

## Homegrown engineers



### Homegrown engineers

By Roberta Codemo

Springfield Southeast High School junior Maurice Johnson wanted to be a pharmacist, until he met Kevin Seals, chief environmental scientist at Hanson Professional Services, Inc. and the coordinator for the Grow Our Own Minority Participation program.

"Three years ago I had no idea what engineering was," Johnson said, until he attended an open house for middle and high school students at the University of Illinois Urbana-Champaign Rail Transportation and Engineering Center. "It was super cool."

Johnson was running up and down the campus and looking at everything, so Seals pulled him aside afterwards. "I want this so bad," said the young man, who also attended the week-long summer program for rail and intermodal transportation at Michigan Technological University.

He can't wait until he's old enough to do a summer internship with Hanson and plans to attend the University of Illinois Urbana-Champaign, where he is leaning towards majoring in civil engineering.

Johnson wants to work at Hanson following college. "It's one of the few companies that I know," he said. "Plus it's close to home."

This is the spark of enthusiasm in engineering and science that the Grow Your Own program aims to foster in local

minority students. "It's been exciting watching it grow," said Seals, who has seen a lot of interest from the community since the program's rollout in 2014.

The two-year, \$60,000 program was recently renewed and is collectively funded by the city, county and Hanson. It was designed to tie in with the Springfield Rail Improvement Project and multimodal facility. There has been a lot of public interest in increasing minority participation in the project.

"We didn't know where to start," said Seals, who said the program targets high-achieving minority students from middle school through college with interest in science, technology, engineering and mathematics (STEM) to determine if this is the career path they want to take. He wants to expand the program to include a broader base of students in the future.

Students are recruited from local schools, minority-based organizations and individual referrals. The largest pool of students comes from local high schools, accounting for between 12-15 program participants. Students must secure a reference from someone familiar with their interests and submit a completed referral form to Hanson.

Hanson administers the program and works with minority-based community groups, businesses, colleges and universities, the Illinois Department of Transportation and others to connect students with organizations that offer STEM-related programs and activities. It offers mentoring, educational opportunities, job training and possible internships through its community partners to encourage students to pursue careers in engineering and related fields.

"There's not a lot of minority interest in STEM fields," said Seals. The program has 25 to 30 applicants each year, with a 70-30 breakdown between males and females. "The challenge is to identify students." Three high school students have participated in the Michigan Technological University summer camp.

Part of the reason, he thinks, relates to societal issues. "Students feel like there is a barrier and give up," said Seals. "They don't achieve their full potential." It disappoints him when he sees someone with a gleam in their eye but too afraid to venture down the road.

"I don't want to lose them because they don't think they can do it," said Seals, who encourages students to ask questions and to not take no for an answer. "We can open the door for you. Don't be afraid to knock."

The company selects three minority students each year for full-time paid internships, which helps students gain professional experience with the potential of future employment with the company. "We want to grow students locally and provide them with opportunities so they know they can come back home and that there are jobs available," said Seals.

To date, 10 students – six the first year and four last year – have applied for internships. The City of Springfield and IDOT have also hired summer interns from the program. Seals foresees a time, however, when there will be more positions than there are applicants.

Alex Diop, who is active in the Junior Frontier's program, plans to graduate from Southern Illinois University Edwardsville with a degree in electrical engineering in 2018. He strongly encourages anyone with an interest in technology and engineering to learn more about Hanson. "I love Hanson," he said.

His advisor heard Hanson was accepting applications and referred him to Seals. He's currently doing an internship and works under Robert Stidham, who is the IT manager at Hanson. Diop enjoys the work that he does.

"I've always had an interest," said Diop, who liked taking devices apart and putting them back together when he was younger. His counselors suggested he pursue mechanical engineering but he's always been more interested in electrical engineering.

His internship helped him his first year of college. "Everything made sense," said Diop, who was able to correlate his work experience with his classes. It made him a better student.

The program's success has inspired others. Seals has been engaged in conversations with CEOs at other local engineering firms who have expressed an interest in the program, which has received national attention. "We wanted to get some experience under our belt before we invited others," he said. Future plans include expanding the program to local and regional engineering programs over the next year and expanding the program into fields such as banking, finance, healthcare and retail.

The program has blossomed. Hanson recently opened a project resource center for the rail project at the City of Springfield's Office of Community Relations, 1450 Groth St., for post-high school minority adults. Individuals can learn about job opportunities and job training programs.

The program also works with minority contractors and helps them navigate the process of applying to pre-qualify as "Disadvantaged Business Enterprises" with IDOT so they can bid on construction contracts for the rail consolidation project.

"Everyone feels this is a great opportunity," said Seals. "It's a win-win for Hanson, the city, the county and residents."

*Roberta Codemo is a full-time freelance writer. She can be reached at [rcodemo@hotmail.com](mailto:rcodemo@hotmail.com).*