



## Surface Transportation Design for DOTs and Public Works Agencies



**M. Mansoor Ahsan, P.E.**  
CEO

### **About Bridgefarmer & Associates, Inc.**

Bridgefarmer & Associates, Inc. is an employee-owned civil engineering firm with a focus only on transportation design. We specialize in all aspects of transportation design: roadways and bridges, railroad lines and bridges, highway interchanges, retaining walls, drainage, and utility relocations. The firm is headquartered in Dallas, Texas and maintains offices in Austin; Houston; Little Rock, Arkansas, and Tulsa, Oklahoma.

Since 1976 when Bridgefarmer & Associates was founded, the firm's driving inspiration has been to create the most effective and reliable outsourcing option available to meet the needs of transportation agencies and bring value to our clients with innovations and cost-saving design solutions.

Bridgefarmer engineers study all civil engineering aspects of a project, considering the many ways in which the project will affect the community. Bridgefarmer has won top state and national awards from the American Council of Engineering Companies over the past decade – three just within the past two years. We believe the greatest measure of our success, however, is the confidence our clients affirm as they select us for project assignments year after year.

**Interview conducted by: Lynn Fosse, Senior Editor, CEOCFO Magazine**

### **CEOCFO: Mr. Ahsan, would you tell us about Bridgefarmer & Associates?**

**Mr. Ahsan:** Bridgefarmer is a regional transportation firm in the Southwest United States serving Texas, Oklahoma and Arkansas. We have been in business since 1976 and have five offices throughout this region. Our primary focus is on the surface transportation market: roads, bridges, drainage and railroads. We have been working in this sector for almost forty years and primarily our client base is DOTs (State Departments of Transportation) and public works agencies.

### **CEOCFO: What is the range of your projects?**

**Mr. Ahsan:** The size of our projects could be stated in terms of dollars or in terms of length and complexity. The value of the projects could be a hundred thousand dollars or \$100 million in construction amount, and it goes all the way up to \$4 billion dollar projects. Bridgefarmer's leading project, which is currently the largest single project in the country, is the LBJ Expressway widening in Dallas. It is a design-build project and the first P3 (Public Private Partnership) project in the state of Texas, which means that it is being privately funded. Bridgefarmer teamed up with a Spanish firm and here we are doing this project in Dallas right outside our corporate offices. Traditionally, our jobs are multi-level interchanges that could be up to five levels, bridges or roadways where we have up to 34 miles of corridor. The complexity of the projects could be as small as dealing with a problem on a bridge column where a technical solution is needed from people like us who are ready to get involved and very much engaged in the process. They run a variety and wide range of projects, such as when the Union Pacific Railroad has a problem on their tracks or their bridges, they call us. We recently completed three bridges over one of the busiest 24/7 rail yards operating in the country. It is called the UPRR Davidson Yard in Fort Worth, and we built a multi-level interchange right on top of it. Essentially, our projects are of different varieties that could be any size, but the complexity of the problem is where we come in and truly help our clients.

**CEO CFO: *What do you understand fundamentally about the engineering that maybe other companies do not understand as well?***

**Mr. Ahsan:** I believe strongly in adding value to our projects. What do we do differently and better than our competition? To find a solution however complex that project is. What sets us apart is time and time again, our clients tell us, is that we bring a ton of energy and passion and we are not managers who are managing managers. We are engineers and I am a very hands-on person. I get involved in a very detailed level on all projects. Over the years, potential clients will go to one of our competitors looking for a solution, but what they get is somebody that comes from a sales department as opposed to somebody that can come in and truly solve their problem. They need someone that understands their problem and can provide many choices in solving problems. That is where we have been very successful and that is what sets us apart. We offer multiple choices at different levels of cost for our clients and that has helped us stay in business. When things were lean in 2008 and 2009, we were able to actually expand the corporation at that time because of that energy level that we bring to projects and to solve problems.

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**CEO CFO: *What might be some of the newer concepts or technology resources that you are able to bring to the table?***

**Mr. Ahsan:** If you think about Bridgefarmer, it is not a big design house as you would see some of the multi-national companies who are either national or international firms, yet here we are competing in the same space and arena where they are. One of the big reasons we do that is that we push the technology very far. We have used systems which are already available to advance plans and our work further along. Over the years, the technology especially in civil engineering has taken off. We noticed that to compete in the market for the kind of projects we wanted to compete in for the accelerated delivery method market, we must utilize technology so that we do not have to rely upon ink and mylars, which was yesterday's way of delivering. Now everything is based on a computer model. We have systems in place where if there is a conflict, whether it is a utility or a pipe or another existing problem, we can model the entire project in 3-D and show it to our clients. We can show them the areas where we need to be careful in how we can provide the solutions and identify long lead items. Where technology has helped us is by allowing us to create proprietary software. We have written our own programs that help us accelerate delivery methods where we can deliver bridges, roads and especially fast-paced projects much faster than anybody else. We can do this very nimbly, quickly and with accurate results. We are on the cutting-edge of utilization of technology. We give the contractor a model and he can go out and build it based upon our model as opposed to creating a model from our diagrams. I would say technology has been a good friend to Bridgefarmer.

**CEO CFO: *How do you reach potential clients?***

**Mr. Ahsan:** Developing and maintaining relationships with clients is a key – face to face relationships, not merely through emails or social media. But we still have to compete. Our primary market is a qualification based selection from DOTs, Toll Road Authorities and other localized agencies responsible for transportation infrastructure. We have to submit our proposals and then we go through the shortlist process and then through the interview selection process. The alternate way of doing things now is design-build projects or P3, which is an alternate delivery. This market has been very good to us. We have been pursuing just about every design-build project in the state of Texas, which is the leader in that arena, and we work with most of the national contractors because of the service we provide. When we look for a partner, we look for similarities whether it is cultural similarities or technical similarities -- knowing where the contractors are good or not so good and how we complement one another. When we select our partners, we look for two or three things such as technical ability and how passionate they are about their work. Civil engineering in my opinion is not as difficult, but if you do not pay attention, a lot is at risk. If a bridge fails, it has a catastrophic result. Paying attention to the details is what matters and we work with partners who are as careful as we are.

**CEO CFO: *What do you look for in your people?***

**Mr. Ahsan:** When we hire people, we have never put an ad in a paper. Just about everybody in this company has come in through networking and through knowing people who we worked with and have seen us in action. When we bring in people, we look above and beyond their technical abilities. The technical ability of the individual is how you get your foot in the door. Personalities can be polished but to get accepted at Bridgefarmer, a big part is you have to have a passion and commitment towards civil engineering. Civil engineers can make life a lot easier for people through better, safer infrastructure.

**CEO CFO: *What is ahead for Bridgefarmer & Associates?***

**Mr. Ahsan:** We have set goals for eight offices in eight different states by the year 2020. We are more than halfway there with five offices. We look at the growth markets and we look at where things are happening in the transportation industry. We want to branch out to different markets as we serve our clients. A relatively new market is alternate delivery of projects whether it is P3 or design-build. We also see that there is a significant potential for the rail market; the railroad has been a good market for us and we do work with all Class 1 railroads. We want to make sure that as the federal government is applying the funding to the rail industry that we can have our share of the market. Growth is one thing but we want to have a sustainable growth and not growth for the sake of growth. Most important for us is whether Bridgefarmer stays a leader in the industry by making sure that we truly add value to our clients and projects and have that passion to deliver projects where we feel that as engineers, we are able to make a difference.

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**BIO:** Mansoor prepared for his career in design at the University of Illinois, then earned his Master's degree in structural engineering from Bradley University in Peoria, Illinois. He went on to study business management at the Harvard School of Business Management and the Dale Carnegie Management Program. During his early career, Mansoor designed highway and railroad bridges in Illinois, Michigan, Florida and Washington, ultimately becoming a registered civil engineer in 11 U.S. states. In 2002, Mansoor became the CEO of Bridgefarmer & Associates, Inc., the Dallas, Texas-based civil engineering firm. With over 28 years of award-winning structural design and construction experience, Mansoor has become a leading voice in the industry for alternate delivery transportation projects. His innovations for design, scheduling and construction methodology have saved project owners hundreds of millions of dollars.

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