

# The Voice

DECEMBER 2011

# Voice

**ACEC**  
AMERICAN COUNCIL OF ENGINEERING  
COMPANIES OF TENNESSEE

THE VOICE OF TENNESSEE'S ENGINEERING COMPANIES

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## Engineers Play Important Role in Economic Development Efforts in Memphis

by *Ashraf Elsayed, PhD, PE*  
*Chief Engineer, Memphis Branch*  
*Geotechnology, Inc.*

The Mississippi River is known as America's greatest commercial waterway. In today's supply-chain driven world, owners of intermodal and storage facilities have realized the Memphis area's potential and have constructed a substantial number of storage and processing facilities that take advantage of the area's water, rail, and interstate systems.



**Ashraf Elsayed**

One challenge to the construction of such facilities is that they require a lot of real estate, and location—not site conditions—is the predominant factor for locating facilities. Large tracts of available land are becoming scarcer as development continues and more facilities are being located on the banks of the Mississippi River.

Furthermore, the desirable sites have inherent challenges relative to flood elevations, natural resources conflicts, poor subsurface conditions, and proximity to a seismic source.

### Engineers overcome site challenges

The subsurface conditions alone have presented many challenges to geotechnical engineers who are working with project developers, civil engineers, and structural engineers in efforts to support the planned buildings and infrastructure. The young deposits along the river are relatively weak and compressible which presents challenges in controlling settlement of buildings which often have heavy crane loads and vibrations from equipment and heavy traffic loads due to distribution needs. Geotechnical engineers seek to understand the expected soil behavior using discrete subsurface investigation points with soil borings, in-place and laboratory tests, local experience, and geologic knowledge.

Difficult sites require more emphasis on understanding the fundamentals of both engineering and construction. There is also more dependence on sophisticated software.

Tennessee engineers are using the fundamentals and finding ways to innovate.

Instead of solely relying on traditional, expensive, and limited-in-benefit soil replacement as a main site improvement

tool, geotechnical engineers in West Tennessee are utilizing recent advancements, such as rammed aggregate piers, controlled

*(continued on page 2)*

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*Difficult sites require more emphasis on understanding the fundamentals of both engineering and construction.*

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# Opportunities Are Here

by Mike Pohlman, PE  
 President, ACEC of Tennessee

If I was asked to describe ACEC of Tennessee in one word, it would be “opportunity.”

As president of ACEC of Tennessee, I have become increasingly aware of the many opportunities that it provides. A review of the Calendar of upcoming activities that appears in this newsletter illustrates my point.



**Mike Pohlman**

Through its *Engineering Excellence Awards* program, ACEC of Tennessee provides an opportunity for firms to gain recognition for their engineering accomplishments.

ACEC provides a place and a platform to voice our opinions in meetings with state officials such as the Environment & Energy Committee meeting coming up in January and the Legislative Reception and the Engineers’ Day on the Hill activities coming up in March.

Did you notice the January 20 date? That is the deadline for engineering stu-

dents to submit their ACEC scholarships applications. By submitting an application, they have an opportunity to win \$1,000 awarded by ACEC of Tennessee and additional scholarships totaling up to \$20,000 awarded by our national organization. Please encourage students to submit their applications by January 20. Details are available at [www.acectn.org/Scholar.htm](http://www.acectn.org/Scholar.htm).

In April in Washington, DC, we will have the opportunity to network with colleagues nationwide and to connect with elected leaders on Capitol Hill.

However, opportunities are funny things – they are only useful if you take advantage of them. The opportunities are here. Get involved. Stay involved. It will make a difference to you and our profession in 2012.

I hope all of you have a joyous and safe holiday season and look forward to an exciting and prosperous 2012.

Q

**Qualifications**

**Based Selection**

QBS lowers overall project cost through designs that reduce change orders during construction and minimize long-term maintenance and repair costs.

## Important role *(continued from page 1)*

modulus columns, soil-mixing, and more efficient deep foundation systems to meet the loading and performance demands of heavy industries and major transportation facilities. Site-specific seismic studies for better understanding of earthquake impact on local soils also aid the design team’s efforts in efficiency. Such techniques have allowed engineers to strike the difficult balance of designing safe and efficient foundations that can be built economically and generally with typical construction means and methods.

### Ready for the next challenge

Meeting the challenges of competitively building on difficult sites enabled several heavy industries, such as Nucor Steel (in production), Mitsubishi Electric (under construction) and Electrolux Home Appliances (in final design) to make the decision to build major facilities in Memphis.

As this trend continues, the challenges will become greater, but that is what engineers are trained to do: solve problems. Good communication among the owners, developers, decision makers, design professionals, and continuous utilization of recent engineering innovations should help develop Memphis into the home of more industries and an exciting place to conduct business and practice engineering.

## MEMBER NEWS

- Burkley M. Allen, PE, LEED AP, I.C. Thomasson Associates, Inc., was recently sworn in as a member of the Metro Nashville City Council.
- Nashville-based Smith Seckman Reid, Inc., (SSR) has opened a Chicago office. SSR now has 15 offices nationwide.
- The East Tennessee Chapter of ACEC met in October to hear from two candidates for Knoxville mayor, Madeline Rogero and Mark Padgett.
- **Impressive news!** Congratulations to these ACEC of Tennessee members with offices in Tennessee that appear at the top of Engineering News Record’s annual Top 500 rankings:
  - 1 - AECOM
  - 6 - AMEC
  - 7 - Tetra Tech
  - 10 - Parsons Brinckerhoff
  - 12 - Arcadis
  - 14 - Parsons
  - 23 - CDM
  - 25 - Stantec
  - 27 - Atkins North America

# Entries Announced for Awards Competition

**W**hat do a world famous rock band, skating and a sinkhole have in common? Answer: The 2012 *Engineering Excellence Awards* competition.

The 23 projects entered in the 2012 competition reflect the diverse and interesting ways in which engineers are involved with entertainment, recreation, and public health and safety. Water—in the form of creek water, storm water or flood water—figures prominently in many entries. Other projects involve planes, buses or automobiles.

“The entries are a reminder of how the work of Tennessee engineers impacts virtually every area of economic endeavor and public and private activity,” said Greg Brubaker, PE, chair of the 2012 *Engineering Excellence Awards* (EEA) Committee.



Kim King, PE, EEA co-chair, pointed out that the entries are for projects located throughout Tennessee – from Sevierville to Memphis—plus the states of Colorado, Texas and Washington.

## Next steps toward winning

Now that entries have been submitted, what's the next step in the competition? By January 13, the entrants must submit information notebooks and panels describing their projects in detail. Then independent judges will gather in February to review all the entries and complete an evaluation of each project to determine the winners.

On March 6, the winners will be announced at a gala awards banquet attended by federal, state and local officials, business leaders and engineers. The Grand Iris Award will be presented to the project judged overall winner of the competition. A Grand Award will be presented in each entry category at the discretion of the judges. Announcement of the winners is then distributed to media statewide.

“There is always a ‘wow’ factor connected to the competition and awards event,” said Brubaker. “The work of Tennessee’s engineering firms never fails to impress.”

## 2012 EEA Award Entrants

**AECOM: *Special Projects*** - TDOT Local Government Guidelines Update, Nashville, TN  
**AECOM: *Studies, Research and Consulting*** - I-40 @ SR66 Diverging Diamond Interchange, Sevierville, TN  
**ARCADIS: *Water Resources*** - Rock Stabilization at Ocoee No. 2 Flume, Ocoee, TN  
**Askev Hargraves Harcourt & Associates, Inc.:** *Small Projects* - Memphis Skate Park, Memphis, TN  
**Atkins North America, Inc.:** *Transportation* - Repair Runway 05-233-Fairchild Air Force Base, Spokane, WA  
**Brown and Caldwell:** *Studies, Research and Consulting* - Wastewater Process Design, NREL Ethanol Model, Golden, CO  
**Brown and Caldwell:** *Water and Storm Water* - Dry Creek WWTP Flood Recovery, Nashville, TN  
**EnSafe Inc.:** *Environmental* - Century-Old Brownfield Site Remediation, Chattanooga, TN  
**EnSafe Inc.:** *Studies, Research and Consulting* - Sustainable Safety Management Program, Dallas, TX  
**Florence & Hutcheson, Inc.:** *Special Projects* - SR 7 Reconstruction (CNJ318), Santa Fe, Maury Co., TN  
**Garver:** *Transportation* - Henry County Parallel Taxiway Relocation, Paris, TN  
**Gresham Smith and Partners:** *Water Resources* - K. R. Harrington Flood Recovery Effort, Nashville, TN  
**Gresham Smith and Partners:** *Water Resources* - REOstone Levee Reconstruction, Nashville, TN  
**Gresham Smith and Partners:** *Water and Storm Water* - KUB Lower Third Creek Wastewater Storage Facility, Knoxville, TN  
**Jacobs Engineering Group:** *Water and Storm Water* - Beaver Creek Waste Water Treatment Facility Expansion, Powell, TN  
**J. R. Wauford & Company Consulting Engineers, Inc.:** *Water and Storm Water* - Maryville Regional Wastewater Treatment Plant, Maryville, TN  
**K.S. Ware & Associates, LLC:** *Small Projects* - Davidson Street Sewer Collapse, Sinkhole Stabilization, Nashville, TN  
**K. S. Ware & Associates, LLC/Hart Freeland Roberts, Inc.:** *Studies, Research and Consulting* - Richland Creek Embankment Failure Investigation, Nashville, TN  
**Neel-Schaffer, Inc.:** *Studies, Research and Consulting* - Boyd Bridge Structural Analysis, Knoxville, TN  
**RPM Transportation Consultants:** *Small Projects* - Cool Springs Area ITS Expansion Project-City of Franklin, Franklin, TN  
**TTL, Inc.:** *Studies, Research and Consulting* - U2 Concert Stage at Vanderbilt Stadium, Nashville, TN  
**Vaughn & Melton Consulting Engineers, Inc.:** *Water Resources* - First Creek Channel Improvements, Knoxville, TN  
**Wilbur Smith Associates:** *Transportation* - John J. Duncan Jr. Knoxville Station Transit Center, Knoxville, TN

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(as of November 25)

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## CALENDAR

**JANUARY  
13**

EEA Entry Notebooks  
& Panels Due

**JANUARY  
17**

Environment & Energy  
Committee

1:30 p.m., TDEC  
Office

Information:  
Amy Spann at  
aspann@ensafe.com

**JANUARY  
20**

ACEC Scholarship  
Applications Due

**FEBRUARY  
19-25**

Engineers' Week

**MARCH  
5**

Legislative Reception  
Sheraton Nashville  
Downtown  
6:00 p.m. to 7:30 p.m.

**MARCH  
6**

Engineers' Day  
on the Hill  
State Capitol, Nashville  
9:00 a.m. to 1:30 p.m.

*Engineering Excellence  
Awards* Banquet  
Franklin Marriott  
Cool Springs  
6:00 p.m. to 9:00 p.m.

**APRIL  
15-18**

ACEC Annual  
Convention &  
Legislative Summit  
Washington, D.C.





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**DECEMBER 2011**  
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[smayes@managementsolutionsllc.com](mailto:smayes@managementsolutionsllc.com)

A woman-owned small business with extensive experience with project controls, project management, cost estimating, process improvement, and project management training and construction management. Excels at developing, implementing, and facilitating training on systems, software and processes relative to project management to ensure excellence in technical, schedule and cost performance.

**F R O M   T H E   E X E C U T I V E   D I R E C T O R**

*Look What We've Accomplished!*

by Candy Toler  
Executive Director, ACEC of Tennessee

As the year draws to an end, let's reflect on a few of our accomplishments in 2011:

- we had several victories on the legislative front, including the Governor's tort reform bill and ACEC of Tennessee's "mini tort reform" for TDOT projects;



**Candy Toler**

- we pushed back efforts to limit the state's ability to outsource work to the private sector and legislation that would have required the designer of a state project to estimate the annual BTU consumption during design;
- we have a good working relationship with the new

State Architect, Bob Oglesby, and will provide him feedback on issues like designer selection and evaluation, sustainable design guidelines, and more;

- we look forward to working more closely with the new Assistant Commissioner for Fire Protection, Gary West;

- we recognized a variety of significant engineering projects at an EEA gala with record attendance;

- we set an all-time record for attendance at our annual meeting and we are making plans to have the 2012 meeting with ASCE; and

- we hosted a very successful Tennessee Engineering Foundation luncheon where speaker TDOT Commissioner John Schroer entertained a capacity audience and pointed out the realities of state and federal funding for transportation (that part was not entertaining!).

Thanks to all of the ACEC members who contributed to these successes.

**Looking Ahead**

The General Assembly will reconvene on January 10. Redistricting will be at the top of the agenda, because the entire House and half of the Senate members have to run for reelection in new districts in 2012.

We hope that you plan to participate in ACEC of Tennessee's Engineers' Day on the Hill on March 6 and ACEC national's Annual Conference and Legislative Summit April 15-18 in Washington, DC. Both will be great opportunities to inform legislators about the issues facing the engineering profession.

Best wishes for the holidays and a terrific new year.