INSIDE:
ACE/USGBC Launch Sustainable Design Award Program
Mentoring and the Military
ACE Students Connect with Peers, Professionals Long After High School
I’m constantly amazed at the passion and creativity that ACE Mentor volunteers bring to our program each year, pushing us into new frontiers through unique and innovative programs that promise to change the lives of young people across the country.

Take for instance our recent partnership with AGC Construction Education Program in California to develop the first ACE Mentor summer camp and the AGC Student Chapter/ACE Mentor Student Exchange Program. Then there’s ACE Mentor Jodi Paci and entrepreneur Amanda Weathersby’s program to use ACE concepts to help injured U.S. military men and women at Walter Reed Medical Center find careers in architecture, engineering and construction when they leave the military.

At the same time, our organization is attracting attention from notable organizations. The National Endowment for the Arts awarded ACE a grant to develop the Green House Design Basics (GHDB) curriculum focusing on a sustainably designed house. The MetLife Foundation and the Afterschool Alliance honored the Junior ACE Mentor Program in Sacramento with an Afterschool Innovator Award for its program to teach middle school students about green design and introduce them to careers in the design and construction industry.

As new programs and directions continue to emerge, ACE continues to grow by leaps and bounds. We opened 12 new affiliates to serve 60 additional communities across the U.S.—and have a double-digit waiting list of other cities that would like to participate in the ACE Mentor Affiliate program. We welcomed new sponsors including Figg Engineering Group and Stantec. These organizations join our 50+ other sponsors that come from all over the industry.

We also continued to build stronger support networks for students who graduate from the ACE program. We launched the ACE Alumni Network, a web-based system designed to create structure and connections with former ACE students earlier this year. Students are already using the network to stay in touch with fellow alumni, interact with ACE and its numerous sponsors, find jobs and internships and much more.

On an administrative level, ACE introduced the National Affiliates Council, a group of individuals that I call guardians of ACE values and liabilities. Geographically dispersed, these appointed members represent ACE in their region. Their job is to advise ACE National on issues relating to the way the affiliates think and feel as the hands-on experts to this program. They also serve as a liaison between ACE National and their representative region.

We’ve had a tremendously successful year and we’re excited about the ideas and opportunities emerging for the next school year. I hope you enjoy the following ACE Mentor Yearbook 2011 report—and if you aren’t already involved with our organization, give us a call. We think you’ll be amazed at how a few minutes a week can change a child’s life, a career and an industry.
Another year and another 10,000 talented and excited young people are on the road to careers in the building and construction industry. Representative Jim Himes, D-Connecticut, 4th District, said these words to Congress earlier this year, “I applaud volunteers, students and companies involved in the ACE Mentor Program and I’m encouraged by their commitment to create jobs and improve young lives.”

Each year, 6,000 volunteers mentor an increasing number of high school students in 42 states. Leading companies in the construction industry contribute $22 million in volunteer time to the program.

Denise Ramsey, vice president, chief engineer and AE Group principal for the Commercial Delivery Group at the Haskell Company, says, “You get back more than you put in.” She recalls the story of a young man who had won a $1,000 ACE scholarship who said he would never have gone to college if the scholarship hadn’t shown that ACE believed in him. “As an ACE mentor, it was my proudest moment,” says Ramsey. “It really demonstrated what a significant impact this program can have on young people’s lives.”

Bryan Burke, a civil engineer and owner of Millennium Resource Engineering and ACE mentor for the last four years, adds, “Contract deadlines, budgets, and subcontracts, etc., just don’t seem important—at least for a little while—when I am working with the future of our industry.”

Some might be surprised at the unrestrained enthusiasm coming from mentors and young people in the program. Those less optimistic might point to the growing number of job losses and decreased project funding as a sign to choose a different path. Despite the current economic malaise, forward-thinking firms continue to push forward in preparation for the turnaround.

“Now is the time to identify and develop the young talent we need to create the sustainable buildings of tomorrow,” says Sandy Diehl, vice president for Integrated Building Solutions at United Technologies Corp. “The ACE Mentor Program does just that by helping ACE is making a proven difference in the future talent sources for this industry and in the lives of the kids involved.”

—Hank Harris, President and Chief Executive Officer, FMI
introduce young people to the exciting opportunities that the building professions provide.”

**Community pledge**

During the 2010-2011 school year, ACE National opened 12 new affiliates providing programs in another 60 communities. The organization provided scholarships through this last school year in excess of $10.4 million.

Tony Guzzi, president and COO of EMCOR Group Inc. and member of the ACE Mentor Program’s board of directors and executive committee, says, “What pleases and impresses me the most is that despite really difficult industry conditions, ACE mentors continue to show commitment to the program through time and financial contributions. Bottom line, ACE makes a difference in kids’ lives.”

Making a difference is what drives a majority of ACE mentors. Aimée Lopez, an ACE mentor with the San Francisco Bay Area Affiliate and a project manager with O’Connor Construction Management, says, “I especially like how some ACE affiliates mentor students in rural and underprivileged areas, where those students, especially, are reminded that they too can become engineers, architects and construction professionals.”

**Inspired education**

During the year, ACE students learn the basics of sustainable design and construction, best practices for coordination and collaboration, ways to balance the requirements of all stakeholders, and much more—all before they graduate high school. On any given day, ACE students learn teamwork, ways to balance form, function and even a little about facilitating a more sustainable future.

Joan B. Calambokidis, president of the International Masonry Institute, says, “ACE provides hands-on opportunities for students with mentors that are practicing professionals in the field so ACE students know before applying to college what the industry has to offer and how they might work within it.”

For example, high school students in Palo Alto re-designed their high school to incorporate eco-friendly features. The structure’s glass tiered roofs allow natural light to fill classrooms and are slanted toward the building’s center to capture rainwater, which is diverted to cisterns and recycled for toilets and irrigation.

High school students in the Greater New York City ACE Affiliate designed a military retirement village, Aquila Villa. Five mentors worked with the team, including lead mentor Miguel Cedeño, an architect with the New York City Dept. of Design and Construction. “This year’s project was a true team effort,” explains Cedeño. “The scale and complexity of the project dictated that each student had to put on several different hats and take on several roles.”

In Florida, mentors required the students to prepare a proposal for the design and construction of a single-family home on one of three urban site locations. The design parameters included that the home was to be between 2,000 and 3,000 sq ft; include a living room, dining room, kitchen, three bedrooms and three bathrooms; and be designed to correspond with its surrounding elements. At the last...

**The ACE program represents the future of our industry, encouraging the best and brightest to take on careers that enhance the built environment and quality of life.**

—Linda Figg, CEO of Figg Engineering Group (FIGG), a National Sponsor of ACE
minute, the mentors changed the scope per “owner” requests and had the students scrambling to come up with a feasible solution by a fixed deadline—and they did!

Once these students graduate, a large majority, about 65%, move on to study architecture, engineering and construction or related fields in college.

“They’re talented, motivated and very bright,” says Linda Figg, CEO of Figg Engineering Group (FIGG), a National Sponsor of ACE. “When students commit their time to something like ACE, they can learn so much in a short period thanks to the professional and Internet resources that are readily available to them. It is inspiring to see the knowledge they gain from the ACE experience.”

New curriculums and connections

Key in the ACE Mentor Program’s continued success is its evolving business structure.

EMCOR Group’s Guzzi continues, “We’re focused on delivering a much more standardized experience for kids, regardless of location. Whether in New York or California, our goal is to provide more consistency of message and purpose.”

Developed in 2009, the ACE Mentor Program Best Practices Manual offers a compendium of ideas, experiences and materials. Its purpose is to give both new and experienced mentors a wide range of practical information that they can readily apply in their work with ACE students. The heart of the Manual is the detailed, step-by-step instructions of hands-on activities that the mentors can “plug-and-play” during their sessions with students. Every ACE affiliate has access to the guide.

ACE continues to partner with a variety of organizations to expand its ability to educate students about the building and construction industry and introduce them to current prac-
tices. Most recently, ACE received its first grant from the National Endowment for the Arts to develop the Green House Design Basics (GHDB) curriculum focusing on a sustainably designed house. As well, the AGC Construction Education Program and ACE partnered to introduce several new projects including the first ever ACE Mentor summer camp and the AGC Student Chapter/ACE Mentor Student Exchange Program.

The ACE Alumni program is also developing new programs to help former ACE students in college develop more connections. The Mentor for a Minute, a blog space, is one such tool where ACE alumni attending college can ask industry professionals a question. It could be how to solve a calculus problem to best coursework for a particular AEC career. The Mentor for a Minute blog will be available in Fall 2011.

ACE has also pushed its influence beyond high school students through an innovative program to help wounded military personnel find a rewarding and exciting career in the building and construction industry as architects, engineers, contractors or any of the other related fields [see Mentoring and the Military].

Pamela Mullender, president and CEO of the ACE Mentor Program, concludes, “The dynamic and diverse makeup of our executive board and leadership council allows us to reach out to communities in creative and innovative ways. Every building and construction firm, regardless of size, has an opportunity to touch the lives of young adults across America from all cultures, ethnicities and financial backgrounds while at the same time, building a strong foundation for our industry. The future is ours to create—ACE is the vehicle for success.”
NEW AFFILIATE ACHIEVES IMPRESSIVE, SPEEDY RESULTS

For the Twin Cities ACE Mentor affiliate in Minn., the last year has been a rapid-fire lesson in cooperation, coordination and action. In less than a year, affiliate organizers moved from conceptual discussions to its first mentoring session with almost a dozen teenagers.

In early 2010, Twin Cities-based representatives from Mortenson Construction, PCL Construction, Associated Builders and Contractors (ABC) and Zurich discussed starting an ACE Affiliate. PCL, ABC and Zurich have all been national sponsors of ACE and involved with ACE affiliates across the states for a number of years.

Seth Hausman, head of operations and profit management for Zurich's construction business, recalls, “At a recent ACE national board meeting, we realized that the Twin Cities was one of the largest metro areas in the country without a chapter. This was most surprising given the strong commitment the region has toward education and community engagement. We quickly were connected with Mortenson and PCL to begin the work to build the chapter.”

Via a conference call with the ACE national office in early fall, representatives from each of the participating firms established the mechanism to facilitate the first Twin Cities ACE Affiliate. By December, five other companies joined and the members created a board of directors. Affiliate organizers opted to start small with an abbreviated pilot program. In the initial phases, PCL Construction reached out to a few Minneapolis and Saint Paul Schools to share information and generate interest in the ACE program.

Roosevelt High School, a Minneapolis inner city neighborhood school, was selected as the pilot school. Roosevelt's teacher representative, Brian Nutter, selected 11 sophomore, junior and senior students for their interest in ACE professions.

Dylan VanAvery, a quality engineer with Mortenson Construction and one of the co-leaders of the program, says, “Our pilot program was completely dedicated to mentor development and student engagement. We hand-picked six mentors from various backgrounds and aimed for a 1:2 mentor/student ratio.”

At each session, mentors started with a short “day-in-the-life” discussion about various career paths in the integrated construction industry. Then students were challenged with hands-on activities developed by the mentors. These activities ranged from pin & straw truss construction and construction site scavenger hunt to creating Google SketchUp drawings and performing take-offs and estimates.

Counting a construction tour and the final presentation event, the program extended over seven bi-weekly sessions. Many activities and the final project were linked to a timely theme of replacing the Metrodome stadium roof, which collapsed late last year after a heavy snowfall. In early June, two teams presented their design concepts for a new roof.

VanAvery says, “The students did an exceptional job defining roles and presenting all the pieces/labs in one mock interview to parents, local professionals, teachers and mentors.”

Beginning this fall, the Twin Cities ACE Affiliate will expand to three more inner city schools. Affiliate board members believe it is important to work with populations under-represented in the building industry. Paris Otremba, manager of human resources and professional development for PCL Construction Services, Inc. and co-leader of the Twin Cities ACE Affiliate program, says, “We recognize the need for more females and minorities in our industry. ACE allows us to reach out to these demographics and encourage them to consider a career in design and construction.”

Recruiting mentors apparently will not be a problem. “We already have a waiting list of mentors for 2011-2012,” Otremba adds. “This is a great problem to have!”

Thanks to contributions from various companies, especially PCL Construction, the Twin Cities affiliate raised $20,000 to give it a good financial foundation for its first few years. The Affiliate awarded $1,000 scholarships to two students in the pilot program.
ACE STUDENT PROFILE

FROM INNER CITY TO GLOBAL FRONTIERS

At 14 years old, Krystal Robinson knew she wanted to be an engineer—she just wasn’t sure how to get there.

Today, nearly a decade later, Krystal is an electrical engineer for Jacobs Engineering Group, one of the largest technical services firms in the world. As part of Jacobs heavy construction division, Krystal is a member of a team that facilitates projects from oil refinery expansion to wind tunnel construction.

Krystal’s journey to engineering professional hasn’t been easy or without hardship and challenges. Yet throughout the process, she has had her ACE mentor by her side to offer advice, guidance and support.

She says, “I’ve been so fortunate to have ACE, particularly the support of my mentor, through the years. Without him, I would have lost track of my goals, and my potential.”

Career commitment

Knowing her daughter’s knack for electronics and science, Krystal’s mother enrolled her in an inner-city engineering-focused high school in 2001, the beginning of Krystal’s sophomore year. Her counselor knew of Krystal’s interest in electrical engineering and recommended the ACE Mentor Program.

Her family, immensely dedicated to after-school programs that motivated their daughters, encouraged her to apply. She was accepted and became a member of the first Washington D.C. ACE Mentor class. Krystal was assigned to the team that featured Syska Hennessy Group as the MEP engineers.

Exceptionally dedicated, Krystal attended every meeting on time, often arriving early, and catching the attention of mentor John Sporidis, then managing director and senior vice president at Syska’s Washington D.C. office, now managing principal at R.G. Vanderweil Engineers, LLP.

Krystal recalls, “John was so enthusiastic that it was hard not to get excited about engineering. You could tell that he loved his profession and was glad to be there.”

During her three years with ACE, Krystal and other engineering-minded students were offered summer internships at Syska, all the while continuing the ACE after-school program during the school year.

The ACE edge

According to Krystal, the most valuable aspect of the ACE program was the semester-long design project that guided students through the building process. The students participated in the planning process, learned how to operate CAD programs, and were even taught the best way to give a presentation.

In 2003, Krystal was awarded the ACE National Scholarship for her dedication to the program and focus on a future in engineering. John Sporidis continued to mentor Krystal and guided her through the college application process, which led to her acceptance at Howard University.

Course correction

Krystal credits the ACE Mentor Program and John’s mentorship as motivating forces that have guided her throughout her academic career, particularly after high school.

While the college curriculum proved challenging, Krystal’s personal life took a shift when she gave birth to a beautiful baby girl midway through her studies. With John’s support, she continued on her quest to become an electrical engineer, ultimately graduating from Howard University with a degree in electrical engineering in December 2010. She started working for Jacobs Engineering in Arlington, Va. in February 2011.

Krystal states emphatically, “I love my job! I have the opportunity to travel and learn new things every day. It’s been a long and challenging road. I would have lost track of my goals without my ACE mentor, who’s always in the back of my head encouraging me.”

Krystal hopes to go to graduate school in the near future. She is currently an active mentor for Jacobs Engineering under the lead of Tony Maida.
NATIONAL DESIGN COMPETITION INSPIRES AND MOTIVATES
FREDERICK, MARYLAND STUDENTS WIN FIRST PLACE

Competition for the 2011 Construction Industry Round Table-ACE Mentor Program National Design Competition was especially intense in the contest’s fifth year with double the number of previous entries.

A record 37 entries from 21 ACE affiliates from across the country submitted entries with just three finalists invited to present their projects to a seven-person jury—with eight students from five different Frederick, Md. high schools, all in their second year of the ACE program, coming out on top.

To win, the Frederick team designed a 35,000-sq-ft, three-story healthcare facility they named the Serenity Health Clinic. Theoretically located in Baltimore, near the world-class medical facilities at Johns Hopkins University, the students estimated that the clinic would qualify for a LEED Gold rating. To ease patients’ anxieties, the interior space uses warm, calming colors with artworks by local artists. The waiting rooms have both interactive and passive entertainment options such as computer games and music stations.

Savannah Krause, a senior at Urbana High School, organized the team’s workflow in her capacity as project manager, while Malini Nambiar, a Tuscaroa High School senior, presented their project at the competition.

A very green-oriented redesign of Mountain View High School in California earned second place, while a New York City team took third place with an innovative military retirement community situated in Waco, Texas.

**Green and creative concepts**

The San Francisco Bay Area Affiliate Peninsula Team 1 team’s second-place entry pitched a green-oriented redesign of their high school, Mountain View High School near Palo Alto. With the exception of Joseph Chang, a senior who presented the team’s project to the competition jury, all team members were first-timers in the ACE program.

The campus centerpiece is the academic wing with 34 classrooms. The wing’s tiered glass roofs allow natural light to fill classrooms and are slanted toward the building’s center to capture rainwater, which is diverted to cisterns and recycled for toilets and irrigation.

Team 8 of the Greater New York City ACE Affiliate took third place with its military retirement village, called Aquila Villa. Shanna Ramsmooj, a senior at the High School for Construction Trade, Engineering and Architecture, explained in her presentation to the jury that aquila is Latin for eagle. The eagle, symbolizing all branches of the military, inspired the design of the project’s master plan. Situated in the eagle’s head is commercial space. Both wings are set aside for residences, and common space is located in the bird’s torso.

The Frederick, Md. team won a prize of $3,000 for its affiliate. Second- and third-place teams took home $2,000 and $1,000 prizes, respectively. CIRT sponsored all three prizes.

**Renewed enthusiasm**

National Design Competition jury members were CEOs of top design and construction firms. The list includes Linda Figg, CEO of Figg Engineering Group and 2011 CIRT chair; Robert Alger, Chairman, President and CEO, The Lane Construction Corp.; Mark Casso, President, CIRT; Blake Murillo, CEO, PSOMAS; Ross Myers, CEO, American Infrastructure; Gilberto Neves, CEO, Odebrecht Construction; Charles Thornton, Founder and CEO, Charles H. Thornton & Co.; and Matthew Walsh, CEO, The Walsh Group.

PSOMAS’s Murillo observes, “The breadth and depth of the ideas that each team wove together were impressive. Students had to think from so many different perspectives—a planner, designer, and builder—and, also had to consider the needs of the project’s end user. What they came up with and were able to convey was absolutely terrific!”

“Students in the National Design Competition impress our members with their dedication and talent,” adds Mark Casso, CIRT president. “In many ways, the competition reminds CIRT members why they first entered the industry, renewing their enthusiasm for their own work.”
The innovative Sustainable Design Award program developed collaboratively by the ACE Mentor Program and the U.S. Green Building Council (USGBC) is now available to registered juniors and seniors across the country.

The sustainable program is designed to help students understand the core concepts of sustainability—site, water, materials, energy, and air—in building and construction and to identify green strategies.

Ed Worthy, education director with the ACE Mentor Program, says, “With grant funding from AT&T, we’ve been able to launch the Sustainable Design Award program nationwide, much to the excitement of our students and mentors.”

The contribution is part of AT&T Aspire, the company’s four-year, $100-million commitment to education. Launched in 2008, AT&T Aspire is one of the largest-ever corporate commitments to address high school success and workforce readiness.

Laura Sanford, president of the AT&T Foundation, says, “The Sustainable Design Award uniquely fits our program goals. AT&T looks for programs that meet our corporate sustainability and community mission to help at-risk youth. We want these programs to target the right student population, have a green
component, provide career readiness—and think a little outside the box. ACE does all that with this innovative green program.”

The Award program operates virtually through a secure website created by ACE. Each student is paired with a qualified LEED-accredited ACE mentor who supervises and approves the student’s work. Mentoring occurs via email and occasionally by telephone, or sometimes in person if the mentor and student are on the same ACE team.

To fulfill the Sustainable Design Award requirements, students first take an online USGBC course and pass a short quiz. Next they analyze a case study of one of four LEED Platinum projects around the country and complete a report identifying and explaining the project’s sustainable design elements. Mentors review, propose refinements and approve their students’ reports according to a scoring rubric developed in collaboration with the Green Building Certification Institute.

During the pilot program, students found that they gained valuable knowledge that was fun, interesting and provided an edge in college applications and career decisions. On average, it took 10-12 hours to complete the process.

Worthy adds, “This is just another way to excite young people about the building and construction industry. As the industry continues to focus on sustainability and energy efficiency, we can help develop the next generation of creative green thinkers. Naturally, the success of the program depends on having as many mentors as interested students.

Already, 60 students have signed up for the 2011 Sustainable Design Award program, and each student must be matched to a qualified mentor.

A critical part of the program is to analyze one of four LEED Platinum projects. They are the Gerding Theater at the Armory in Portland, Ore. (adaptive reuse of historic building); the middle school building of Sidwell Friends School in Washington, D.C. (rebuild and expansion); the Lake View Terrace Library in Los Angeles, Calif. (new construction); and the EcoDorm at Warren Wilson College in Swannanoa, N.C. (new construction).

Once all requirements have been met, ACE and USGBC issue a Sustainable Design Award document that states the student has demonstrated a basic understanding of sustainable design concepts. For more information, visit: sustainabledesign.acementor.org/.

The ACE Mentor Program also just received its first grant from the National Endowment for the Arts after a competitive peer-reviewed process. The funds will help support a new ACE education program called Green House Design Basics (GHDB). The eight-session curriculum will focus on how to sustainably design a house. Over the next two years, ACE will develop, test, and disseminate the program.
ACE Mentor Jodi Paci and entrepreneur, Amanda Weathersby recently introduced the 100 Entrepreneurs Project, a pro-bono project to provide injured U.S. military men and women with the necessary information collected from over 100 entrepreneurs about starting their own businesses.

The innovative program evolved out of an ACE Mentor/Turner Construction program put in place several years ago to introduce military personnel recovering at Walter Reed Medical Center to the architectural, engineering and construction profession. In its early days, the program was based on Turner Contractors College, which Turner Construction has run for 25 plus years to help small and minority businesses operate successfully in the building and construction industry.

The program mission was to help wounded military personnel find a rewarding and exciting career in the building and construction industry as architects, engineers, contractors or any of the other related fields. With the 100 Entrepreneurs Study, that is still the goal—and much more.

The education program offers workshops to recovering military personnel about how to set up and operate a successful business, how to run a franchise, develop a marketing and business plan, deal with the legal and insurance needs and much more. The veterans in the program range in age from 19 to 45. To-date, 15 veterans have set up their own businesses, which include a mobile barbershop, a video game business, a data storage and retrieval company and a real estate development firm.

As part of the program, Paci and Weathersby interviewed over 100 entrepreneurs from across various industries, including building and construction, to develop case studies about new businesses. The case studies serve as a basis for discussion at mentoring classes.

Entrepreneurial Spirit, Safety Innovator
One of 100 Entrepreneurs case studies features Bob MacDaniels, construction industry professional and safety innovator.

Fifteen years ago, then 48-year-old MacDaniels decided to leave the employ of a big construction firm to start his own concrete business, Oncore Construction. Today, Oncore is a thriving business and a safety innovator in the industry. Early on, MacDaniels instituted a red dot program that required all new employees to wear a red dot on their hard hats for the first 60 days, the time that studies show a majority of injuries occur. Five years ago, Oncore instituted a company-wide health and wellness program. The company learned through the program that the optimal waist to hip ratio for a man is .9. The higher that number, the more susceptible the man is to diabetes and heart disease. In one 12-week period, the health and wellness professionals measured 219 field employees and reduced the combined waist size by 200 in. For more about Bob MacDaniels and Oncore Construction, visit www.oncoreconstruction.com.
NETWORK CONFIDENTIAL:
ACE STUDENTS CONNECT WITH PEERS, PROFESSIONALS LONG AFTER HIGH SCHOOL

Former ACE Mentor program students are staying connected, finding jobs and building careers with help from the new ACE Alumni Network.

Catalina Warrick, director of Affiliate Relations with the ACE Mentor Program, explains, “The online network is designed to continue the connections that ACE has created with thousands of high school students as these students move through college and on to careers in our exciting industry.”
Through the site, registered ACE students can learn about additional scholarship opportunities, connect with other ACE alumni, locate industry associations, find a summer internship and search available jobs within the industry.

“The site is brand new and the possibilities are endless,” says Warrick. “We want to facilitate live ‘chats’ with leaders in the industry that allow the students to ask them direct questions. Members of the ACE Mentor National Board have agreed to be the first participants.”

Key in the success of the ACE Alumni Network is access to the ACE student database that will allow administrators to contact all 7,168 students who have graduated from the program since 2007. Warrick adds, “We’re also working with the affiliates to capture alumni information from individual affiliate databases. We’re also reaching out to the 2,031 seniors who completed the program this school year.”

The ACE Program has been a great success in terms of engaging and exciting high school students to pursue careers in the integrated construction industry and supporting them through scholarships.

“However, the secondary goal is to help eliminate the 1.5 million worker gap that industry experts forecast in the coming years,” concludes Warrick. “The ACE Alumni Network will be a primary vehicle in feeding the pipeline for years to come.”
Building for the Future

ENR's Annual ACE Mentor Yearbook 2011

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10 Nationwide influence
In the last decade, we’ve introduced over 75,000 students to careers in the building and construction industry—and we’re still growing. This year alone, ACE will have more than 12,000 students in 61 affiliates across 34 states and more than 400 communities, all engaged in learning about the industry through team mentoring.

9 Financial backing
ACE National and its affiliates have provided more than $10.5 million in scholarships in the past 10 years. In 2010-2011 school year, ACE affiliates gave out $1.6 million.

8 We teach life lessons
A key part of the ACE program is to teach students life and work skills such as team building, visual and oral communications, problem-solving, adherence to deadlines, valuable in any career.

Through the ACE Mentor program, students have an opportunity to visit AEC firms, learn basic design and build techniques, and shadow industry professionals. Where else can a group of teenagers have the opportunity to design a better high school, a green healthcare facility for injured military personnel, a cultural arts theater, or even modernize main street USA?

7 We have an immensely successful history
The ACE Mentor Program was established in 1994, one of the first after-school programs for engineering-related industries. At the time, 17 firms banded together into three teams, each organized like a typical design and construction team, and “adopted” about 90 students from local high schools. Today, we have 12,000 students in 61 affiliates across 34 states in the program.

6 Far more ACE students graduate high school and go to college than the national average
An estimated 90% of ACE alumni are enrolled in college or graduate school, with about 65% pursuing majors in AEC as undergraduates or graduate students.

5 Former students look to us for support, guidance
Here’s just two of the many quotes from ACE alumni:
“I’ve been so fortunate to have ACE, particularly the support of my mentor, through the years. Without him, I would have lost track of my goals, and my potential.”
“I’m not sure where I’d be today without ACE—but I don’t think I’d be graduating from college with a degree in civil engineering.”

4 ACE national sponsors are the leaders of our industry
ACE sponsors include top architects, contractors, engineering firms, suppliers and equipment manufacturers, insurance and surety providers, construction lawyers and trade associations.

Sponsoring CEOs and presidents state:
“We sponsor ACE because we believe in it and its criticality to the engineering and construction industry.”
“The program is a win-win and the personal and professional rewards are immeasurable.”

“It just makes good business sense with the added benefit of nurturing young people and community involvement.”

3 We have a vast network of talented and community-driven mentors
Mentors span the corporate ladder from presidents and senior executives to project engineers and leads, with an average 11 plus years of experience in the AEC industry. Currently there are well over 4,000 mentors in the program. Turner Construction Co., the oldest non-association ACE Mentor Program sponsor, has over 370 mentors in the program.

2 Our support continues well after high school
Through the ACE Mentor University and College Scholarship Collaboration Program and the ACE Alumni Network, ACE students have a continuing network of mentors, advisors and peers available to discuss and help resolve financial and educational challenges, find internships and, upon graduation, find a job.

1 We are fulfilling the needs of industry today…and tomorrow
Economists predict that by 2012-2013, the construction business will have one to two million job openings, in part because of an aging workforce and in part because of increased need to expand and rehabilitate our nation’s deteriorating infrastructure. ACE is fast becoming the number one workforce development program in the country.
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LATEST ACE SURVEY CONFIRMS POWERFUL AND POSITIVE RESULTS

Over 93% of the graduating class of 2010 ACE Mentor students are in college, a path that for many of them might not have been possible without ACE. A high percentage, just over 75%, of the survey respondents are focused on career paths in the building and construction industry.

The survey demonstrates that the ACE experience persuades a high proportion of students with doubts about working in the industry to pursue this career option. Almost 49% of survey respondents reported that before starting the ACE program they were not at all certain about an A/E/C career. More than 65% of these students entered college planning to major in architecture, engineering, or construction or started a skilled trades program.

These are just a few of the results of the most recent ACE survey of 2010 ACE Mentor Program graduates. Generating a solid 31% response rate, the 2010 survey confirmed the findings of a similar survey a year ago.

Ed Worthy, education director with the ACE Mentor Program, says,
A/E LEADER JOINS ACE NATIONAL BOARD

Stantec, a leading architecture, engineering and consulting firm with over 10,000 employees in 160 locations in North America, has joined the ACE Mentor Program’s National Board.

Rich Allen, senior vice president and chief operating officer for Stantec, says, “We’re excited to be a part of the ACE Mentor Program and help address the workforce shortage problem that threatens our industry. Our aging infrastructure needs serious upgrade, and we simply don’t have the talent to meet the demand. The ACE Mentor Program can help fill that impending void.”

Stantec already has a number of mentors involved in the ACE Mentor Program at various offices throughout the country and contributes to the ACE scholarship programs. Those numbers are expected to increase in the next year. The firm has a reputation for thinking outside the box when it comes to youth programs including its involvement in the creative Leadershship Initiatives for Teaching and Technology (LIFT2) program. The LIFT2 program provides middle and high school science and math teachers with summer internships at engineering firms to help them relate classroom curriculums to real world applications.

“These programs have multiple benefits to our industry, the students and individual communities,” says Allen. “We look forward to growing our involvement in the ACE Mentor Program in the U.S. and, perhaps even across the Canadian border where the communities face similar infrastructure and workforce challenges.”

BRIDGE EXPERTS JOIN ACE NATIONAL BOARD

After many years of mentoring and commitment to education, Figg Engineering Group (FIGG), a leading bridge engineering firm, joined the ACE Mentor National Board.

Linda Figg, CEO of FIGG, says, “ACE is a visionary program with the ability to touch the lives of young people across the country in a very practical and exciting way and to help them see the tremendous value and opportunity of a career in the engineering and construction professions.”

Since 1978, FIGG companies have been pioneers in the bridge industry in the United States, creating sustainable signature designs that blend timeless artistry and precise engineering. The FIGG team has studied, designed or built bridges in 38 states and multiple countries with construction values over $10 billion.

The ACE Mentor Program fits well into FIGG’s corporate community initiatives. The firm regularly involves young students in those communities where the firm is working on a bridge. For instance, on the new I-35W Bridge in Minnesota, 1,800 sixth graders had the opportunity to learn about bridge building and design, visit the site and create recycled glass/concrete tiles that were used as a feature of the new bridge.

“It’s our belief that many of these students will go on to learn more about the industry and find career opportunities through ACE when they get to high school,” says Figg. “I’m excited to be a part of the ACE National Board. The level of ACE involvement at the local and national level is impressive—and the enthusiasm is contagious. ACE inspires all of us to find ways to engage students of all ages in everything we do and to develop the talent our industry needs to respond to emerging infrastructure challenges around the world.”
INSIDE THE ACE NATIONAL AFFILIATE COUNCIL

Whether an ENR Top 100 firm or a small not-for-profit, progressive companies know that sounding boards are critical to success. In fact, company leaders surround themselves with smart people for that very purpose. Knowledge of the industry, innovation, creativity and experience all play a major role in how companies operate. Sounding boards can provide inspiration, and also serve as a necessary check and balance as new processes and ideas are vetted.

The National Affiliate Council (NAC) is ACE Mentor Program’s sounding board.

The NAC serves many purposes for ACE, but most notably these representatives serve as guardians of the values and liabilities of ACE. What this means is that NAC representatives not only help to provide strategic direction to ACE, but they also protect ACE’s best interests and act as that check and balance as ACE continues to grow.

Individually, each appointed NAC member also serves a critical role within ACE. Geographically dispersed, each NAC member serves as a liaison between ACE National and a set group of affiliates in their region. In that role, they help to strengthen the communication channel between the affiliates they represent and ACE National, as well as actively soliciting feedback from the affiliates as to how the organization can continue to better the program. Last, NAC members also serve as another communication channel to ACE’s National Board of Directors. Through their participation in regular meetings, NAC members can express the insight of their affiliates on a national level, help to bring important topics to light, and most importantly, keep the National Board abreast of issues and ideas that are affecting the organization’s success on a regional level.
“Our goal in this follow-up survey was to confirm the 2009 survey’s positive results and gather more detail about student's educational directions and the impact of ACE. The results are especially enlightening in several areas.”

One of the questions included in the survey asked if the students’ high school studies had become more meaningful because of ACE. The response was a resounding yes from about 70% of the students. More than 63% indicated that ACE gave them greater motivation to study in high school. Almost half of the responding students participated in ACE for more than one year.

“For ACE program mentors and sponsors, another satisfying survey result was the number of students in the program who graduated high school in four years,” says Worthy. “Of the survey respondents, 96.6% completed on time, a number that is well above the national average.”