

ENGINEERING WEEK FEATURE



John C. Hogan, P.E., LEED AP
CEO & Principal
Hall & Foreman, a division of
David Evans and Associates Inc.



Renita Mollman
Vice President
Burns & McDonnell

Burns & McDonnell

Founded in 1898, Burns & McDonnell is a full-service engineering, architecture, construction, environmental and consulting solutions firm. With the multidisciplinary expertise of more than 4,300 employee-owners in offices nationwide, Burns & McDonnell plans, designs, permits, constructs and manages facilities worldwide with one mission in mind — to make our clients successful. Visit our website at www.burnsmcd.com.



Hall & Foreman, a division of David Evans and Associates Inc.

Hall & Foreman Inc. merged with David Evans and Associates Inc. (DEA) in mid-2014. Currently, Hall & Foreman is operating as Hall & Foreman, a division of David Evans and Associates Inc. (H&F). What this means to our clients is that they not only keep the over 50 years of experience with H&F in Southern California, but they gain access to an expanded pool of combined resources. We now boast 120 employees in eight offices across the region to serve our clients and their needs. Founded in 1976, DEA has more than 800 employees in 20 offices located across nine states. We provide services for the built and natural environments. Our experts have allowed us to become a recognized leader in the design and management of complex transportation, land development, water resources and energy projects nationwide. DEA is an employee-owned corporation and consistently ranks among ENR's (Engineering News Record's) "Top 100 Pure Design Firms" in the nation.



Top engineering professionals speak to the Orange County Business Journal about the most critical services needed in the country, and how they are addressing these demands, as well as other important topics those in the engineering field face today. →

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recognized professional services consulting firm. Our combined firm means increased resources for clients with infrastructure and development projects throughout Southern California. Together, we offer the talents of engineers, surveyors, planners, landscape architects and natural resource scientists who can deliver a wide range of project services under one roof. We have more than 120 employees in nine offices across California.

► **What will be the most critical engineering services the country will need going forward?**

Renita Mollman of Burns & McDonnell: Our country’s overall infrastructure is declining and will need major reconstruction and upgrades very soon. For example, the interstate system in our country was predominantly built in the 1950s and 1960s and has not seen major reconstruction since then, especially the bridges. There are reports indicating that over 50 percent of the bridges in the U.S. are failing. This will require engineers to design and construct new bridges. Many cities in the U.S. have water and sewer distribution mains that are several decades old. These distribution mains will require replacement. The same is true for many of our electrical and communication facilities as well. I think that in the next decade, we will have to fund a program that provides the funds to upgrade the country’s aging infrastructure.

John C. Hogan of Hall & Foreman, a division of David Evans and Associates Inc.: The American Society of Civil Engineers issues reports cards on the state of our national, state and local infrastructure. The grades have been consistently low – C’s and D’s. We must increase our investment in our overall infrastructure, especially in the critical areas of transportation and water delivery. California’s traffic congestion and our challenges with managing water distribution due to our current drought are factors inhibiting the abilities of our state’s residents and businesses to reach their full potential and prosper. I am confident the engineering industry has the talent and

creativity to address these challenges, but that talent must be supported by local and federal investment. We are encouraged that the need to invest in infrastructure is increasingly being recognized by our political leaders at all levels of government. Passage of the water bond by California voters in November was evidence that the public is also aware of this need. We are optimistic that increased infrastructure investment will become a key component of the policies and campaign platforms for both major political parties.

► **What is your firm’s experience working in this region?**

John C. Hogan of Hall & Foreman, a division of David Evans and Associates Inc.: Hall & Foreman has played a key role in Southern California’s development for more than 50 years. We have planned, engineered and surveyed projects involving more than a quarter million homes; tens of millions of square feet of retail centers, office buildings and industrial facilities; thousands of miles of roadways and other infrastructure; and scores of school, college and civic facilities. These projects are located throughout Orange County, the Inland Empire, the High Desert and the LA Basin. Our integration with DEA means we bring our clients more innovation and more solutions through an expanded team of professionals in nine offices across California located in Tustin, Los Angeles, Ontario, Sacramento, San Diego, Santa Barbara, Santa Clarita, Temecula and Victorville.

Renita Mollman of Burns & McDonnell: Burns & McDonnell has experience throughout California and a long history of experience going back to the 1920s. We began working on major infrastructure projects in the 1920s and 1930s. Since that time, we have expanded to serve major utilities in Southern California on their electrical infrastructure upgrades, major airports, military facilities and ports. We have also helped several clients with their environmental remediation issues throughout Southern California.

► **What is your firm’s expertise?**

John C. Hogan of Hall & Foreman, a division of David Evans and Associates Inc.: Hall & Foreman provides civil engineering, surveying and land planning solutions to residential and commercial builders, developers, public agencies, municipalities and school districts. Our footprint in the Southern California market expanded in 2014 as we joined forces with David Evans and Associates Inc. (DEA), a nationally

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► **What are the most important qualities your firm looks for in entry-level engineers?**

Renita Mollman of Burns & McDonnell: Burns & McDonnell is a 100 percent employee-owned company, so in addition to strong technical skills, we also look for entry-level engineers who have an entrepreneurial spirit and business skills. We ask all our employee owners to think like an owner, since we are all owners of our company. Engineers with strong internships and a high GPA in their field of study are always looked on favorably. This shows to us that they are driven to succeed and take ownership of their own development and career. We always hire for attitude and aptitude. You can often teach someone new skills, both technical and business, if they have the right training and aptitude. It is very hard to change someone's attitude.

John C. Hogan of Hall & Foreman, a division of David Evans and Associates Inc.: At all levels, we look for individuals who have soft skills, as well as technical aptitude. For us, a candidate who stands out is someone who has good communication skills. Being able to design a solution is great, but a successful engineer must be able to explain and advocate for their idea. We also look for individuals who demonstrate a desire to get involved with extracurricular activities or to volunteer in the community. Participation with organizations on campus, like the American Society of Civil Engineers and other clubs, help differentiate a candidate. Our corporate culture encourages involvement with industry associations and giving back through philanthropic activities, so someone who embraces that spirit is a good fit for us.

► **What is the Envision Sustainable Infrastructure Rating System and how will it affect engineering and construction projects in the future?**

Renita Mollman of Burns & McDonnell: Since 2000, owners desiring "green" buildings have had the U.S. Green Building Council's Leadership in Energy and

Environmental Design (LEED) certification system to guide their efforts. But those responsible for water reclamation plants, power substations, bridges and industrial facilities have been largely on their own — until now. Envision™ is making it easier for municipalities and utilities to evaluate and publicly demonstrate project sustainability. Envision™ includes a process for evaluating projects using standardized criteria. The program was introduced in 2012 by the Institute for Sustainable Infrastructure (ISI), a nonprofit founded by the American Society of Civil Engineers, American Public Works Association and American Council of Engineering Companies. Burns & McDonnell is a charter member of ISI and only the second firm worldwide to have 150 professionals credentialed to guide clients in the use of Envision. Envision considers not only a project's environmental impact, but also its life cycle economic and community quality of life contributions. Envision also addresses elements of the planning and site selection process related to community stakeholder outreach, helping organizations make decisions that stand the test of time.

► **How well is (or isn't) the supply of engineers meeting market demand? What specialties are most in demand?**

John C. Hogan of Hall & Foreman, a division of David Evans and Associates Inc.: Demand for engineers in Southern California is up. As momentum in the economy picks up, so does the need for engineers. With that comes the challenge of finding the right candidates, with the right blend of technical experience and soft skills, to fill the open positions. Project engineers and project managers with 5-10 years of experience are particularly difficult to find. It takes time, but our philosophy is to overcome this challenge by developing our entry-level engineers to move into these roles as they gain experience.

► **Are there opportunities in the engineering field for those who have science degrees, such as biology or archaeology?**



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Renita Mollman of Burns & McDonnell: Engineering and construction, in many cases, involve the meeting of the natural environment and the built environment. To that end, the engineering field is always in need of professionals with knowledge of the natural environment who can take steps to protect it and help ensure its integrity, as well as help protect the integrity of cultural resources. Biologists and archaeologists with knowledge of relevant environmental regulations will always have a place in the field of engineering.

ENGINEERING NEW HORIZONS.

THAT'S WHAT WE DO.

What we do isn't just about what we design and build. It's about making the world a more amazing place. Empowering future leaders through Science, Technology, Engineering and Math (STEM) education is a big part of that. At Burns & McDonnell, we inspire our engineers to take on the world's toughest challenges. And we encourage them to change, shape and improve the future.

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