

## • NEXT STEP •

*Advice from Young Engineers Moving Forward in Their Careers*

### Work Hard and Enthusiastically Embrace Change

**K**ELLI L. MCARDELL, I.E., A.M.ASCE, has worked on many transportation and aviation projects in just seven years as a full-time engineer with C&S Companies. Her responsibilities have included preparing agreements, schedules, and cost analyses; working through environmental and local permitting; and hands-on design and construction site work. Her recent promotion to project engineer gives her supervisory responsibility over younger engineers and interns, and as she pursues her master's degree in project management, she is relishing the role. She is an exuberant powerhouse who has no intention of letting any obstacle slow her from achieving her ever-evolving goals.

#### What are the responsibilities that come with this new job?

At C&S, project engineer is the next step toward a managing engineer. I run small projects, and I have a small team reporting to me. I mentor interns and entry-level engineers, and I go out and see clients more.

#### How did you move into management so quickly?

Honestly? Hard work!

One thing that is a strength of mine is working in teams and motivating them. The teams I work with are very positive, and we have fun at work, and that definitely helps.

Also, my diverse experience helped because I have worked in the aviation and the transportation industries, and I have also done design and construction, following the engineering process from start to finish.

#### What are the key skills or traits that help you work well in teams?

I look for and find the strengths and weaknesses of everybody and put people with activities that use their strengths. For example, some people are better in the field, and some people are better behind the computer, so I match their strengths with what we need. Then I also take some time to work on their weaknesses, in the background.

Also, I genuinely care about my teams and the people who work with me. I'll occasionally bring in coffee or bagels or treat them to lunch. Or I'll put a little sticky note

on their desks that says, 'Thanks for all your hard work,' or 'I appreciate all you do.' Those small thank-yous go a long way. People are more motivated when they realize they are truly appreciated.

#### What are the chief skills and abilities that you developed in your previous position that enabled you to move on to this new position?

First and foremost, I appreciate C&S because the fact that we are a large company means that I have the ability to work on a large portfolio of projects. When you first start here, you work wherever you are needed, which gave me many different experiences. We have separate transportation and aviation departments, but now we are bridging the gap between the two, doing parking lots and highways connected to airports, and I had had experience in both areas. So that helped.

I also have the willingness to take on a project for which I will have to grow 'muscle' or add tools in my toolbox. I am not afraid of change and am willing to grab life by the horns.

#### What personal characteristics do you believe helped you win this promotion?

I am extroverted and outgoing, and that has helped with my willingness to work on project teams.

I am also tenacious and determined. When there is a roadblock, I don't back down. I will build a bridge and get over that roadblock.

And I am ambitious. I want to deliver anything the client asks. When I speak with clients, we might start talking about something that is not within the scope of our project, and I'll say, 'Oh, we could model that for you,' or 'We could construct that for you.' Going the extra mile for our clients and ensuring their satisfaction are very important to me.

#### What technical skills helped you achieve this position?

I got my bachelor's degree in civil engineering from SUNY [State University of New York] Polytechnic University, and I'm going for my master's degree now from Embry-Riddle Aeronautical University. I graduate in March, and the master's degree is in project management with a concentration in human resource management. The classes I



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**NEW TITLE**  
Project Engineer

**PREVIOUS TITLE**  
Engineer

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have taken toward that have definitely helped me in learning to work with others. In engineering, you can't do projects all by yourself. Working together and getting along with people who may have different backgrounds than you, and recognizing the value of coming together as a team, is a huge differentiator.

## What role did mentors and advisers play in your career?

I have had many great mentors, but three main ones. Mark Arner [P.E., a project engineer at C&S] was one of my professors at SUNY Poly. He helped to give me the confidence I needed to become an engineer. He told me, 'Oh, you got this! Tell people to get out of your way because you can handle this!'

Jack Thompson [LEED AP], a former boss, provided positive feedback. He would support his people until the cows came home, and I only hope to be as great a leader as he was.

And C&S provides you with a mentor when you are hired, and mine is Ron Peckham, P.E., the former CEO. We meet once a month and at any time that I need anything. Even at nights or on a weekend, I can call or email him. He taught me reflection and the benefit of realizing how far I've come. He also encourages me to think about the lessons learned and how I can move forward from any errors—or accomplishments. And every year he helps me write new goals for myself.

## What do you hope to accomplish in this new position?

I hope to deliver successful projects and maintain good relationships with clients, and I hope to help the younger engineers who work with me to continue to progress and succeed.

## What is one item that you can share from your personal or professional bucket list?

This year I want to do a fifty-mile road bike race. I have a road bike I use often.

And I absolutely want to learn to play an instrument. I never did that in elementary school, so I want to do it now. I am probably going to take piano lessons.

## What would your current coworkers be surprised to learn about you?

I do not drink any coffee. People always ask me if I do because I am so energetic, but I don't.

## What quote or principle do you try to live by, in your work or your personal life?

I have a motivational quote board on Pinterest, and one of my favorite quotes from that is, 'A little progress each day adds up to big results.'

## Where do you think the field of civil engineering is headed in the next five to ten years?

Having had experience in the design industry and in construction, I think that design is moving way faster than construction. So, I think we need to either allow the construction side to catch up or do something to help construction to get within the same alignment. We have multiple 3-D programs right now—Revit, Autocad 3-D, OpenRoads—and all the engineers are very familiar with them. But the construction side is still behind in those capabilities.

And with that, I think there will be even more integration of the construction and engineering fields. I see it moving toward a sort of hybrid where during the early design process, when we are doing schematics, either the contractors are involved at that stage or the engineers *are* the contractors.

## What advice would you give to other young engineers who would seek positions similar to yours?

Definitely hard work. For me, that means, stay focused, do your best, ask questions, and be a sponge to the knowledge inside and outside your organization.

Become involved in organizations such as ASCE and Toastmasters. Con-

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tinue your education; I'm enrolled in the Project Management Institute and will receive my project management professional certification soon.

Don't be afraid of opportunities. Be willing to leap, even if it is something that is scary or uncomfortable. My example of that is that I am working full time and going for my master's degree, and I teach engineering drawing at a local college. What motivates me is seeing my students succeed. When one of my students calls me to tell me they got their first full-time job, I have a 'proud mom' moment.

Also, be agile and willing to change, whether it's learning new computer programs or project delivery methods. You have to bend and mold with your organization and the industry to fully succeed and prosper.

—LAURIE A. SHUSTER

*Are you a younger member who has recently taken the next step in your career? We'd like to hear from you. Email [cemag@asce.org](mailto:cemag@asce.org) using the subject line "Next Step."*