will receive electronic copies of the

organization's magazine, with that policy extending to current members probably in 2015. After a self-evaluation, the organization realized it offered about 300 products and services, probably half of which weren't used by members but that required time and effort to maintain. The organization is also looking at reducing its strategic alliances.

Engineers were treated to a demonstration of a FIRST Robotics Challenge robot built by the Breakaway team from Harding Academy in Searcy. FIRST hosts competitions where student teams of different ages build robots to compete in challenges. In this year's FIRST Robotics Challenge, high school students built a robot that autonomously shot three discs into a 10-foot-high goal and then was operated manually by the students through challenges.

Teacher Brian Jones said the students manufactured much of the robot themselves, wrote code, and performed testing and prototyping. Much of the work was crammed into a six-week period between the time the students received their instructions in January and the time the robot had to be completed. Building the drivetrain alone involved well over 400 hours of research and development. And to make it all happen, engineers are needed to help FIRST teams across the state.

"It has been an amazing thing, and something that FIRST really pushes is the mentoring model," he said. "This isn't where you sit back and watch. This is students working hand in hand with professional engineers like yourself, not math teachers, but professional engineers like yourself, and they work together, and they design and they learn."

Engineers wanting to volunteer for FIRST can contact Meredith Novak at mnovak@usfirst.org or 870.404.3260.

Continued on next page



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SESSION SPEAKERS. Pictured are speakers at this year's Annual State Conference. Top row, from left, Steve Haralson, P.E., Arkansas State Board of Licensure for Professional Engineers, gives an update on his agency's activities. Middle, Tim Brockway, P.E., McClelland Consulting Engineers, discusses green design principles. Larry Weir, P.E., co-founder of Hawkins-Weir Engineers, discusses engineering standards. Bottom row, Rick Geraci, P.E., of Brown Engineers talks about engineering ethics. Clark York, P.E., Contech Engineered Solutions, discusses the advantages of pipe rehabilitation. Outgoing ASPE president Paul Strickland, P.E., Garver, speaks during the awards banquet.

Elsewhere during the conference, Larry Weir, P.E., co-founder of Hawkins-Weir and now an adjunct engineering professor at the University of Arkansas, discussed engineering standards in a seminar entitled "Professional Management Time and Purpose." Weir described a Gallup Poll listing engineers tied with doctors as being the country's third most respected profession behind nurses and then pharmacists.

He emphasized the importance of effective professional practices, including critical path scheduling, which involves breaking a project down to define how much time each task takes so each staff member's responsibility can be described. He said project managers can't use Murphy's Law – that if anything can go wrong, it will – as an excuse because they are supposed to include those possibilities in their plan.

He encouraged engineers to communicate staff members' roles to them because each person's role is important. When Hawkins-Weir was working on a building that had been destroyed by a tornado, it discovered the construction workers in the early 1900s had written their names on the basement foundation, which meant they had taken ownership of the project. "If you learn nothing today, learn to respect your staff," he said.



EMERGING LEADERS. Lane Crider, P.E., incoming ASPE president, leads Annual State Conference attendees in the reciting of the Engineers' Creed.

while all other forms of life have been judged only by their utility to humans, Geraci said. He asked whether engineers should design roads through wilderness areas in a way that reduces the number of road kills.

Steve Haralson, P.E., executive director of the Arkansas State Board of

In a presentation on green building practices, Tim Brockway, P.E., with McClelland Consulting Engineers encouraged engineers to take a greater interest in sustainable design because of the benefits to society and the profession. Green buildings reduce carbon emissions, save on energy costs, result in less employee sick days, and help students learn better in a healthier environment, he said. Governments offer incentives for green building, while clients, including high-tech tenants, are demanding it.

Brockway said focusing on sustainable design would make the profession more innovative, more interesting, and more attractive to young people. Unfortunately, he said, the engineering community has been too slow to embrace the practice.

"We tend to be a very kind of reactive profession in a lot of cases," he said. "We tend to do what's gone before because nobody wants to be blamed for doing something wrong that wasn't tried before. We lose a lot of opportunities that way. ... We're trained to look at problems and see them. We're trained to solve them. I wish we could start focusing a little bit more on the higher problem and how each of our little pieces play into it and not just focus on the problem at hand."

As in the past, Rick Geraci, P.E., with Brown Engineers led a discussion about ethics. This year's topic was the concept of moral standing, or, as he put it, "how an individual is treated apart from the effect it has on others." Traditionally, only human beings have had moral standing,

Licensure for Professional Engineers and Professional Surveyors, said his agency is moving toward digital and away from paper-based processes. Starting in January 2014, the fundamentals exams will be computer-based, while the survey exam will transition that direction in two or three years. The professional exam won't be affected. Computer-based testing will allow licensees to take tests at their convenience rather than waiting for twice-a-year exam days, and results will be available in days rather than weeks. The board also is moving to electronic correspondence for most recipients and is taking most of its applications online. It is paying the \$3.40 online credit card processing fee for renewals in order to encourage members to pay that way.

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TALKING IT OUT. Engineers at the Annual State Conference discuss a case study where a real-life design firm found itself in trouble while dealing with a troublesome client. Opposite page, incoming ASPE president Lane Crider, P.E., with McGoodwin, Williams, and Yates makes a point during a group discussion.

Open lines can prevent legal trouble

XL Group: Nontechnical factors usually contribute to claims

By **Steve Brawner**
Editor

How can a design firm keep itself out of trouble and out of court? Often, it's about communication.

Denise Rust with the XL Group insurance firm said at the Annual State Conference that 30 years of data has shown that while every claim has a technical cause, nontechnical risk drivers contribute to nine out of 10 of them. Forty percent of claims, representing 30 percent of claims dollars paid, have some basis in communication issues – most often, a lack of procedures that would identify

problems, and an improper handling of project issues and potential disputes. Negotiation and contract issues are factors in six percent of XL's claims and represent 13 percent of the claims dollars.

Rust and Jason Campbell, an attorney with Anderson Murphy Hopkins, said insurance companies like to see a limitation of liability clause in contracts as well as a waiver of consequential damages where anything that is not a direct repair cost is not covered. Rust advised parties to seek mediation, which is quick, voluntary, and nonbinding, instead of arbitration, which is the opposite.

The two presented a case study based on a real-life situation that had involved a firm designing a car dealership. A company referred to in the case study as Design Firm was contracted by Realty Company,

a subsidiary of LossCo, to build a 60,000 square-foot building for LossCo. The end user was a company known as Franchise Entity, which meant Design Firm was dealing with three sets of bosses. Furthermore, LossCo wanted what should have been a 14-month project completed in seven months. Because it was an important client, Design Firm attempted to meet that timetable.

The project quickly ran into other problems. Design Firm was told its clients had excellent connections with local public officials who could expedite the process. That wasn't true. Realty Company covered its tracks at the expense of Design Firm, falsified meeting notes, and even actively tried to sabotage the project. At one point, it instructed Design Firm to redesign the HVAC system to meet less

stringent specifications. Franchise Entity demanded additional features. But instead of seeking in-house counsel, Design Firm's architect in charge of the project simply encouraged his staff to take careful notes and then worked even harder to please the client.

Somehow, Design Firm managed to complete the project on time, but Franchise Entity, the end user, wasn't pleased. Unbeknownst to Design Firm, Realty Company replaced the HVAC system and then a year later sent Design Firm a \$1.4 million bill. Realty Company filed suit against Design Firm, denying any knowledge of why it had designed the original HVAC system the way it did.

The courts sided with Design Firm, but the entire process ended up costing it a \$150,000 insurance deductible, \$500,000 in legal fees, and enormous amounts of staff time and energy. Before Design Firm could countersue, LossCo, Realty Company and Franchise Entity had all gone out of business.

Rust and Campbell discussed with the engineers in attendance what went



wrong. Participants talked about the importance of writing good contracts, solving problems before they happen, and dealing with clients that don't follow suggestions. Design Firm had failed to formally evaluate the project's risks, and the architect had made a big mistake in

not getting the company's legal counsel involved early. On the plus side, the firm had written an airtight contract, and the architect had documented the project throughout the process.

The seminar was sponsored by BancorpSouth.



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ASPE Young Engineer of the Year

CLAIRE MCKINNEY, E.I., a traffic engineer at Garver, is this year's ASPE Young Engineer of the Year and Central Chapter Young Engineer of the Year. At 25, she's working on Little Rock's Broadway Bridge replacement. She also has organized Garver's Salvation Army Angel Tree projects as well as a service project for Habitat for Humanity. Opposite page, she receives her plaque at the ASPE Annual Conference from ASPE President Paul Strickland, P.E., center, while Raul Pena III, P.E., NSPE Southwest director, looks on.



Traffic career began at traffic stop

McKinney inspired watching street construction

By **Steve Brawner**
Editor

Most people consider sitting in traffic a waste of time. For Garver's Claire McKinney, E.I., ASPE's Young Engineer of the Year and the Central Chapter Young Engineer of the Year, it changed her life.

McKinney was a junior in high school driving as she did every day through the intersection of Little Rock's Markham Street and Chenal Avenue. The street was being expanded, and the traffic wasn't moving.

"I can just remember sitting in the left turn bay forever," said McKinney, 25. "It would take two, sometimes three cycles to make a left turn to get onto Markham.

And then one day, while I was there they were tearing it up. They're making it really big, adding turn lanes, completely redoing it. So then I thought, well, who decided this? And then I found out, and it was a traffic engineer. So then that was when I decided I wanted to do traffic."

When McKinney told her parents that day what she wanted to do, they were excited about her choice. She had always had an interest in construction and design. In the ninth grade, she had completed a science project about bridges. She'd been talking about architecture when her mom had brought up engineering, which had piqued her interest.

"I liked problem-solving," she said. "I always did puzzles and that sort of stuff. And like I said, I did that science project in ninth grade. It really only occurs to me

now, maybe I was always meant to be an engineer."

After graduating from the all-girls Mount St. Mary Academy, McKinney enrolled at the University of Arkansas to study civil engineering. Hoping to get her foot in the door and spend some time in an engineering environment, she interviewed for a summer internship at Garver after her freshman year. "I don't even think I expressed my interest in traffic when I was meeting with Bert (Parker)," she said. "And then I showed up on my first day, and I was with Nicci Tiner in traffic. So it really worked out, and so I've been here ever since doing traffic."

McKinney joined the firm full-time in January 2011. Among her big projects is creating detour plans and planning permanent signage and pedestrian improve-

ments for the upcoming replacement of the Broadway Bridge. This is a major traffic artery, and her work will affect almost everyone traveling regularly through that part of the state's capital city. No matter how well she does her job, traffic will be disrupted. It's her job to minimize those disruptions.

"I like to think that whatever we do is going to make things better and that people will be pleased with it," she said. "That's what I kind of think traffic does and just civil engineering in general – make things better for the public."

The profession long ago reached the point where being a female engineer is no longer a big deal. However, it's worth noting that in Garver's five-person traffic engineering group, three are females: McKinney, Tiner, P.E., and Annette Porter, E.I. McKinney said the standard joke in the office is that they are "the traffic ladies." She'd like to encourage more young women, maybe from her high school alma mater, to enter the profession.



Despite working at the firm only two years, McKinney already has taken a leadership role. This past Christmas, she initiated and organized Garver's Salvation Army Angel Tree project giving gifts to needy children – a project with which she had been involved through her church in high school and with her sorority in college. She also organized a day for Garver employees to volunteer at a Habitat for Humanity ReStore. She also is sec-

ond vice chair of the ASPE's Central Arkansas Chapter and is chairing the scholarship golf tournament.

Moving forward, she is looking forward to taking her PE exam in 2015 and then later passing the Professional Transportation Operations Engineer exam. Eventually, she would like to be a manager in her office, but, for now, she doesn't see herself doing

anything but traffic.

"It's just something I've always liked," she said, "and I like the people I work with, and so I think that works. Even though, like you said, I'm not building the Broadway Bridge, I didn't work up the design of that, but what I did affected it. That, I think, is cool, always knowing I worked on that project or I did that. That's what's fun about that is actually seeing something done."

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ASPE Engineer of the Year

Engineer in the House

As majority leader, Rep. Bruce Westerman creates policies that affect every Arkansan. He's also a pretty good engineer, too.

By **Steve Brawner**
Editor

While Bruce Westerman, P.E., was accepting the ASPE's Arkansas Engineer of the Year award at the Annual State Conference, he also was checking unread emails on his phone. He had about 1,000 of them.

That's because he's also Rep. Bruce Westerman, R-Hot Springs, majority leader of the Arkansas House of Rep-

resentatives, and he had a small crisis to deal with. One of his fellow legislators had sent a message on Twitter that insulted Bostonians in the wake of the Boston Marathon bombing. It was becoming a national news story, so Westerman was releasing a statement disavowing the legislator's comments.

In the midst of all that, he accepted his award, made a short speech, and then joined with others in reciting the Engineers' Creed.

How did he make it all work? The way a juggler keeps three balls in the air: by catching and throwing one at a time.

"That goes a lot back to football," said the former Arkansas Razorback and all-state high school football player. "Because I remember I had more than one coach say when you get in the game, you don't have time to think. You'd just better react."

When not crafting policies that affect Arkansas, Westerman, 45, is an engineer at Hot Springs-based Mid-South Engineering Company. The firm's primary work involves designing manufacturing facilities that turn trees into something else. Focused on forest products, it was perfectly positioned to transition



to energy when the housing bust struck. For example, the company designs mills where low-value timber is dried and pelletized before being burned with coal in power plants as a carbon offset. It's also designing the Saint-Gobain facility in Saline County that will produce ceramic pellets that are injected into the fissures created by hydraulic fracking in order to keep them open so the gas and oil will flow.

Westerman works in the project planning and development group. He does the conceptual work for facility layouts that determines the cost of production and the potential economic return, which clients use to obtain funding.

"You know he's a good employee when clients call and specifically request that he work on their particular jobs," said Lee Murphy, P.E., president of Mid-South Engineering. "Bruce has always strived hard to overachieve, to go beyond what the client's needs are and to be very thorough and always be very strong from a technical standpoint. Bruce is humble. He doesn't really overstate at all what his capabilities are, but certainly when our clients work with him, they understand he's very thorough in his analysis of what he does for us."

After graduating as valedictorian from Fountain Lake High School, Westerman earned his degree in biological and agricultural engineering at the University of Arkansas, where he also played football under coach Ken Hatfield. Even though

"Engineering and politics are all a lot about communication - listening and understanding and trying to get the facts right, and make sure you're approaching a problem from the right perspective. So I think politics has probably made me a better listener."

he was a walk-on, he made the traveling team the last three years and got on the field quite a bit as a defensive back. Those Razorbacks played in two Cotton Bowls and started the 1988 season 10-0 before losing a close away game to Miami on Thanksgiving Day.

Westerman had worked as an intern for Mid-South, where his father was the head draftsman, as a college student. After graduating, he first went to work for Riceland Foods as the plant engineer, but by 1992 he was asked to come back home to Mid-South. He later earned a master's degree in forestry management from Yale.

Politics from an early age

Politics had gotten into his blood when he was in high school. He and other state presidents of the Future Farmers of America met President Reagan in the old Executive Office Building across from the White House. Being state president also gave him the chance to go to Washington, D.C., and work as an intern in the mailroom for Sen. David Pryor.

In 2006, he was elected to a seat on the Fountain Lake School Board, where he used his engineering skills when the

district passed a millage increase for construction projects. When the first architectural plans came in over budget, he insisted that cheaper alternatives could be found. Eventually, the district used more wood products than were in the original plans and saved millions of dollars.

He was elected to the Legislature in 2010. During his first term, he and other House Republican legislators sensed the party could gain a majority in 2012, so they formed a group to start crafting a message the party could sell to voters. The final product was called the SIMPLE plan: spending restraint; income and other tax reform; Medicaid sustainability; protecting Arkansas' future; legal and other regulatory reforms; and educational excellence. Republicans did gain control of both houses in 2012 – the first time that had happened since shortly after the Civil War. According to Rep. Charlie Collins, R-Fayetteville, "Bruce kept that work together, kept it integrated, and really dove in himself personally in a lot of different areas."

Collins said Westerman thinks like a business owner – by analyzing costs and benefits and trying to incentivize

Continued on next page

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good behavior. He said he also thinks like an engineer. "Bruce (takes) very much a servant-leader type of an approach," he said. "I think he's a big believer in getting the facts on the table and organizing them in a way where people can come to their own independent decisions, and that tends to be the way that he leads."

Before the session, Westerman was elected majority leader, which meant it was his job to help craft policy and round up Republican votes. Now finally in power, there was a lot of pent-up demand to pass Republican-supported legislation. Other issues blurred party lines, including incentives for a big steel mill near Osceola, and the so-called "private option," where the federal government will subsidize insurance for up to 250,000 low-income Arkansans.

Despite being the leader of the Republican caucus, Westerman didn't get everything he wanted. His bill that would have tied the growth of state government to the rate of increase of the state's gross domestic product didn't pass. He also opposed the private option, which did pass. After studying the issue carefully and being involved in many of the discussions with Gov. Mike Beebe's administration about it, he decided that the federal government wasn't willing to give the state enough flexibility.



REP. BRUCE WESTERMAN accepts his award as ASPE Engineer of the Year at the Annual State Conference in April.

"I'm not against compromising if I can see that down the road you might get to a better solution," he said. "But if it's compromising and I think it's going to make the situation worse, I will not compromise because I think staying where you're at is better than going backwards."

During the 2010 session, Westerman often was able to come back to Mid-South Engineering to work on Mondays. That wasn't happening in 2012. He did drive home each night, but time with his wife and four school-age children was limited.

"This session was different being majority leader," he said. "I was basically in my office or committee meetings or

meeting all the time. People go to a lot of dinners and stuff in the session. I hardly ever ate lunch or dinner there. I was eating candy bars and popcorn out of the quiet room."

Despite the hectic schedule, Westerman didn't leave the session burned out on politics. In fact, he's strongly considering running for Congress if the state's current congressman from the Fourth District, Rep. Tom Cotton, runs for Senate as is widely expected. "I'm getting considerable encouragement to do so, and my family is warming to the idea," he wrote in an email July 6.

Moving from the engineering field to politics can be a challenge. In engineering, decisions are based on basic principles, reason, logic and common sense. Politics involves people, who don't always exhibit those qualities. That's especially true with Congress lately. However, Westerman said that engineers can offer a lot to that body.

"I think it took me a few years to realize that engineering's basically problem-solving," he said. "That's what you learn in engineering school, is how to solve problems. The actual stuff I learned in engineering school – differential equations and all the calculus – I use that very little, but I use the problem-solving technique a whole lot."



Bruce Westerman
ASPE Engineer of
the Year



Congratulations, Bruce,
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Marketplace

Editor's Note: This page contains news of interest from Arkansas Professional Engineer advertisers that are not members of ACEC/A or ASPE.

RP Power updates website

RP Power has redesigned its website at www.rp-corp.com.

Founded in 1988 by John Ronza and Phillip Pate, the company is a single-source provider of premium power products and services, including Kohler generators and corporate data centers powered by Liebert products. Headquartered in North Little Rock, it has branch offices in Memphis, Tulsa, Fayetteville and Oklahoma City.

The company is hosting its 15th Anniversary and Open House at its corporate office at 7777 North Shore Place in North Little Rock on Thursday, Oct. 10.

For more information or to register for RP Power's technical data base for specification sheets and drawings, visit the company's website or call 501.568.3000.

Van Horn's Rohlman attains P.E. license



Brian Rohlman, P.E., of Van Horn Construction has attained his professional engineering license.

Working out of the heavy construction company's Russellville office, Rohlman specializes in managing water/wastewater treatment projects. He is currently managing an EPA Stage 2 Disinfectants and Disinfection Byproducts Rule improvement project for Central Arkansas Water. He also managed educational facility work with the Russellville and Pottsville School Districts.

Rohlman

"Each project has its own set of unique challenges," he said. "The bigger the challenge, the more I like it. I have always enjoyed working with fellow engineering professionals. As an engineer working for

an experienced construction company like Van Horn Construction, I am able to identify the objectives of each project and see those objectives realized by project end. Providing a quality product and quality service to a client is very rewarding."

For more information, contact Van Horn Construction at 479.968.2514, or go to its website at www.vanhornconstruction.com.

Piller joins New Water Systems



Piller

is joining New Water Systems starting August 1 as a sales representative providing engineered product solutions for water and wastewater systems in Arkansas and western Tennessee.

Piller is a civil and environmental engineer with licenses in Arkansas and Tennessee. He comes to the company with 28 years' experience in water and wastewater systems, including the last 10 owning his own business, Western Tennessee Water Works. In that capacity, he sold the same products he will be selling now.

He said he provides consulting engineers, who often work on a variety of projects, with detailed information about his specialty. "I consider myself a consultant's consultant," he said.

While owning his own business, Piller had worked with Andy Davis, P.E., owner of New Water Systems. By joining forces with that company, he'll be able to focus on customer service and leave the accounting and bookkeeping behind. "They do it the right way," he said. "They're honest. They make sure that the customer's taken care of. That's what I like."

Founded in August 2003 by Davis, New Water Systems is celebrating its 10-year anniversary. The company serves large and small municipal systems, pres-

sure sewer collection systems, and systems for private industry, campuses, churches, retail establishments and residential areas.

More information is available at www.newwatersystems.com or by calling 501.888.0500.

ICM is coating sewer structures with epoxy

An epoxy coating being used by Improved Construction Methods is lengthening the lives of pump stations and manholes.

According to Bruce McFadden, ICM's owner, churning of the sewage at pump stations creates hydrogen sulfide gas that can quickly damage the concrete. At one recent job in Mayflower, a 10-15-year-old well already had sustained enough damage that the concrete was crumbling in places. ICM replaced the damaged concrete and coated it all with the epoxy.

"This is a significant change in new construction ... and a significant change in rehabilitating old manholes," he said.

Scott Brecht, a construction observer with McClelland Consulting Engineers, observed the process in Mayflower and Pine Bluff. The epoxy was tested in six places by adhering a piece of aluminum to the epoxy on the surface of the well. A hydraulic machine removed the aluminum from the surface. If concrete was present on the aluminum, that meant the epoxy was holding. In each case, it was.

David Poe, technical services and GIS supervisor for the city of Pine Bluff, said the process was used on a wet well that was eight feet in diameter and 21 feet deep.

"I think it went very well," he said. "The product looks good. It passed all testing. I feel like we got a really good product. It was a quick application, and it didn't seem to take terribly long. We've done this type of work with some other products that we were satisfied with as well, but this one seemed to go on more smoothly."

ICM's website is www.improvedconstructionmethods.com. The phone number is 501.912.7715.

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