Bridging Kentucky: Using cost-saving approaches to restore 1000+ bridges

Page 10

Kentucky Engineer
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Plus:
Q&A with 2019-2020 Leadership P.E. Class Members
Page 18
In recognition of its ongoing efforts to promote and improve diversity and inclusion, the University of Kentucky College of Engineering has received a Bronze Award from the American Society of Engineering Education (ASEE). In addition to the Bronze Award, the college was further recognized as being “exemplar.” The distinction came as the result of ASEE’s inaugural Diversity Recognition Program.

“This recognition from the ASEE demonstrates that our college, working hand in hand with the university, is intentional about opening doors for people who not only need opportunities and resources, but also to feel welcome and wanted,” said Dean Rudy Buchheit. “While I am encouraged, we certainly have more work to do.”
Contents

04 President’s Statement
A note from KSPE President Kristen Crumpton

06 Executive Director’s Statement
A note from Executive Director Sara Massey

10 Bridging Kentucky
Bridging Kentucky Program using new approaches to save state millions

12 Board of Licensure Report
Updates from Board of Licensure
Executive Director James Ed Manning

16 George M. Binder Scholarship Project Lead The Way Award
2019-2020 scholarship recipients

18 Leadership P.E. Q&A
Hear from four of the 2019-2020 Leadership P.E. participants

20 GRW Announcement
Five new vice presidents selected

21 Professional Development
Upcoming professional development opportunities

23 Golf Classic
2019 Golf Classic application form

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Greetings! It is with true honor that I serve as this year’s KSPE President representing the state of Kentucky and its licensed engineers. As KSPE President, I am excited to have the opportunity to work with many of you over the next year through programs such as Mathcounts, Leadership PE, membership growth, chapter meetings, and much more. I look forward to learning more about the chapters and how we can work together collaboratively to meet a common goal, to protect and promote the engineering license.

I first want to recognize and thank our past President Matthew Rogers for his service over the last year and congratulate him on his achievements that have benefited all of us as professionals. Matt was instrumental in the rollout of the new NSPE business model that went into effect in July 2018. Matt led the task force that focused on Kentucky’s direction and integration in the new business model platform and did an excellent job keeping us all informed of the progress. Matt, we thank you again!

I would also like to thank all those who supported our organization by attending the 84th Annual KSPE Convention which was held in Louisville at the Omni Hotel in April. We had over 220 attendees from around the state, 53 technical sessions, several tours including Churchill Downs, and were honored to have the Mayor of Louisville, Greg Fischer, as our guest for the Friday Luncheon. I hope all will join us next Spring for the 85th Annual KSPE Convention in Lexington!

In the last three months your state and chapter leadership and committee chairs have been hard at work, focusing on programs that benefit our Society and its members. The following is a summary of the latest “goings-on” in KSPE.

Leadership Conference

On May 30th and 31st, your state officers, chapter presidents, state directors, and committee chairs gathered at French Lick Resort for the annual KSPE Leadership Conference. This conference serves as a learning and networking opportunity to share ideas and concerns from a state and chapter level perspective. The two-day event covers many topics including strategic planning and goal setting for the coming year, member benefits and membership growth, as well as reports from committee chairs about the past year’s activities. It is a learning experience for chapter and state leadership. A portion of the conference is dedicated to an open discussion amongst chapter leadership to discuss community outreach, membership retention, and other concerns/issues the chapters currently face. The goal for the discussion is to learn from each other what has been working and what has not been working as a chapter. While it is apparent that some chapters struggle to remain active, we did learn of some very exciting and positive activity going on around the state. I believe most of us came away encouraged and excited about the future of KSPE. Immediately following the Leadership Conference, the Board of Directors held their first board meeting of the year where the annual budget was approved.

Leadership P.E.

The 22nd class of Leadership PE. has recently been selected and the new class will begin its journey in September. I’m proud to say I am a graduate of the 9th class of Leadership PE. This program has proven to be an excellent learning tool and networking experience for over 300 engineers across the state and is a perfect segue for those wanting to take the KSPE leadership path. Congratulations to the new class of Leadership PE. I look forward to meeting all of you and wish you a successful LPE year!

NSPE Annual Conference

In July, Mike Harris, our outgoing National Delegate, KSPE President-Elect Darin Hensley, Executive Director Sara Massey, and I attended the National Society of Professional Engineers annual convention in Kansas City, MO. The conference contained informative presentations by National Society Leaders, NSPE members from around the country, and NSPE staff. Specifically, we had the privilege of hearing from Karl Reid, the Executive Director for the National Society of Black Engineers, who spoke about why diversity and inclusion matters in the classroom and in the workplace and how we, as engineers, must foster an inclusive environment. The Professional Engineers Conference is a great opportunity for state leadership to meet and network with other state leaders. This was my second year attending the conference.
and is a great reminder of the important role that NSPE plays in advocating for licensed professional engineers. I was encouraged by the awareness that NSPE has on the threats to licensure across the U.S. It is truly an important and critical issue that must continue to gain the attention of our state and national leadership.

**Thank you**

As many of you know, Marcie Fisher and Jennifer Gatewood have decided to move on from their positions at the Kentucky Engineering Center. Jennifer is pursuing other career opportunities and Marcie is pursuing retirement! We want to thank each of them for their many years of service and unending commitment to our profession and the Kentucky Engineering Center. I, personally, want to thank Marcie for her guidance and continued support of my growth within KSPE over the last 16 years. I wouldn’t be here in this position today without Marcie’s encouragement over the years. I wish both of them success and happiness and hope they know how much they will be missed!

**Welcome**

I would like to extend a big welcome to the newest member of the Kentucky Engineering Staff, Bryan Smith. Bryan has been hired as the Director of Membership Services and will report directly to our Executive Director, Sara Massey. Bryan has worked on several statewide campaigns doing fundraising and has also served as the Director for the Division of Property and Casualty for the Department of Insurance. He lives in Lexington with his wife and 4-year-old daughter. Welcome Bryan!

**Looking Ahead**

As President this year, I look forward to continue building and expanding on our past presidents’ goals and achievements. I’m excited to also focus on additional areas in need of attention, such as Membership and Member of the Future, which focuses on our young engineers and how we bring value to these young professionals, as a society. One of the constant challenges with many organizations, including KSPE, is maintaining the existing membership and attracting new members. In today’s busy environment where we are pressed for time, everyone must be able to justify their commitments. With KSPE, it’s easy to see the overall benefits of membership – networking, continuing education, advocacy, and much more. We need to spread this message to our younger groups. I am asking each of you to identify a young engineer in your organization under the age of 30 and encourage that person to get involved in KSPE, just like I experienced as a young engineer right out of college as an EIT. There are many committees and activities to get involved with, especially at the Chapter Level. Thank you to all of our current members for your continued support and commitment to our organization and profession. I look forward to a successful year ahead of us.

As President this year, I look forward to continue building and expanding on our past presidents’ goals and achievements.
Transitions are not always easy, but can offer the opportunity to reflect on the benefits of change and motivate leaders to strengthen an existing foundation. The Kentucky Engineering Center (KEC) and the Kentucky Society of Professional Engineers (KSPE) are undergoing many transitions this year and I’m looking forward to working with you to navigate these changes.

We have several transitions taking place on the personnel front. Two long-time staff members departed the KEC in July. After more than 20 years of service, Marcie Fisher retired on July 25. Marcie was an integral part of KEC and has truly helped our organizations grow. She will be greatly missed. Jennifer Gatewood also left her position to pursue other opportunities. Jennifer’s management of the professional development classes, website and communication materials has been an asset to KEC. We wish Jennifer the best of luck in her future endeavors!

Bryan Smith has joined the KEC staff as the Director of Membership Services. In this role, Bryan will be overseeing all aspects of ACEC-KY, KSPE and KEF events to ensure we are providing the best benefits to our members. Bryan will also serve as the KEC staff liaison to the following committees: Annual Convention, Awards, Educational Outreach, Golf Classic, Partnering Conference, and Professional Development. Bryan has a background in campaign finance and project management, which will assist him in this role. Join me in welcoming him to the team! If you would like to connect with Bryan, his email address is Bryan@kyengcenter.org.

As members, you may also begin to see changes to our communications and member outreach approach. To ensure our members are receiving the most value, we will be conducting a communications audit to evaluate our tools and determine what improvements to make.

The Kentucky Engineer Magazine, for example, will be shifting to include more member spotlights, feature articles focused on the engineering field and more information about your membership benefits. For example, did you know you get 15 hours of FREE online PDH courses through your KSPE/NSPE membership? Please let me know if you have any ideas or suggestions on how we can improve our outreach to you, as a KSPE member.

Sir Henry Royce, an English engineer and automobile designer, once said, “Take the best that exists and make it better. When it does not exist, design it.” While we are fortunate to already have “the best that exists” in KSPE, we are at a significant point of transition. However, we are ready and determined, in the spirit of Sir Henry Royce, to make it an even better organization for our members.
The 22nd Leadership PE class has been selected from an extremely strong field of candidates. Below is the list of the 2020 Leadership PE class. Please join us in congratulating this impressive group of engineers:

- **Seth Bradley**, Hazen & Sawyer (Lexington)
- **Andrew Brown**, Palmer Engineering Company (Crescent Springs)
- **Ariel Cenizal**, The Troyer Group (Louisville)
- **Brandon Flaherty**, Metropolitan Sewer District (Louisville)
- **Billy Garrison**, WSP USA (Lexington)
- **Sam Guy**, Terracon Consultants (Lexington)
- **Robert Hatton**, Stantec Consulting Services (Lexington)
- **David Hird**, Gray Construction (Lexington)
- **Keith Holz**, Ok4 (Louisville)
- **Jeremy Kubac**, Gresham Smith (Louisville)
- **Wayne Roberts**, GRW Engineers (Lexington)
- **Paul Sainato**, Dept. of Natural Resources – Mine Permits (Frankfort)
- **Kurt Smith**, US Army Corps of Engineers (Louisville)
- **Paul Sridhar**, Stantec Consulting Services (Louisville)
- **Lydia Watkins**, SD1 (Ft. Wright)

What is Leadership P.E.?

Leadership P.E. is a leadership development program designed to encourage, strengthen and build the professional careers and the civic involvement of entry- and mid- to upper-level engineers. The class typically comprises of fifteen individuals who participate in organized career-training sessions, networking, as well as meetings with community decision makers.

Hear from some of our 2019-2020 class on page 18

KSPE President Kristen Crumpton, President-Elect Darin Hensley, National Delegate Mike Harris, and I attended NSPE PECon 2019 in Kansas City July 17–20. During this convention, we were able to join our counterparts to work on the NSPE strategic planning process and discuss how other Member Organizations are handling a variety of issues.

Kristen Crumpton joined the 2019 NSPE fellow class and was honored during NSPE Celebrate Engineering Excellence Luncheon on July 19. Congratulations, Kristen!

Mike Harris represented Kentucky during the NSPE House of Delegates meeting on July 20, which was his last meeting as the KSPE National Delegate. Thank you for serving in this role, Mike.

NSPE has announced that the 2020 PECon will be in Philadelphia August 12-16, 2020. Please mark your calendars.
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Bridging Kentucky using cost-saving approaches to restore 1,000+ bridges

story by Ed Green
photos by Kaitlin Keane
In its first year, the Kentucky Transportation Cabinet’s Bridging Kentucky Program is providing significant savings. Since the program was launched in mid-2018, Kentucky has awarded $79.8 million in construction contracts for 139 bridges – a savings of about 23 percent below budget for these projects.

KYTC’s goal is to deliver more than 400 bridges to construction by the end of the year. That’s about five to six times the typical pace for bridge projects, keeping KYTC on track to deliver more than 1,000 bridges to construction in six years with an estimated budget of $700 million.

A programmatic, rehab-first approach

To maximize available funding and restore so many bridges in a relatively short period, Kentucky is working with a 22-firm general engineering consultant (GEC) team led by Stantec, QK4 Inc., and AECOM.

A key focus of the program team is to reduce project-development costs and speed delivery of bridges by using innovative approaches and limiting the scope of work for each project. Historically, bridges in Kentucky with significant deterioration and/or load restrictions are replaced and, in many cases, expanded to address nearby roadway deficiencies or accommodate potential future needs.

To stretch program dollars for Bridging Kentucky, KYTC is performing only the work needed to restore bridges to an NBI rating goal of 7 (good) and an appropriate load rating. In cases where full replacements are necessary to accomplish these goals, KYTC and the program team have adopted a goal to put back generally the same-sized structure, in the same location with the same hydraulic opening. These basic criteria have helped reign in costs and speed delivery of projects by limiting time-consuming right-of-way acquisition, additional environmental permitting, and utility relocations.

Benefit-cost analysis

To help determine the right design solution for each bridge, the Bridging Kentucky team screened each bridge using data already collected by KYTC bridge inspectors, including inspection reports and notes, NBI ratings, load ratings, element-level condition states, inspection photos as well as posting results and notes. This process allowed engineers to distinguish potential rehabs from replacements. In some cases, the need for major or minor changes yielded an obvious decision to replace or rehab the bridge, and those bridges moved directly to design to expedite projects.

The remaining bridges underwent a life-cycle cost evaluation to determine the most cost-effective solution. The program team worked with Paul D. Thompson, an internationally recognized expert in transportation asset management, to compare life-cycle costs of rehabilitating versus replacing each bridge. The analysis included a deterioration model customized for Kentucky’s environment, user costs developed by the program team and estimated construction costs to restore elements in poor condition. This cost estimate was baselined against similar recent work on Kentucky projects.

Through this life-cycle analysis, the team found that about 40 percent of the bridges could be rehabbed rather than replaced for the greatest cost advantage.

Project bundling

Another cost-saving and time-saving approach used by Bridging Kentucky has been project bundling, which KYTC and the program team have pursued with input from the Federal Highway Administration EDC-5 initiative team. Following an FHWA-supported peer exchange with states like Ohio, Pennsylvania and Georgia, KYTC finalized its plans for project bundling – the first time the state had used widespread bundling for bridge construction projects.

KYTC began bundling construction projects in March and has continued to consolidate projects based on location, scope of work and project priority. Full bridge replacements and rehab projects with superstructure replacements are grouped together when possible, as are other rehab projects of similar-type structures.

To date, the Cabinet has awarded a dozen project bundles, ranging in size from two to 13 bridges, for a total of 53 bridges. Kentucky also is using design-build as a delivery method. KYTC recently announced a design-build project to replace 102 bridges in eastern Kentucky. Five teams responded to the RFQ, and a design-build team is expected to be selected later this year.

Looking to the future

By the end of FY 2020, KYTC plans to have designed projects and awarded construction contracts for more than 450 of the 1,000 bridges being restored through the project. However, a lot of work remains to keep the program on track.

Since the program’s inception, about 160 more bridges in Kentucky have been posted as substandard or closed by the state’s bridge engineers due to unsafe conditions. KYTC is preparing its transportation budget and road plan for FY 2021-22, which starts in July 2020. To support the state’s data-driven approach to planning, the program team currently is screening the additional bridges, using the life-cycle cost model it developed for the start of the project and reprioritizing its list of remaining bridges to help the Cabinet and state leaders determine which bridges should be restored next and included in the road plan for the next two years.

The program team will repeat this process in two years, bringing additional value to a program that already is saving the state millions of dollars and fixing bridges the state needs to maintain a strong transportation system.

The overarching goal of Bridging Kentucky is to ensure bridges throughout the state are safe and sound for crossings by school buses, emergency vehicles and commercial traffic. Specific program goals include:

• Removing bridge postings by restoring load capacities to 44 tons for bridges on state routes and 40 tons for bridges on county routes.

• Restoring bridges to NBI rating of 7 (good).

• Designing structures for a minimum service life of 75 years for replacement projects and 30 years for rehab projects.

• Ensuring capacities are above emergency vehicle load requirements

• Allowing program exceptions for historic bridges such as covered bridges and some steel truss bridges.

The Kentucky Transportation Cabinet's Bridging Kentucky Program is providing significant savings.
Expired Licenses

Licensees with surnames in the range A thru K were due to renew their license by June 30, 2019. If you failed to renew, you can still renew online. Just go to the board website www.kyboels.ky.gov then click “AlreadyLicensed” and follow the prompts, or type this link in your browser: https://kyboels.ky.gov/Renewals/Pages/default.aspx. Once you are there, just answer a few questions and pay with your credit card. A 10% late renewal penalty will be charged for each month or part of a month that the renewal is late.

It is important to note that while the regulations permit a licensee to renew his or her license for up to a year after it expires, the licensee is not authorized to practice engineering or surveying on an expired license.

Any licensee who renews on or after September 1 of his or her renewal year is subject to an automatic CPD audit.

CPD Audits

Audits for Continuing Professional Development (CPD) will begin in early September. Each year 5% of licensees who renewed before September 1 are randomly selected for an audit of their compliance with the CPD regulations. Licensees are required to respond to an audit notice within thirty days by providing documentation of their CPD activities for the audit period.

More and more licensees are taking advantage of the NCEES Continuing Education Tracking system. This system allows users to enter their continuing education courses, scan and store documents such as completion certificates, and transmit them electronically to state licensure boards upon request. The service is free and is accepted by most state boards. For more information, go to http://ncees.org/cpc/

Firm Renewals

All Business Entity Permits (aka Firm Permits) expire on December 31 every year. Permits can be renewed online in a manner similar to that for individual renewals. The window for online renewal of Firm Permits will open about Mid-November. Please mark your calendars accordingly.

Additionally, the information is retained in your file at NCEES for future reference.

License Verifications

At some point in their career, many licensees find it necessary to obtain a license in another state, or several states. NCEES and state licensing boards across the country have been working to ease the burden of multi-state licensure. One part of that initiative has been to create a centralized license and exam verification system.

If you need to have your license and/or exam information verified in another state, go to http://ncees.org/, log in to, or create your MyNCEES account. From there you can request a verification electronically. Requests are sent in real time. States are able to respond electronically. Responses are immediately available from the state you designated.

Reporting Violations

From time to time, Board staff receives inquiries from licensees about reporting violations of the licensure law and unlicensed practice. Most licensees realize that they have a legal obligation to report such violations, but they are unsure how to do it and to what extent they are obligated to cooperate with board investigations. The Board would like to remind licensees that under the Code of Professional Practice and Conduct, if a licensee has knowledge or reason to believe that any person or other licensee is in violation of KRS 322 or 201 KAR Chapter 18, the licensee shall submit to the board in writing the relevant information within his or her knowledge. Additionally, a licensee is required by the Code to cooperate with the board by providing relevant information within his or her knowledge upon request.
**JASON LANCE GOINS, PE**

In 2017, the Board received a written complaint from a licensee. A Board investigation found that Jason Goins, PE, had been hired to provide engineering services for a commercial construction project. As part of his work on that job, Goins was responsible for submitting an application to Kentucky’s Department of Housing, Buildings, and Construction (HBC), to obtain their necessary authorization for the project. Another engineer’s foundation plan was included in Goins’ submittal to HBC, and while the foundation plan was for the same proposed building, it had been designed for another specific site at another physical location. This foundation plan had been altered by the placement of a concealing sticker over the original site address, and displayed the address of the new proposed building location. Mr. Goins failed to adequately supervise the application submission to HBC, and therefore aided and abetted the unlicensed practice of engineering by accepting an engineering plan from his client, which had been altered by someone other than the design engineer. This action constituted a violation of KRS 322.180, Section 5. Further, his application submission also failed to be objective and truthful, and failed to disclose all material facts, a violation of the Code of Professional Practice and Conduct, 201 KAR 18:142, Section 3. In addition, an audit of Mr. Goins’ continuing professional development (CPD) requirements showed a deficiency of more than half of the required thirty professional development hours for the audited period, a violation of 201 KAR 18:196. The Board’s case against Mr. Goins was settled with a Consent Decree wherein Mr. Goins acknowledged the violations and agreed to: (1) pay a $2,000 fine; (2) receive a written reprimand; (3) provide proof of thirty professional development hours of CPD activities for the 2017/2018 reporting period; and (4) provide proof of thirty professional development hours of CPD activities for the 2019/2020 reporting period; and (5) take and successfully complete the online 60 professional development hour course in Engineering Ethics offered by Texas Tech University. The Board accepted the Consent Decree on July 26, 2019.

**HGS LIMITED, CONSULTING ENGINEERS, PLLC**

In January of 2018, the Board received a complaint from a licensee that HGS Limited, Consulting Engineers of Windsor, Ontario was providing structural engineering services in Kentucky without the proper business entity permit. An investigation by the Board confirmed the complaint and HGS Limited, Consulting Engineers, PLLC, through its president, agreed to settle the Board’s investigation through a Consent Decree. In the Consent Decree, the corporation acknowledged violations of KRS 322.060, and agreed to: (1) pay a $1,000 fine; and (2) maintain a current and valid business entity permit for any period in which the corporation is engaged in providing engineering services in the Commonwealth of Kentucky. The Board accepted this Consent Decree on July 26, 2019.

**ADRIAN BRENT COMBS, PE**

On July 5, 2017, a private citizen filed a written complaint against various licensed professionals and local and state government agencies. A subsequent investigation by the Board found that Mr. Combs, in October of 2016, while a public employee engineer of the Georgetown-Scott County Planning Commission, reviewed and approved an Amended Final Development Plan and associated permit applications, submitted by his former client, for the same project for which he had performed private consulting engineering services in 2009. The case was settled with a Consent Decree wherein Mr. Combs admitted that he should have known a conflict of interest existed when he reviewed and approved the Amended Final Development Plan, which plan was similar to his own Preliminary Development Plan, for the same client, in violation of 201 KAR 18:142, Section 4. The agreement with the Board requires Mr. Combs to: (1) receive a written reprimand; (2) have his professional engineering license suspended for sixty days; and (3) pay a $2,000 fine. The Board accepted this Consent Decree on July 26, 2019.

**G-A-I CONSULTANTS, INC.**

In September of 2018, the Board of Licensure learned that G-A-I Consultants, Inc., a Pennsylvania corporation, with a branch office in Erlanger, Kentucky, was offering engineering and land surveying services through their website and print media, while not regularly having a responsible charge professional engineer or responsible charge land surveyor in said branch office, in violation of KRS 322.060. G-A-I Consultants, through its president, agreed to settle the Board’s investigation through a Consent Decree, wherein the corporation acknowledged the violations and agreed to: (1) pay a $2,000 fine; (2) maintain current appropriate valid business entity permits for any period of time in which they provide, or offer to provide, engineering services and/or land surveying services in the Commonwealth of Kentucky; (3) update its current business entity permits to include any new office locations in Kentucky; and (4) present to the Board, in writing, a Corrective Action Plan detailing the staffing for their new Kentucky office and a detailed description of the work that will be performed at that office. The Board accepted this Consent Decree on July 26, 2019.
Board of Licensure
Calendar of Events 2019

August 14-17 NCEES Annual Meeting
Scottsdale AZ

August 29 Registration for Fall Paper & Pencil PE Exams
Closes 3:00pm

August 29 Last day to request Special Accommodations for Testing

October 15 PE Petroleum & PE Nuclear Exams via Single Day CBT

October 24 Committee Meetings
Frankfort KY

October 25 Board Meeting
Frankfort KY

October 24 PE, STR Vertical Exams
Louisville KY

October 25 STR Horizontal Exam
Louisville KY

October 25-26 All other Paper and Pencil PE Exams
Louisville KY

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2019-2020
George M. Binder Scholarship Award

“I also wanted to invest myself within a career where I could continue learning and always be encouraged to keep pursuing what I did not yet know or understand...”

– Savannah Bell, Western Kentucky University

The George M. Binder Scholarship is a $2,500 scholarship awarded to one full-time Kentucky engineering student for the 2019-2020 school year. The scholarship is awarded to a student who has made a significant contribution to the engineering profession, while maintaining a good grade point average and extracurricular involvement.

This year’s George M. Binder Scholarship recipient is Glasgow senior Savannah Bell, who is majoring in mechanical engineering at Western Kentucky University. Bell’s passion for art and science first drew her to engineering. She decided she wanted to be an engineer when she realized she could use her artistic talents in a functional manner to help others.

“I also wanted to invest myself within a career where I could continue learning and always be encouraged to keep pursuing what I did not yet know or understand,” Bell said in her application.

This dedication to continued learning and professional development fostered a new passion for research.

Bell has taken advantage of multiple professional activities and employment opportunities while at WKU, which has enabled her to gain experience, participate in patent applications and publish research papers—one of which is titled, “Adjustable conveyor belt guidrail and related methods”.

Bell leads a team for WKU’s engineering program, Center for Energy Systems, which is staffed with full-time professional engineers and undergraduate students completing projects funded by industrial sponsors.

With the Center for Energy Systems, Bell has created Solid Works parts, assemblies, drawing sheets, simulations and motion animations. She helps her team meet project deadlines and communicates with the machinist to ensure designs accurate and makes changes as needed. Her research team’s abstract was recently accepted to the International Mechanical Engineering Congress & Exposition (IMECE) 2019. They are working with the industrial contact to write the research paper for that project.

Besides field research, Bell has also pushed herself professionally through leadership roles with the American Society of Mechanical Engineers (ASME), to include treasurer and secretary. She has found other ways to give back. Bell has spent more than five years with Compassion International, sponsoring children in need of healthcare, food, education, shelter and career guidance.

Like her philanthropy, Bell wants to take her career future out of this world and into aerospace research and design. She said what intrigues her most about this field is that we don’t know a lot about it. She believes it will allow her to be a part of something bigger and make an impact that could potentially change the future. Finding new technologies and innovative solutions is what drives Bell to continue asking questions and seeking knowledge. A fascination for the unknown is what continues to shape her as a growing engineer.

“That motivates me and keeps me excited about pursuing engineering—and ultimately a career in aerospace,” Bell said in her application.
2019-2020
Project Lead the Way Award

Tim Lawson, a technology teacher at Owen County High School, was awarded the George M. Binder Project Lead the Way scholarship this year. This scholarship of $2,500 is given to cover the cost of core training, which takes place during summer. The scholarship is awarded to the applicant who can best demonstrate what Project Lead the Way means to the school, the teacher and the Project Lead the Way students. Other selection criteria include the level of financial need and available resources for the Project Lead the Way curriculum training.

Why did you decide to become a teacher?
I had retired after working in manufacturing for 26 years and as a mechanical designer for 4 years. I had several friends encourage me to seek teaching opportunities; they felt I had a lot of knowledge to share with our young people and could give them some insights about real-world challenges.

What made you decide to become involved with Project Lead the Way?
I taught the first year that PLTW came to Owen County. Fortunately for me, leadership had already committed to PLTW before hiring me.

What are your hopes for the future of the PLTW program at your school?
I hope to continue to better our shop. In the past 2 years, through grants and donations, we have been able to add several 3D printers as well as a CNC controlled laser. I hope in the future to add a table top CNC mill and possibly some table top robotic arms.

How do you feel PLTW impacts your students?
PLTW gives students a chance to tackle some real-world challenges. They get the opportunity to do a lot of hands on such as robotics, computer aided design (CAD), and computer numerical control (CNC) to name a few. It better prepares them for college and career.
Q&A with four 2019-2020 Leadership P.E. participants

The Leadership P.E. class was recently chosen for the 2019-2020 year. We talked to four of those participants, Robert Hatton, Geotechnical Engineer; Kurt Smith, Structural Engineer; Lydia Watkins, Plan Review Engineer and Ariel Cenizal, Civil Engineer, to see what they were most excited for in the upcoming year.

1. How would you describe Leadership P.E. to someone who has never heard of it before?

**Hatton:** Leadership P.E. is a program designed to cultivate and develop the leadership skills of engineers within the engineering profession. The program incorporates interactive career-training sessions for the participants that help develop leadership skills, including communication, managing dynamic teams, professionalism, and personal management. While the program is designed for engineers, the ultimate goal of the program is to develop strong leaders within the engineering profession that are strong and influential leaders in communities across the Commonwealth of Kentucky.

**Smith:** It is an excellent opportunity to meet engineers from all over the state with different experiences and backgrounds. Through discussions of our experiences with other engineers, we provide ourselves the unique opportunity to grow our technical skills and be more involved within our communities.

**Watkins:** Leadership P.E. is a program comprised of different career-training, personal building, and networking sessions to help strengthen new leaders for the engineering community.

**Cenizal:** Leadership P.E. is something that all Professional Engineers should anticipate and look forward to as an opportunity to be an effective and responsible Engineer.

2. What is the value in a leadership group focused specifically on professional engineers? Personally and for industry as a whole?

**Hatton:** The greatest value of the program may be in the networking opportunities available to participants in learning and developing as leaders from fellow participants and the leaders of the career-training sessions.

**Watkins:** A Leadership program for professional engineers is important to help mold the future of Engineering as a whole. Helping young engineers become more confident and knowledgeable about things other than just design makes for a better well-rounded person both professionally and personally.

3. What leadership opportunities are you looking most forward to participating in this year?

**Hatton:** I am most looking forward to the communication and team dynamics session of the Leadership P.E. program this year. These are two traits that strong leaders within the engineering profession must have.

**Smith:** Within my organization, I am currently the Building Information Modeling Lead for one of our larger projects. The required modeling, coordination, and design for this project is very unique and I look forward to working with individuals from multiple states.

**Watkins:** The leadership opportunities I am looking forward to most would have to be the Legislative session and the Communication session. As an engineer for the local sanitation district, politics is a large factor in the day to day decision making. I hope to gain a better understanding of the legislative processes and political and economic realities that affect the decision process in the county/city environments.

**Cenizal:** Something that will boost or improve my leadership skills by engaging in whatever opportunities are available in the leadership class.

4. What does it mean to you to be a professional engineer?

**Hatton:** For me being a professional engineer is about service. The infrastructure, projects, and clients that we work on are about serving the people and communities that are impacted. Being a professional engineer is about delivering projects that help improve the quality of life and promote the welfare of the communities of people where we work.

**Smith:** I believe it means your responsibility goes beyond your own work, but also work produced within your organization.

**Watkins:** As a professional engineer I believe it is my responsibility to be a well-rounded individual who uses my knowledge and experiences to better the community as a whole.

**Cenizal:** Being a PE for me means a new level of Technical competence above and beyond an Engineering degree.
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5 Vice Presidents Named

Greg Gabbard, PE, LSIT
Gabbard is a transportation engineer with more than 33 years of experience, including 23 with GRW. He’s a registered Professional Engineer in Kentucky, West Virginia, Georgia, Ohio, and Tennessee, as well as a Licensed Surveyor-in-Training in Kentucky. Greg earned his bachelor’s degree in civil engineering at the University of Kentucky. Greg regularly leads project teams for Kentucky Transportation Cabinet assignments in most districts, having completed more than two dozen projects.

Joe Pavoni, PE, LEED AP, Assoc. DBIA
Pavoni has taken on numerous responsibilities as a water resources engineer during his 20 years of experience, including 16 with GRW. He’s a registered Professional Engineer in Kentucky and Indiana, as well as a LEED Accredited Professional and an Associate Design-Build Professional (Assoc. DBIA). Joe earned his bachelor’s and master’s degrees in civil engineering at the University of Kentucky. Joe not only manages GRW’s Louisville office, he is active as a member and/or chair of a variety of industry groups such as KSPE Louisville Chapter Partners Program Co-Chair and KY/TN Water Environment Association Kentucky President.

Wayne Roberts, PE
Roberts is an electrical engineer with more than 20 years of experience, all with GRW. He’s a registered Professional Engineer in Kentucky, Ohio, West Virginia, Alabama, Pennsylvania, Kansas, Florida, Arizona, and Washington. Wayne earned his bachelor’s degree in electrical engineering at the University of Kentucky. His areas of expertise include the design of electrical power distribution, water and wastewater systems instrumentation, lighting, communication systems, control systems, and lightning protection systems, among other items. He works with a wide range of GRW’s municipal, state, federal, and industrial clients.

Jimmy Piper, AIA, LEED AP BD+C
Piper has more than 33 years of experience, 24 with GRW. He’s a Registered Architect in Kentucky, Indiana, Georgia, Ohio, Michigan, and Virginia, as well as a LEED Accredited Professional with a BD+C (Building Design and Construction) specialization. He earned his bachelor’s degree in architecture at the University of Kentucky. Jimmy’s recent leadership roles within the industry have included being named to Kentucky’s Housing, Buildings and Construction Advisory Committee (2016-2020). He also served on the AIA East Kentucky Chapter Board of Directors in 2017. He currently serves as chair of the Kentucky AIA Code Committee. Jimmy plays a key role in mentoring GRW architectural colleagues.

Darren Wells, PE, BCEE
Wells has more than 23 years of experience, 21 with GRW. He’s a registered Professional Engineer in Indiana, Kentucky, Ohio, Illinois and Wisconsin, as well as a Board-Certified Environmental Engineer (BCEE) with specialty certification in water supply and wastewater. Based in GRW’s Indianapolis office, he earned his bachelor’s degree in civil engineering at Purdue University. Darren’s steady industry involvement has included Indiana Water Environment Association, ACEC-Indiana, and the American Water Works Association.
Professional Development Opportunities

**AUGUST**

Engineering Excellence Awards  
*August 15, 2019 at 10 a.m.*  
Kentucky Engineering Center – Frankfort

Upgrading to Open Roads Designer  
*August 20-23, 2019*  
Kentucky Engineering Center – Frankfort

Roadside Design Guide  
*August 27-28, 2019*  
Kentucky Engineering Center – Frankfort

**SEPTEMBER/OCTOBER**

2019 ACEC-KY/FHWA/KYTC Partnering Conference  
*September 3-5, 2019*  
Galt House Hotel – Louisville

Highway Capacity Analysis using HCM 6th Edition with HCS7  
*September 10-12, 2019*  
Kentucky Engineering Center – Frankfort

Upgrading to Open Roads Designer  
*September 17-20, 2019*  
Kentucky Engineering Center – Frankfort

Upgrading to MicroStation CONNECT  
*September 24-25, 2019*  
Kentucky Engineering Center – Frankfort

Upgrading to MicroStation CONNECT  
*September 26-27, 2019*  
Kentucky Engineering Center – Frankfort

Upgrading to Open Roads Designer  
*October 8-11, 2019*  
Kentucky Engineering Center – Frankfort

Design of ADA Sidewalk Facilities for Roadways in the Public Right-of-Way  
*October 16, 2019*  
Kentucky Engineering Center – Frankfort

Upgrading to Open Roads Designer  
*October 22-25, 2019*  
Kentucky Engineering Center – Frankfort
Terracon is an employee-owned consulting engineering firm providing environmental, facilities, geotechnical, and materials services. We offer clients across the Commonwealth practical, cost-effective solutions from our Lexington, Louisville, and Cincinnati offices. By anticipating project requirements and adapting to challenges, we make it easy for you to work with us. Contact us for your next project.

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University Club of Kentucky on September 18, 2019
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Limited to FIRST 180 Players

DATE: Wednesday, September 18, 2019
TIME: 12:30 pm (Shotgun Start)
Lunch will be served beginning at 11:30 am
PLACE: University Club of Kentucky
4850 Leestown Road
Lexington, KY  40511
http://www.ucubkentucky.com

FORMAT: Four-Person Scramble
COST: See costs within the registration area.
GOLF CLASSIC PACKAGE - $850.00 EARLY BIRD
$900.00 after August
Includes a Four-Person Team - a Hole Sponsorship - Mulligans (4 per player)
- Go For The Green (1 per player)

HOLE SPONSORS: $275.00 (does not include golf registrations)

REGISTRATION: Register online at http://www.kyengcenter.org or send registration form below and check by September 13, 2019. Make check payable to Kentucky Engineering Foundation, Inc. (See Form Below).

Registration fee includes: lunch • giveaway • drinks • awards ceremony

COME OUT AND PLAY!!!

GOLF CLASSIC ORGANIZERS
Kentucky Engineering Foundation, Inc.
(KEF, Inc.)
Kentucky Society of Professional Engineers
(KSPE)
American Council of Engineering Companies of Kentucky
(ACEC-KY)

Join Us for the 24th Annual Kentucky Engineers’ Golf Classic!
Registration Deadline: September 13, 2019

| Team Captain/Individual Player (name) ___________________________ Phone ___________________________ |
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| List Other Team Members Phone Numbers |
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Check one: □ Individual Play @ $125/ea ($150 after 8/16).
□ Four-Person Team @ $500/ea ($550 after 8/16).
□ Hole Sponsor with Team @ $750/ea ($800 after 8/16).
□ Hole Sponsor/Team/Mulligans/GoForGreen @ $850/ea ($900 after 8/16).
□ Hole Sponsor without Team @ $275/ea.

Mulligans: 4 Mulligans = _____ x No. Golfers ____ x $5.00/Mulligan = Total Mulligan Purchase: $ ____
Payment: Total Payment Enclosed: $_________ (NO REFUNDS)

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□ Golf Shirt/Qty. __________ □ Gift Card __________
□ Wind Shirt/Qty. __________ □ Cash __________
□ Golf Towel/Qty. __________ □ Other __________

For a tax deductible contribution equal to 50% of the individual registration fee, make check payable to Kentucky Engineering Foundation, Inc. You can fax your registration to 502-237-0236 or email to kef@kyengcenter.org. Mail check and completed registration form to: Golf Classic, Kentucky Engineering Center, 160 Democrat Drive, Frankfort, Ky. 40601. REGISTRATION DEADLINE: September 13, 2019.
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