Service Learning

Off-campus projects benefit CM students and the community
As another academic year drew to a close, the faculty and staff at the Construction Management Department finally had time to reflect on the accomplishments – and the changes – during the year. In this second edition of the Construction Innovator, we would like to share some of them, as well as our plans for the future as the department continues to change and grow.

Clearly, one of the most important changes occurred last fall when students and faculty occupied the new Construction Innovations Center for the first time. Over 200 of you joined us in October for the dedication of the facility. If you haven’t returned to campus yet to tour our new home, please make plans to visit soon. The building was programmed, designed, constructed and furnished to support a whole new approach to teaching construction management at Cal Poly, which will be fully implemented in the fall. (See article on the opposite page.)

The majority of Construction Innovator stories this year are about our students, who continually impress me with their dedication, intelligence and hard work. These students are committed to service, viewing it as an essential component of the profession they are entering. Consequently, you will read articles about our students devoting their time and efforts to service projects as far away as Tanzania and Belize, and as close as San Luis Obispo.

We also celebrate student successes this past year in regional and national competitions and highlight three graduates receiving annual awards from the department.

Finally, we take a look forward with updates on the start of construction for the college’s Simpson Strong-Tie Materials Demonstration Lab and future plans for the California Center for Construction Education (CCCE). The department continues to expand in many new areas that we hope will have a positive impact on the alumni, supporters and friends reading this issue.

So, take a few minutes to read about our students and faculty and the activities in which they are involved. We hope to see all of you in the coming months – either on campus or at your offices and job sites. Thank you for all of your ongoing interest and support. With your help, we can continue to turn out the top leaders of our profession for many years to come.

ALLAN J. HAUCK

PH.D., CPC

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On the Cover
Construction Service Learning students Brian Arsenau and Brian Brandt test their skills on a Morro Bay project that benefits the community. PHOTO BY JOSEF KASPEROVIC

Department Head Al Hauck
In summer 2002, CM faculty and alumni leaders began a wholesale rethinking of the traditional curriculum in a series of visioning exercises to imagine a new model. Those conversations became the centerpiece of the discussion when this group was first talking about what “could be” in a few facility dedicated to construction management education.

As they started to develop the first case statement for a building that was to become the Construction Innovations Center, they wrote the following words:

“Imagine this: a small group of students would work with a faculty member at one end of a lab filled with framing models, sample materials, marketing documents, contracts and other items related to residential construction. In the front of the space, another group of students practice this afternoon’s marketing presentation, while still others work in individually assigned spaces on their housing designs and cost estimates.

“We are in the dedicated Residential Construction Lab in Cal Poly’s Construction Management Department. Next door are similar labs for Commercial Building, Heavy/
Highway, Design/Build, Material Properties, Computer Controls, Computer Simulations and Graduate Research, and other flexible spaces that can be modified as curricular needs change.

“Next quarter, students will continue their progress through this series of dedicated labs in which they are immersed in the materials, methods, documentation and professional practices of each segment of this dynamic and evolving industry. Adjacent to these spaces are state-of-the-art lecture and presentation centers for groups of various sizes, open computer labs, conference rooms, industry recruiting rooms, faculty offices and administrative areas.”

With the exception of changes to the names of some of the labs, it is surprising seven years later how close those original concepts reflect what actually now exists in this facility. “From the very beginning, the programming and design of this building was curriculum-driven,” says CM Department Head Al Hauck. “We asked ourselves: what is the best way to educate future constructors? If we were to adopt a more integrated, ‘studio-based’ model for construction education, what would that look like?”

Since that time, faculty, students, industry advisors and alumni have reviewed, debated and tested various versions of what has come to be known simply as the “integrated curriculum.” Courses in this proposed curriculum have been pilot-tested with over 200 students and more than 10 faculty members, leading to many changes in the structure of the final proposal. This fall will be the first real launch of the entire model.

The new curriculum replaces almost 75 percent of the existing courses in a process described by Al as “being analogous to changing your tires while driving down the freeway.”

Instead of being taught as isolated courses, estimating, scheduling and contracts will be taught in the context of the materials, methods and management practices unique to each sector.

“This immersive, project-based learning permits teams of students to ‘practice their profession’ while receiving critiques from industry practitioners and our experienced faculty members,” says CAED Dean R. Thomas Jones. “This is a true epitome of Cal Poly’s learn-by-doing motto and the polytechnic model for which we are known.”

The pilot tests of these core seminars have demonstrated that this approach to education closely correlates with the practices in industry. Today’s constructor must be able to practice all aspects of this complicated profession at the same time and in concert with other professionals working for designers, owners, subcontractors and governmental entities. The conventional educational approach simply does not reflect the integrated teamwork required to bring a project in “on time and under budget.”

Excellence in education must reflect excellence in practice. Successful projects are led by multifunctional, collaborative teams of individuals able to solve problems in new and unique ways. Working in silos of specializations is no longer acceptable to owners and proves to be counterproductive to the goals of complicated projects. In education, it is necessary to show students the need to integrate all components of their learning. Working on an integrated, major “management problem” each term – analogous to the architecture student’s “design problem” – requires students to focus on the connections rather than the parts and to develop problem solving techniques that they can transfer to any number of environments. This has been the traditional foundation of construction management education found today at Cal Poly and, with this new approach to teaching, this tradition can be expanded in the future.

All students who started as freshmen in fall 2008 and later will go through the entirety of this new curriculum, and all graduates next year will experience at least some part of it. Student response to the curriculum changes to date has been very positive. They appreciate the more realistic education resulting in this hands-on approach and like working on the larger, “real” projects that can be accommodated in classes of this complexity.

There also are more opportunities for practitioners to interact with students in this mode of instruction. At any time of the quarter, alumni, recruiters and other visitors will find teams of students struggling with the same problems they see every day in practice that would welcome the insight from those with more years of experience.

“The department invites you to come see this curriculum in action and to add your expertise to the learning that takes place here,” says Al. “Most of all, departmental faculty realize that this is a dynamic curriculum that must be constantly updated to reflect industry practice. Your help in maintaining this currency is always welcome.”
Students pack their adventurous spirit and CM know-how for a working trip to Tanzania

The “Tanzania project.” In the College of Architecture and Environmental Design, those words have a very particular meaning. Architectural Engineering graduate David Lambert (’06) was first to bring attention to the project when, in 2007, he returned to Cal Poly for ARCE’s new master’s program.

Father Mansuetus Kimbwe Setonga was planning a Technical College in Same, United Republic of Tanzania, and David was able to bring Cal Poly into the project at the beginning. Beyond the structural concerns central to an architectural engineer’s profession, David and his colleagues wanted to tackle issues important in east Africa, including sustainability in terms of water, thermal comfort, and operating and maintenance costs.

Quickly, the initial project turned into a collaborative, interdisciplinary effort. The Catholic Diocese in Same recognized the commitment of the Cal Poly group and added a worship center and dormitories to the original plan for a cafeteria and classrooms.

“The CAED has a long history of both hands-on and interdisciplinary learning,” says CM Department Head Al Hauck. “None of us are surprised that students learned of an
interesting senior project in ARCE and wanted to join in."

CM faculty member Mike Montoya (CE ’97) adds, “I think it says a lot about the solid groundwork and the enthusiasm of our students that a student project can be handed off from year to year; different people bring different skills to the various moments.”

Max Brandt (’09) and Erik Wright (’09) from CM were two of the original students with David Lambert. Max and Erik are now project managers, and Max is quick to point out that there are a lot of people involved. “At least five related senior projects, then Mike Montoya’s class.” He also notes that ARCE faculty member James Mwangi played a crucial role as translator on the recent spring break site visit.

“Five of us traveled to Tanzania for 14 days,” Max says. “We had very specific goals: surveying 200 acres, taking soil samples, working on permitting with government officials and evaluating existing infrastructure to prepare for groundbreaking next year.” The team was assisted by The Wallace Group in San Luis Obispo. The firm provided training prior to the trip and continues to help with project development.

Mike Montoya notes that in addition to “getting the building constructed” the focus was on sustainability to have the first LEED-certified building in the region. “Technically, the building is the easy part,” he notes. “More difficult is water conservation and recycling and the development of sustainable power sources.”

Max and team member Mike Vitkovich (CM ’09) came up with the idea for an energy plan using framed solar panels as skylights to get a double benefit from the sun. Mike took the lead on electrical design and found his initial plan led to widespread involvement with others at Cal Poly. “The project was so hands-on, real life and interesting; I wanted to be involved with my senior project.”

He began by researching solar power and alternative energy systems, then decided to learn more about electrical systems from the ground up. He worked with students in electrical engineering to add to his knowledge: “I taught them about construction and they taught me about electricity and power.” Mike would also like to add a special thanks to Steve Dittman (EE ’77) of Steve Dittmann Associates in Pismo Beach for his vital contributions.

Max says the project has come a long way. “Dave, Erik, and I have been involved since the beginning, and we can’t wait to be in Africa for the groundbreaking.” Mike adds, “When I look back, I think this project has been the epitome of the learn-by-doing spirit of Cal Poly.”

All team members hope their work will not only benefit the community in Same, but serve as an example of sustainable design and system management elsewhere in the region.

To further this project and others in developing regions, Max Brandt and Erik Wright have formed the nonprofit, Shiriki, which means Unity in Swahili. Stay tuned to future Alumni News for an update on their work.

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2008-09 student participants
CM’s Max Brandt and Erik Wright serve as project managers, with assistance from:

**Construction Management**
Holly Powdrell, Michael Vitkovich, Jen Werner, Jessica Boriskin, Kyle Sharrer, Carlos Velarde

**Architecture**
Juliie Reynolds, Kim Strickland, Tara Millard, Angela Moinickien, Christian Loza, Travis Urig

**Architectural Engineering**
Ashley Moraes, Nicole Brandt, Solomon Ives, Jon Bassignani, JR Aube, Kendra Fuller, Amy Bell

**Landscape Architecture**
Serena Conti, Allison Crump

**City & Regional Planning**
Blake Hudelson

**Electrical Engineering**
Joseph Durango, Scott Therein, Scott Waddell, Amit Kumar

**Speech Communications**
Paden Followwill
Helping Hands

Handiwork of Audrey Schultz and students benefits young SLO residents and visitors

Audrey Schultz still counts herself as a recent arrival to the Central Coast and Cal Poly. Three years ago, while working at the Pentagon Renovation and Construction Program (PENREN) in Arlington, Va., she attended a design-build workshop taught by Cal Poly Professor Barbara Jackson. Audrey had always wanted to teach and was intrigued enough to contact Barbara about teaching construction management in a university setting.

“The idea stayed in the back of my mind,” Audrey says, “but I was in the middle of a $1.5 billion, 6.5 million-square-foot design-build project, so I was focused on other things.”

Barbara contacted Audrey about a teaching position that was open at Cal Poly. Audrey confesses that she wasn’t familiar with Cal Poly or California’s Central Coast before she applied. However, she arrived with a wealth of experience that she has translated into the classroom.

“One of the most rewarding aspects of teaching is the fact that I bring to the table fresh ideas...
and an authentic desire to educate and help create the next generation of successful industry professionals,” Audrey says. She adds that the industry demands that students understand the fundamentals of good project management and leading a successful construction project on schedule and within budget.

“Construction projects are increasingly multidisciplinary, and our CM students deserve innovative ideas and up-to-date industry information to be prepared. We need to emphasize the necessity of becoming more business savvy and better project managers.”

Beyond the usual fare of coursework, Audrey is committed to taking students outside the classroom to interact with the local community, apply their construction-related skills and, in general, become better prepared to be community leaders after graduation.

One of the projects she has undertaken since arriving here is working with the San Luis Obispo Children’s Museum. She started by donating her own time, then expanded to involve students. Executive Director Roy Mueller says that all nonprofits depend on the support of the community, but that a nonprofit involved in a building project has a special need.

“Audrey’s assistance was invaluable. She coordinated material ordering and contractor services. In particular, her knowledge of the infrastructure of the building – fire sprinklers, smoke alarms, HVAC – was helpful.” Roy adds that she assisted in meetings regarding permitting at the City of San Luis Obispo Building Department.

Audrey acknowledges the thanks and then quickly turns the subject to the students who joined the effort.

“There is a lot that the students can do for the community while at the same time learning how valuable their support is. I want them to understand the importance of being good community citizens now and after they graduate.”

Asked how this project compares with her similar experiences prior to Cal Poly, she laughs and says they don’t compare. At PENREN she was in charge of coordinating Take Your Daughter and Son to Work Days. Student involvement often involved children ages 5-16 and that meant keeping them busy all day.

“I scheduled activities such as the Pentagon police, police dog, and SWAT team demonstrations,” Audrey says. “We had activities scheduled with the Army, Navy and Joint Chiefs of Staff, and an occasional drop-in by the Secretary of Defense.”

While Audrey shouldered much of the role of a general contractor for the project at the San Luis Obispo Children’s Museum, she engaged the students through site visits, clean-up days and landscaping activities. Student members of the construction honor society Sigma Lambda Chi also worked on a special project for the museum, as did students in the sustainable minor at the College of Architecture and Environmental Design.

The museum is now 100 percent complete, and Audrey is proud of the part her students and the CAED played.

“It doesn’t matter how they came to the project,” she says. “In fact, that’s part of the excitement – seeing how the different departments within the college intersect, and then finding out that mechanical engineering students helped with the design of numerous exhibits. It really is a community of involvement.”
Daniel Wiens (CM) and Steve Shimmin (B. Arch) will graduate in spring 2010, but they already have a solid plan for their professional life. It all began with their current partnership with Global Outreach Mission, a non-denominational Christian nonprofit organization.

“We are both passionate about using our skills to assist the livelihood of a developing nation,” Daniel says when introducing the project Global Outreach assigned them: design thinking globally.

A rendering of the dental clinic/home in Belize (top)
Daniel Wiens discusses fundraising with Cal Poly Recreation student Criste Withem (left). Steve Shimmin (above)
and construction of a dental clinic/home in Belize. Inspired by this experience, Daniel and Steve are starting their own nonprofit, Journeyman International, Inc.

“The fundamental concepts of Journeyman International are based on vision,” says Daniel, adding that as Christian entrepreneurs, he and Steve recognize radical worldwide humanitarian needs and the potential to make a positive impact. Their vision is to provide design and construction consulting and/or management worldwide, assisting ministries, humanitarian organizations, communities, and even governments. Also of high importance to them is the green-development movement in impoverished nations that is fiscally feasible, socially accepted, and environmentally responsible.

The clinic for Global Outreach Mission in Belize has been a lesson in respecting the needs of the local community and using a judicious mix of outside ideas. For this reason, the clinic project will shadow LEED requirements, meaning it will emphasize green aspects even if they don’t qualify for the Gold status they aim for. Daniel, already LEED certified, hopes they can be part of “demonstrating the environmental benefits along with reduced costs. I believe we can set a standard and initiate a movement.”

Construction on the Belize facility will begin in June 2010. Global Outreach Mission has purchased two adjacent lots in Independence, Belize and already has local workers preparing the site. They hope to have the facility operational by Christmas 2010.

Construction will be a mix of professional team supervision with local and volunteer labor. Daniel adds that anyone interested in supporting the project as a volunteer worker should contact Global Mission Outreach. The plan for operating the Dental Clinic involves a similar mix: professional leadership with local support. To accomplish this, the clinic will have live-in quarters for a dentist and family.

“The communities surrounding Independence are 100 miles from the nearest dental office,” Daniel says. “Most residents have never been to a dentist.” He adds that the idea is not to compete with the local medical economy, but help those who cannot afford dental services.

As he nears the completion of his time at Cal Poly, Daniel reflects on his years on campus. An Oregon native who now counts California as home, Daniel begins by saying Cal Poly Construction Management is special.

“We have a unique learning style and the curriculum is ever changing, because the construction industry is ever changing.”

He is particularly pleased with how quickly CM and the CAED recognized the importance of the LEED system, creating a LEED class and reimbursing students in CM and Architecture who pass the exam.

“Cal Poly CM also jumped on the BIM (building information modeling) bandwagon,” Daniel adds, believing this will provide all the graduates with an edge in the industry.

Asked about his final year on campus, Daniel says, “Study, work,” then he adds with a smile, “and fundraise for the project!”

Disguised as a technical elective is a construction management course with ambitions well beyond its nomenclature.

CM 400, better known as the Construction Service Learning Class, was initiated last year by faculty member Phil Barlow to lead students through multiple project steps and provide them with an opportunity to give back to the community. This year nearly 30 students got involved during spring quarter, donating nearly 1,300 hours to community service.

The Community Action Partnership of San Luis Obispo County, Inc. (formerly the Economic Opportunity Commission of San Luis Obispo County) is an important partner in the course, providing renovation or remodeling projects that fit the class goals.

“The work we do is on owner-occupied properties,” says Klay Adair, a student leader for Community projects keep students busy designing, building and landscaping. Clockwise from left: Katie Blair (LA) waters newly installed landscape. Kyle Wideman works on a porch (top). A newly installed ramp and landscape (above) Paul MacDonnell works on a stair stringer (right). Students in Construction Service Learning enjoy the neighborly role of tackling projects that fulfill community needs.
the class who served as general superintendent for all of the projects. “Often they are elderly or disabled local residents. All are low income.”

This year there were six teams, each composed of four to six CM students. Most teams included a student from other CAED departments to promote interdisciplinary interaction, and each team was supported by a corporate sponsor.

“We have a $2,000 budget donated by the sponsor and have to work within that,” adds Klay. This year Clark Construction, The Hanover Company, Hensel-Phelps, XL Construction, Pankow Builders and DPR Construction each supported a team while Sundt Construction funded ancillary costs.

The course is based on eight basic steps of the construction process: site investigation, owner prioritization of tasks, estimating/budgeting, scheduling, procurement, construction, job tracking, project closeout, and finally, reflection and celebration. The final step for Phil Barlow is critical to the pedagogy.

“They have about four weeks to plan, then five to construct, followed by a final week to reflect and present what they have accomplished.” He feels that this last phase is critical to achieving the learning outcomes. “Learn by doing also involves learning from our mistakes. Review and reflection allows that to occur in a meaningful way.”

Of course, local residents benefit, and Phil wants the students to think about what they have provided to the community. He adds that “the time to reflect on best practices and lessons learned is what makes the course different from simply volunteering time with a community organization.”
Jeffrey Robertson (CM '07) wanted to use his passion for architecture and knowledge about construction to improve the lives of others. He found a way to do this with Acirfa, a U.S.-based nonprofit organization dedicated to helping underprivileged citizens of developing countries emerge from poverty.

Acirfa’s concept was simple: design and build a bicycle manufacturing plant and train Zambians in mechanics, entrepreneurship and construction. The result was Zambikes, a project that gives Zambians easy access to transportation while helping them use this new-found freedom to create or augment their income and provide a better life for their families.

Jeffrey hadn’t been to Africa or seen one of his school projects built, but he felt that his education at Cal Poly had provided the tools he needed to make the leap and join the Zambikes project. Boundless optimism quickly met the reality of the task ahead of them.

Upon arrival in Africa, Jeffrey realized that the plans for a manufacturing plant were really a few sketches. In addition, funding would not provide for an experienced architect or engineer. He turned to a former professor, Elbert Spiedel, for advice. In short, he needed a robust program to turn his designs into a building. Elbert suggested Jeffrey use the program he uses in class: ArchiCad, developed by Graphisoft.

Today, Jeffrey lives in Lusake, Zambia, and during the last two years has led the completion of three buildings: bike production facility and assembly garage, caretaker’s house, and an Acirfa guest house. His focus is to instruct and implement sustainable building methods, including compressed earth blocks, bamboo trusses and renewable energy systems.

Visit www.zambikes.org for more details.
Facilities Update

Simpson Strong-Tie Materials Demonstration Lab

This cutting-edge interdisciplinary college facility will provide space for large-scale testing and materials demonstration.

Out to bid. Normal enough to hear about a construction project, but words worth celebrating in the Construction Management Department these days.

“We have worked with Simpson Strong-Tie on this project since its inception several years ago,” remarks CM Department Head Al Hauck. “They’ve been a strong partner in developing the idea of a materials demonstration lab and bringing it to fruition.”

Simpson Strong-Tie is the lead donor to this entirely privately funded building and, in addition, has contributed all of the timber connections used on the project. Their participation also led to the groundbreaking use of timber in a commercial/institutional project in California. Donated sustainably harvested timber further makes this project unique.

“This has been an exciting project from a design perspective,” says lead architect Tom Reay (CM ’79) of Omni Design Group in San Luis Obispo. “I’m a Cal Poly CM alum so working on a building that will be used by students in the CAED and pulling together the needs of the college is a great experience.”

From a professional standpoint, Tom adds that the use of polycarbonate cladding on three sides of the building was important. The use of
translucent material means the building structure will be visible from the outside.

Dean R. Thomas Jones points to the programming, design and construction innovations as critical to the success of this facility. “We are a college of design, planning and construction and that needs to be evident in everything we do,” he says.

The building’s main feature is a tall, open area where students can engage in what the dean terms “a robust understanding of the materials and systems that are the basis of our professions.”

Cal Poly history is replete with photographs of students actively building and testing across the campus grounds, an activity that is constrained nowadays. The Simpson Strong-Tie building will allow what those campus projects could not: constructability and performance reviews, productivity evaluations, students building full scale mock-ups in a weather protected space, and exhibitions of building materials.

The facility is designed to take a future internal exhibition on the teaching mezzanine and the building has been structured to receive a green roof. There are also plans for the design and construction of an extended courtyard, which would include a steel frame to demonstrate exterior cladding systems.

Michelle Kam-Biron (ARCE ’87), P.E., S.E. is technical director of the Wood Products Council-WoodWorks-California and has worked with the design team to enable the use of a heavy timber brace frame in the project by providing technical resources such as testing reports from Phil Line, P.E. of American Wood Council (AWC), AF&PA.

“WoodWorks is excited about assisting on the Simpson Strong-Tie lab from schematics all the way through to construction,” says Michelle. “The project will showcase wood’s strength and natural beauty, not to mention its ability to absorb carbon dioxide from the atmosphere when it’s used in buildings. Wood is the only major building material that is renewable, reusable and sustainable.”

A rendering of the Simpson Strong-Tie Materials Demonstration Lab from the northwest corner

The Simpson Strong-Tie Materials Demonstration Lab will bridge the gap between traditional hands-on work and contemporary building technology. Bid day is slated for late summer guaranteeing the start of another new chapter for the Construction Innovations Center and the CAED.

Cal Poly alumnus Tom Reay heads up lab building project

Tom Reay (Construction Engineering ’79) is pleased to lead the architectural team designing the Simpson Strong-Tie Materials Demonstration Lab. His firm, Omni Design Group of San Luis Obispo, knew from the beginning that designing a building for the CAED was daunting, but that it would be a unique opportunity. “Thinking about the college’s interdisciplinary and hands-on pedagogy ultimately led our design.”

Under the firm’s leadership the structure evolved from the original concept of a metal building to a concrete base with exposed heavy-timber structure and translucent polycarbonate walls. “With the association of Simpson Strong-Tie we wanted to reflect their point of view and a structure that was a pedagogical tool down to its materials.”

Tom was pleased to work with structural engineer Michael Parolini (ARCE ’03) of Lampman & Smith. And he points out that many other members of the design team are Cal Poly alumni.

“As a student I looked out my studio window onto the construction of the new library. I like that today’s students can watch building on campus and learn from it.”
Andrew Bylund (CM ’98) has lived in Las Vegas with his wife, Marci, and their daughters, Makenna and Paige, since 2002. In 2008 he founded Trailmark, which will complete its first CM contract in fall 2009 on a 25,000-square-foot residence. The firm has signed a preconstruction agreement to be one of the owner’s representatives on a large mixed-use project in Sacramento slated to break ground in 2010. Trailmark joined the USGBC in 2009 and opened a sister company, TruCor Development, that focuses on solar and wind power and LEED-accredited projects.

Arvin Daeizadeh (CM ’04) worked for Turner International Middle East after graduation until January 2009 as part of the $20 billion Burj Dubai master plan development. A Dubai resident for nearly two years, he has traveled to the United Arab Emirates, Oman, Afghanistan, Iran, Israel and Jordan. Arvin’s home is in the Dubai Marina, next to the famous Palm Jumeirah Island, in a 47-story building among 200 other skyscrapers that have been built in the last four years!

Jourdan Alexander Younis (CM ’06) recently married Austrian Esther Youniss-Micskey, with whom he reunited on the CM summer trip to Prague four years ago. Jourdan works in Dubai for Hilson Moran, a British engineering consultancy, heading up the sustainability department in the Middle East. He lectures on sustainability at the American University in Dubai and was recently accepted to the London Business School MBA program in Dubai and London. For more information, visit www.hilsonmoran.com.

Brian Nebozuk (CM ’01) lives and works in Tokyo as project manager and store designer for the 11-story Abercrombie & Fitch store in Ginza. The construction is from the ground up and includes a feature stair tower that will boast the world’s largest mural.

A sustainable focus

Tokyo rising

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Mark Davis (CM '86) is president of Wright Contracting, Inc. He has been with the company for 23 years, serving previously as estimator/project manager, operations manager and vice president. He and his wife of 22 years, Eileen, have three children.
CCCE Activities

Envisioning the Future – A Day with Industry Leaders

As part of its strategic mission, the California Center for Construction Education (CCCE) will bring together a number of the design and construction industry’s most visionary leaders with some of the best and brightest young new leaders in an all-day forum this fall. “Transformation of An Industry – Inventing the Future from the Future” will be held Oct. 10 at Cal Poly.

Many of you have heard me remark that I believe the next generation of contractors, engineers, and architects will transform our industry – or get out of it completely. As we face both the challenges and the opportunities that this economy presents, I think it’s time to hear the collective voice of this generation so they can have a say in the transformation that is before us. After all, it is their futures we are talking about.

Many of these young, bright individuals can see opportunities that those of us who are well-practiced in traditional approaches and thinking simply cannot. As a matter of fact, they may be able to point us in a direction that could provide a strategic and timely advantage, not only as individual firms but also as an industry.

With all of the talk today about integrated project delivery, building information modeling, integrated forms of agreement, sustainability, and collaboration, don’t you think we need to hear from the generation who is most committed to making these things happen?

The forum is intended to be an “industry visioning event” that embraces both the ideas of the next generation and the astute wisdom of seasoned veterans as we all consider the impacts and opportunities that will emerge during these very challenging times. The event will feature a group of young top performers who are passionate about what is possible and at the same time highly frustrated. They will be joined by some of our industry’s most visionary leaders who will provide keynote addresses and contribute their wisdom and experience as a foundation for having this “Inventing the Future from the Future” conversation.

The reality is that we have a unique and unprecedented opportunity to come out of this recession far better off than how we went into it. It’s a chance to create a future that truly is focused on the future, whereby the burden of the past begins to loosen its grip on what is possible for those of us who have dedicated our lives to this industry and for those who wish to take it to the next level. I invite you all to attend this exciting event.

BARB JACKSON  
CCCE DIRECTOR  
www.ccce.calpoly.edu

ACCE – the national accreditation body for CM programs – seeks practitioner involvement

Cal Poly’s CM Department is proud to be accredited by the American Council for Construction Education (ACCE), the national accrediting body for CM programs.

Cal Poly’s CM program was first accredited in 1978, eight years after its founding. “Our faculty members have been active since, helping to establish and enforce standards to be met by CM programs nationwide,” says Al Hauck, a member of the ACCE Board of Trustees.

ACCE bylaws require the joint participation of both academics and professional practitioners in its activities. The presidency alternates between faculty and industry members who are equally represented on the Board of Trustees and all governing committees. Teams that visit the accredited programs every six years must include academics and practicing professionals.

But there’s the problem: More industry practitioners are needed to participate in the ACCE and train to be members of these visiting teams.

Al urges alumni and friends in the industry to volunteer time to the ACCE. For details, visit www.acce-hq.org or call Al at 805-756-1323.
Klay Adair is that rare bird on campus: nearly a San Luis Obispo native. He moved to the area as a child and, although he admits it was tempting to leave for college, he couldn’t justify it. “When I looked at the facts – and the best construction management department is in your hometown – you just have to stay and go to school there.” His family was supportive, particularly because his mother, sister, uncle and young cousin are all Cal Poly alumni.

The desire to build came early in Klay’s life. “My grandparents built their retirement home,” he says, adding that seeing the house “being built from nothing” had a great impact on him.

In spring of his senior year, CM’s Service Learning Class was a natural fit for Klay. “It’s what I enjoy – starting a project from the ground up and seeing it built. Plus we were helping people in the community I’ve grown up in.” (See article on page 11.)

This extra level of engagement was recognized when Klay received the Service to Department Award at the 2009 Construction Management Senior Banquet. An easy choice, notes Department Head Al Hauck, for Klay “epitomizes the kind of leadership we want to see in our students when they go into the real world. They need a blend of specific skills and the ability to lead a team toward a successful job completion. Although this was not the only reason Klay received the award, the Service Learning Class is a good example of the kind of leadership we like to see.”

Klay’s is starting his post-graduation career with Sundt Construction. Although the company is based in San Diego, he will only spend a few months there before returning to San Luis Obispo as a project engineer on the Cal Poly Rec Center expansion. Asked if he feels prepared, Klay gives an enthusiastic yes.

“The Construction Management Department makes sure everything in the class relates to what we will encounter after graduation,” he says. “And the internships gave me first-hand experiences, so I’m ready for whatever comes next in my career.”
Max Brandt has had his sights set on a career in construction since childhood. “I’ve always liked building with my hands,” is how he characterizes his interest. This modest calling doesn’t adequately reflect his current interests and accomplishments. A native of Davis, he has traveled far as a CM student.

“After the CM department approved the senior project, I was able to see every class in relation to the Tanzania project. (See article on page 5.) The project focused my learning because now I had a very real purpose,” Max says.

Ultimately the project, to design and build a technical college for the Catholic Diocese in Same, was a natural fit for his leadership skills. Max was part of the original group when the project was initiated as a senior project by David Lambert (ARCE ’06). Since then, Max has remained involved and, as part of his own senior project, has undertaken the organization of the interdisciplinary team necessary to finalize the construction.

Clearly, the department values Max’s contributions. He was recently named the recipient of the Outstanding Leadership Award at the 2009 Construction Management Senior Banquet.

“Max has a unique set of skills that makes him a quiet, but very effective, leader in our profession. He has the ability to get the job done without causing disruption or demanding attention – a very mature skill set for someone his age,” says Department Head Al Hauck.

Looking forward, Max will join Clark Construction for a six-month paid internship. His is scheduled to work on the Cal ISO (Independent System Operator) Project in Folsom. Slated to be a LEED Gold project, the structure will house smart technology and hopefully create $110 million in jobs for California.

While excited about this project, Max has arranged with Clark to return to Africa in the new year to lead the Cal Poly team in Tanzania.

“I want a balance,” he says. “The experience at Clark will take my skills to the next level, but at the same time I don’t want to consider my time in Africa a closed book. There has to be a way to stay in touch there and share our technological knowledge overseas and also to continue to learn about new and diverse ways to be more sustainable.”
Head of the Class

Excelling in everything he pursued at Cal Poly, Michael Van Groningen now aims his sights toward a construction management career.
Students Prove Prowess
CM teams win big in regional and national contests

“It was another great year,” says Department Head Al Hauck when asked about CM students’ participation at the Associated Schools of Construction (ASC) Regional Student Competition and the ASC and Associated General Contractor’s of America (AGC) joint National Student Competition.

Construction Management sent 11 teams to the 2009 competitions in Reno, Nev., and at the regional level garnered first place in Heavy/Civil and third place in Multi-Family. At the National ASC Competition in Reno, they had three first place finishes: Mechanical, LEED and BIM. They placed second in Electrical.

The first-place finish in Heavy/Civil qualified Cal Poly to enter the national ASC-AGC competition in San Diego, where the team competed against the other six regions of ASC, placing first nationally. Faculty advisor Erik Simon can’t resist adding that this is the second year in a row that the Heavy/Civil team achieved this distinction.

This was not the only competitive success in CM this year. Scott Kelting was faculty advisor to the Residential Construction competition team that placed third nationally out of 38 universities from around the country. “The competition project directly correlates with learning objectives in at least four courses in the Construction Management curriculum,” says Scott.

The competition proposals are generated by the six-person team during fall quarter and winter break. The proposals are 185- to 200-page documents that include a long list of elements, including a management plan, marketing plan and financial analysis. The team travels to the International Builders Show to complete its proposals with an oral presentation to the industry specialists who have already reviewed the written components.

Other competitions included one hosted by the Mechanical Contractors Association of America (MCAA).

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During the competition, 28 student chapter teams prepared proposals for a build-and-spec project – a 73,000-square-foot, two-story hospital in Northern California owned by the Howard family (owners of the world-famous racehorse Sea Biscuit) – a departure from the design-build projects of previous competitions.

“The submissions were evaluated by a panel of contractors representing the mechanical, electrical, HVAC and plumbing industries,” says Lonny Simonian, faculty member and one of the coaches for Cal Poly’s team. Evaluation criteria included: overall quality of written proposal (20 percent); project management and organization (25 percent); feasibility of construction and program schedules (20 percent); quality of conceptual design (15 percent); and accuracy/feasibility of conceptual costs (20 percent).

“It’s no easy task,” says Al Hauck of all of the competitions the CM students enter. “Still, they do remarkably well.”

With a consistent pattern of winning more ASC competitions than any other competing university, this is surely an understatement.
An Innovative, Integrative Approach

CAED disciplines overlap to build cutting-edge curriculum and workplace-ready students

"The CM department in particular has been a driver in creating interdisciplinary courses, and the new Construction Innovations Center expands these initiatives greatly. Students and faculty have spent a year getting to know their new facility – one which would not have been possible without the very generous support of so many of you, our friends and alumni. The building has brought our disciplines even closer together.

Important changes have also been made to an already robust CM curriculum. Students now share more common courses, and the core sequence of integrated laboratories has bolstered innovative learning while also supporting greater faculty research and service projects.

Department Head Al Hauck led his program to receive the highest praise possible in its recent accreditation. Under the leadership of Barb Jackson the California Center for Construction Education (CCCE) is thriving. Several faculty have won regional and national awards for teaching excellence. Construction Management students continue to win high honors in regional and national competitions. Alumni continue to inspire the next generation of construction managers. With all of these achievements, we are looking forward to another significant addition to CAED facilities; namely, the Simpson Strong-Tie Materials Demonstration Lab. This facility will continue our trajectory of strengthening the entire college’s ability to educate the finest construction managers along with their future colleagues in the planning, design and structural engineering fields.

We at the College thank you for your continued support. These are difficult times, and your support and generosity are greatly appreciated. We hope that you will stay in touch and share in our enthusiasm for the future.

R. Thomas Jones  •  AIA
Golden Reflections

Paul MacDonnell reflects on a community service project he built with CM classmates. The team constructed a wheelchair ramp for a mobile home resident – one of many projects the students tackle for the benefit of the community. Please see more about Construction Service Learning on page 11.