ABC Team Wins Big at Competition

Following weeks of preparation, work sessions held twice weekly and five meetings with industry supporters, a team of students felt ready to win. Teams from 19 colleges and universities across the country, including CSU, gathered for the Associated Builders and Contractors construction management competition at the ABC Leadership Conference in Miami, Fla., November 11-13, 2014.

The three-phase contest began with submission of a binder including a full estimate, schedule and risk assessment plan, and safety and quality control plans for an RFP received six weeks prior to the competition. This year’s project involved a medical office building in a congested area of Florida with high hurricane risk. Phase two is an all-day event where the teams receive a major change or event that significantly impacts the project and they must make changes to their documents and submit them for judging.

After review, the judges, many of whom worked on the project being used for the competition, invited the top nine teams to present and the team from CSU was among them. After final judging, the CSU team came away with first place in project management, second place in quality control, and an overall fourth place out of the 19 teams.

“We are proud of the work these students have put in,” said Jon Elliott, CM faculty member and team coach. “Our industry support was also great. Josh Olsen at LPR Construction is the ABC Rocky Mountain Chapter’s industry liaison and was super helpful lining up industry support for the team. We want to thank Hensel Phelps Construction, Mortenson Construction, LPR, FCI Constructors, and the ABC Rocky Mountain Safety Committee for their time and help with insights on specific challenges in the project.”

MCAA Team Heads to Final Four

Twenty-four teams submitted entries for the Mechanical Contractors Association of America Student Chapter Competition, but only the top four scores would move on to present at the MCAA 2015 conference in Maui, Hawaii, this March. CSU’s team is among those top four contenders. This year’s project involved the construction of the Segundo Student Services Center on the University of California-Davis campus, and the design and building must meet LEED™ NC Gold standards. The competition results will be announced at the Annual Awards of Excellence Ceremony on March 11. Keep watch for the March edition of Ram Built News to learn the results! Good luck, team!
MCAA President Chuck Fell Visits CSU

On January 28, the current president of the Mechanical Contractors Association of America, Chuck Fell, visited CSU as part of the William Duff Speaker Series. While on campus, Fell toured CM’s facilities, met with the MCAA student chapter, and spoke with the CM student body. His presentation covered his experience in the construction industry and how it informs students’ futures, why CM graduates should seriously consider the mechanical contracting industry, and what should be done now to prepare for the future. A social hour and dinner with the students followed.

“I must say I was most impressed with Mostafa and his students,” said Fell, referring to the CM department head. “They have provided a first class education in not only CM but the other facets of the construction industry, including their emphasis on mechanical contracting. The MCA Colorado chapter with Dave Davia’s leadership and their membership’s support is also quite impressive.”

Fell became president of MCAA at the association’s annual convention in Arizona in March 2014. He is the president of CFI Mechanical, a mechanical construction and plumbing contractor known for placing an emphasis on professionalism and adherence to world-class quality standards.

NECA Chapter Visits Sturgeon Electric

On November 19, 2014, CM’s chapter of the National Electrical Contractors Association, along with members of CM’s Electrical competition team, traveled to Sturgeon Electric in Denver to learn about the electrical contracting side of a major heavy civil project: Highway 36. Matt Dunscomb, the project manager for Sturgeon on the project, discussed with the students the challenges that have been faced along with all the new technology being implemented on the project. A lengthy question and answer session followed Dunscomb’s presentation.

“We learned that some of the challenges faced on this project were due to the fact that it’s a major vessel for traffic within Colorado,” said NECA member Owen Thurston. “Many commuters travel on this highway every day meaning the liquidated damages are rather substantial. For instance, demolishing the existing interchange at McCaslin Boulevard required shutting the highway down during the night to complete the necessary work. This was done over a weekend during the nights when traffic was less.”

Although the reconstruction of the highway is a 21 mile stretch, Sturgeon’s scope of work runs all the way into Boulder and consists of 27 miles. The new technology students discovered involves new signs placed at one-mile increments with traffic control technologies to inform commuters of accidents and other traffic slowing circumstances. Along with the new technology, Sturgeon is working on a new interchange that has only been used in one other place within Colorado. The joint venture for the US Highway 36 project plans to monitor this highway’s performance upon its expected completion date in the spring of 2016.

NAHB Team Places in Top Half

A highlight of the International Builders Show, which took place January 19-21 in Las Vegas, Nev., the National Association of Home Builders’ Residential Construction Management Competition showcased student teams’ work to complete a management proposal for a specific project. This year, 34 teams competed and CSU’s group, coached by faculty member Scott Glick, earned a fourteenth place finish. Congratulations to our NAHB students on a job well done!
Implementing BIM into Infrastructure Projects

As part of a project funded by the Mountain-Plains Consortium University Transportation Center, CM graduate student Blaine Fanning worked with faculty member Mehmet Ozbek and former faculty member Caroline Clevenger to investigate the utilization of Building Information Modeling, or BIM, on bridge infrastructure projects. The results of the study were published in October 2014.

BIM is not a widely utilized strategy in infrastructure asset management. However, through this study, the researchers intended to demonstrate that the benefits achieved through implementing BIM in vertical construction suggest that it represents significant opportunity for improved process, material, and economic efficiency throughout infrastructure life cycles. The work included a detailed case study that analyzed and compared two bridge projects, one using BIM and one that did not.

Fanning worked on internship with Triunity Engineering and Management and collected data for this project with the help of Denver’s Regional Transporation District, or RTD. He received guidance and support from Triunity employee Sean Von Feldt ('89), a member of the CM Professional Advisory Development Board.

“This is a great example of a student-faculty-industry partnership,” said Ozbek. “It was a unique experience that resulted in a win for everyone involved. In fact, we just published a paper in the Associated Schools of Construction’s International Journal of Construction Education and Research about this partnership and its benefits to all sides involved.”

Research Conducted to Benefit CDOT

Faculty members of the CM department worked hard in 2014 to provide some research and insights to the Colorado Department of Transportation, or CDOT. The goal of this type of work is to investigate current methods or materials used in CDOT’s daily work and provide possible improvements or changes.

Kelly Strong and Rodolfo Valdes-Vasquez worked together on a project that investigated current road debris removal processes and options for more rapid removal to avoid worker injury or traffic accidents. The study found that, due to no formal guidelines on the subject, the most common practice for debris removal involved workers leaving their vehicles to pick up large debris by hand or to sweep smaller debris. This creates safety hazards for both the crew and drivers, so Strong and Valdes-Vasquez sought options that would allow workers to remain in their vehicles while also not slowing traffic as they performed debris removal operations. They focused on the Gator Getter®, a debris removal device that would allow CDOT crews to pick up large debris on roads at a speed of 45 miles per hour without leaving their vehicles.

Scott Shuler conducted a study on the use of waste tires in the asphalt of Colorado’s highways and comparing its performance to conventional asphalt pavements. Two processes of mixing ground tire rubber with hot asphalt cement were tested alongside a control of conventional asphalt over the course of five years on the US 34 bypass near Greeley, Colo. The project also compared energy consumption, cost, and limitations of the mixtures. While it appeared that this particular pavement mixed under specific guidelines may not be economical in Colorado’s weather conditions, the study did provide suggestions for other methods of mixing and testing to further investigate the possibilities for use.

Ozbek Presents at TRB Conference

CM faculty member Mehmet Ozbek presented research findings to attendees of the Transportation Research Board’s 94th Annual Conference in Washington, D.C., January 11-15. His paper, titled “Understanding Public Perceptions of Different Revenue Generation Systems for Highway Construction and Maintenance,” involved a survey sent to citizens in five states - Colorado, North Dakota, South Dakota, Utah, and Wyoming - all of which fall under the Mountain-Plains Consortium, a university program sponsored by the U.S. Department of Transportation’s Research and Innovative Technology Administration.

The goal of the survey project was to assess the public’s opinion of alternatives for revenue generation systems needed to construct and maintain the nation’s highway network other than the current fuel tax collections. With a few minor exceptions, opinions were very similar among each state’s population. The findings could be used by policy-makers in decisions for alternative funding sources, and the survey itself could be used in other states for the same purpose.
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WIC and RK Mechanical Coordinate Visit for Students

On January 9, the Women In Construction student chapter coordinated with RK Mechanical, Inc., to host an information session for CM students. More than ten students and CM advisors Terry Richardson and Justin Smalley travelled to RK Mechanical’s headquarters in Denver for the event. “The attendees were able to get an exclusive site visit of our VA project followed by a tour of our facilities and a barbecue dinner including an informal conversation with our vice president, operations and project managers, and project engineers,” said Gwen Cagle, outreach coordinator at RK Mechanical. “We thought it was a huge success and a unique opportunity. With such positive feedback received afterward, we will be sure to make this an annual event.”

“It was an amazing opportunity to interact with RK employees over dinner,” said WIC member Katie Lowe. “We would like to thank all of the RK Mechanical employees in attendance for taking their time to introduce students to the mechanical industry.”

Spotlight Article on CM Grad Student

Recent CM graduate student Lisa Quiroga (’14) was featured in the Association for the Advancement of Cost Engineering International’s Source magazine published for February 2015. The article is a biographical piece featuring Quiroga as a young professional in cost engineering and the journey to her current position with Pivotal Scheduling Consultants. The full article can be read here: http://www.nxtbook.com/ygsreprints/AACE/aace_source_feb2015/#/34.

Upcoming Events

2015 Green Energy Challenge
Following an excellent performance in the 2014 Green Energy Challenge hosted by ELECTRI International, a group of CM students has signed up to compete in the 2015 contest. They are seeking input and guidance from members of the electrical construction industry. If you or your company are interested in lending a hand, please contact Brent Sigmon at brent.sigmon@colostate.edu.

Spring 2015 PADB Meeting
The spring 2015 PADB meeting is scheduled to take place on Wednesday, March 25, in the Preconstruction Center at CSU. A formal invitation and agenda will be sent in late February. If you are interested in becoming a member of CM’s Professional Advisory Development Board, visit http://www.cm.colostate.edu/industry/member-info.aspx.

Connect with us!