

November 2015 Vol. 2 Issue 8

civil + structural ENGINEER

CELEBRATING THE DESIGNERS OF THE WORLD AROUND US

NET-ZERO ENERGY

Civil and structural engineering support smart design

Scott Clein: Reigniting the Motor City
Hiring the right graduate
New York's smartest park
Double tracking in the Tehachapi Mountains
Tall wood building awards



SCOTT CLEIN: REIGNITING THE MOTOR CITY

GIFFELS WEBSTER WORKS TO HELP REVITALIZE DETROIT
INTO A NEW, STRONGER COMMUNITY.

By Maureen Foody



According to Scott Clein, P.E., LEED AP, president and partner at Giffels Webster, “Who aside from engineers gets to stimulate the economy, protect the environment, and impact quality of life all while they get to play in the dirt?”

FOR DECADES, DETROIT was the city of creation, the automotive capital of the world, the city of reinvention until things slowly began to unravel. Jobs disappeared, factories that once filled highways with cars and railways with train cars closed, and city roads suddenly seemed empty as people began to depart, leaving the buildings to wait for new life. It became a challenge issued to all — citizens, government officials, and the country as a whole: What needs to be done to remake Detroit?

Slowly there’s been sparks of work during the last decade. Incentives brought new businesses and new people, but then there are those who have been there all along. One of those is Scott Clein, P.E., LEED AP, president and partner at Giffels Webster, headquartered in Detroit, who is currently using his skills and abilities to help push the city and his firm forward.

Born just outside of Detroit, Clein has long held affection for the city where he grew up. “The D has always been home for me,” he said. “I consider myself really, really lucky having grown up on Tiger games and riverfront festivals. The city hooked me early on.”

Along with a devotion to his hometown, Clein had a strong interest in mathematics and science that led him to consider engineering as a potential career. But he also had a strong skill set in communications thanks to his parents both being public school teachers who emphasized the importance of connecting with those around you. So, when he began undergraduate studies at the University of Michigan, he delved right into civil engineering as his focus but also took a number of history courses.

“My professors were some of the first who helped show me that engineering was more than what happened in the classroom. They all worked during the summer doing research and consulting around the world,” Clein said. “As engineers we shouldn’t just be blindly following published guidelines. You have to work to figure out where your skills fit into the larger picture.”

After graduating with his bachelor’s degree in civil engineering, Clein went to work for Wayne County Public Services in a program that offered a two-year rotation through a number of departments and tasks from design to field engineering to the testing lab.

“It was a great crash course on what it means to be an engineer,” Clein said. “I was taught how things are built but also got to see the impact our work has on everyday life.”

Throughout this time, Clein was working on attaining his master’s degree in civil engineering from Wayne State University. As a result, he felt pulled toward more of a focus on helping to enact change on overall quality of life on a larger scale that within the structures of a government job was proving harder to achieve. In 1996, he made the switch from the public sector to the private sector by taking a position at the firm Giffels Webster.

Giffels Webster has been working to help rejuvenate Detroit across a wide number of avenues. Clein fondly remembered a number of projects that they’ve been able to complete, covering all sizes and scopes.



Giffels Webster provided detailed topographic mapping and boundary and utility surveys for Detroit's Comerica Park, home of the Detroit Tigers, and the adjacent Ford Field indoor stadium, home of the Detroit Lions. The firm investigated, located, and addressed all utilities, including water main, sanitary sewer, storm sewer, and franchise utilities.

“Personally, it was staggering to see and learn about the utility systems that are in place for a city that is 300 years old when we were working on the utility analysis for Ford Field and Comerica Park — especially for a history buff like myself,” Clein said.

Another grand challenge taken on was the first Non-Motorized Master Transportation Plan in 2006 for the city of Detroit. “We helped advocate for people, not just vehicles,” Clein said. “Before Complete Streets really took off as a movement, we were able to get into and see what other countries were doing and what we could do both economically and socially to foster that in Detroit.” Detroit has built more than 170 miles of bicycle lanes since 2006, well on the way to the nearly 400 miles outlined in the master plan.

“Really though,” Clein said, “who aside from engineers gets to stimulate the economy, protect the environment, and impact quality of life all while they get to play in the dirt?”

As Giffels Webster continued to grow, Clein soon found himself taking on more of a leadership role. “I wasn’t lining myself up for it, it sort of just came along and it was the right fit for me,” he said. “For me, leading is intrinsic, with an ability to listen and a willingness to speak when both are necessary.”

Further explaining his leadership style, Clein emphasized how the most important task is allowing employees to shine. “They’re all able to do their jobs successfully when a leader sets the framework and guides them

Giffels Webster

Established: 1952

Headquarters: Detroit

Size: 86 employees in three offices

Ownership: Privately owned

Website: www.giffelswebster.com

Primary services: Civil engineering, surveying, municipal consulting, planning, land development consulting, landscape architecture, environmental consulting

through the problems that come along without micromanaging,” he said. “It’s always a different challenge but always centers around people.”

But even with great leadership, the particular struggle to fund projects is a high hurdle to overcome. “We’re continually trying to find funding for not simply what needs to be done but what should be done,” Clein said. “There are so many layers to financing projects in a city like Detroit that it slows the process significantly.”

But public funding is also a struggle, especially when it comes to transportation issues. “With the federal transportation bill always being in flux, many states have started to grapple with increasing local funding,” Clein said. “Michigan’s legislature hasn’t been willing or able to do anything about this here and it’s a huge challenge facing all communities.”

This economic factor applies to challenges within the engineering world



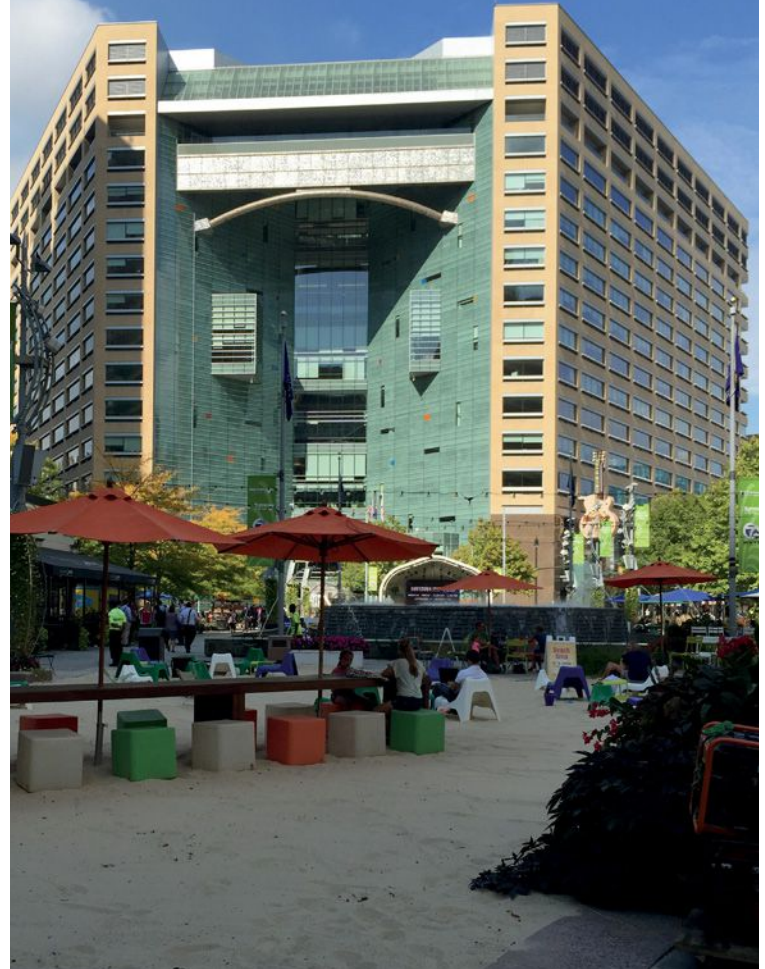
Giffels Webster, an early advocate of Complete Streets, developed the first Non-Motorized Master Transportation Plan in 2006 for the city of Detroit. The city has built more than 170 miles of bicycle lanes since 2006, well on the way to the nearly 400 miles outlined in the master plan.

specifically as well. “Many in the industry fall back on simply charging for their time and cutting rates,” Clein said. “It’s just revenue generation instead of value generation; it doesn’t recognize how important the services we provide actually are to our communities. It’s a corny phrase, but something that’s always stuck with me is that ‘civil engineers are the on-call physicians to mother earth.’”

Clein also issued the call that simply providing the bare bones of engineering isn’t enough anymore if one is truly looking to make a lasting impact. “The age of the knowledge worker is over. We need to be more than that. We need to cultivate our right brain so that we can communicate and build stronger connections,” Clein said. “Creativity and personality are just as important as technical skill, and learning doesn’t end with a degree. There’s a trend lately of specialization, where one leaves school with only a narrow band of experience. Very few problems are that specifically focused; they’re usually multidiscipline, and engineers have to be ready to face those challenges from a number of different angles.”

Specialization can be helpful in a short-term path, but long term needs diversity and the ability to apply yourself in new ways. One can’t just rest on their laurels and expect to have that last. “We as engineers are providing an important service. Many fall back on doing what they know instead of looking into how to enact a change in the norm,” Clein said, “and that’s a problem we’re just starting to face.”

While Giffels Webster has been designated and awarded a number of recognitions over the years, Clein said the most important recognition comes from within the company itself. “We’ve been running an



Giffels Webster completed the Campus Martius \$10 million infrastructure reconstruction project in downtown Detroit in late 2003. The project created an award-winning park space and helped revitalize the downtown core.

anonymous survey within our company for a few years now with over 90 percent participation rates and an improving score every year,” he said. “Our employees feel like the work that they do actually matters, and that is what matters most to me.”

Clein lives in metro-Detroit with his wife and daughter, who all enjoy the splendors of life in Motown. Clein joked that he doesn’t know what downtime is, between his fulltime job at Giffels Webster and the fulltime job of parenthood, but he does find time to volunteer on the Birmingham Planning Board and also occasionally getting to read historical books.

“I don’t like doing the same thing over and over,” he said. “Giffels Webster definitely doesn’t chisel their employees into just one thing either. We allow people to pick what they like or want to learn more about, not just what they know.”

The firm just celebrated its 20th anniversary in the Motor City with no plans to stray from the city Clein calls home. “We’re deeply invested in this city,” he said. “I believe both the firm and the city are on good paths right now. Detroit has so many more, smaller investors and developers working together to create new things. There’s more reality to the idea of growth in Detroit than ever before in my lifetime.”

MAUREEN FOODY is a freelance writer and editor who lives and works in Chicago. She can be reached at maureen.t.f@gmail.com.



COMMUNICATION CHALLENGES

WE ALWAYS HAVE such great stuff in **Civil + Structural Engineer** magazine. The November issue features a profile on Scott Clein, P.E., LEED AP, president and partner of Giffels Webster, a Detroit-headquartered civil engineering, surveying, planning, and landscape architecture firm that recently celebrated its 20th anniversary in the city. The firm is dedicated to a cause near and dear to my heart — revitalization of the city and the region. (The slogan of my other business, Mark Zweig, Inc., is “Rebuilding Fayetteville — one house at a time!”) I got a kick out of reading Clein’s interview. He asked, “Who aside from engineers gets to stimulate the economy, protect the environment, and impact quality of life all while they get to play in the dirt?”

Being able to communicate and deal with people is so important for engineers.

I also like how Clein gets some of his creative satisfaction from the managerial aspects of his job. In reference to his team at Giffels Webster, Clein said, “They’re all able to do their jobs successfully when a leader sets the framework and guides them through the problems that come along without micromanaging. It’s always a different challenge but always centers around people.” Boy, he’s right about that. Being able to communicate and deal with people is so important for engineers.

This semester, in the entrepreneurship class I teach every fall at the Sam M. Walton College of Business at the University of Arkansas, I have a brilliant engineering major student. He spent the last 10 years working as a musician and went back to school for his chemical engineering degree. He has already developed a technology to extract trace amounts of oil from groundwater around fracking sites. But what makes him really special is how he communicates and reads people. He can present his ideas in terms people understand. I have watched him read people and react to what he is hearing and seeing and change direction fluidly to help them understand. He’s going to be successful because these skills are in short supply in the engineering world. I hope the consulting world can compete with the petrochemical industry’s opportunities for this fellow!

Speaking of recruiting new grads, in an article, “Hiring the right graduate,” Terry Johnson, P.E., manager of the Water Resources Department at R. G. Miller Engineers, Inc., discusses how recruiting the right new graduates for the long-term success of a firm is a team effort, involving human resources, engineers, and managers at all levels throughout the process. And since learning is critical to young people, also in this month’s issue, Kevin Kuker, vice president - Services Operations, with IMAGINiT Technologies, explains how combining online, self-paced lessons with instructor-led sessions can provide a convenient way to upgrade engineering software skills.

There’s so much more in this month’s issue of **Civil + Structural Engineer**. We are thankful for our readers and hope you love our publication and pass it to someone else when you’re finished. Happy reading!

MARK C. ZWEIF
mzweig@zweiggroup.com