CONSTRUCTION INNOVATOR

CONSTRUCTION MANAGEMENT DEPARTMENT | COLLEGE OF ARCHITECTURE AND ENVIRONMENTAL DESIGN | FALL 2023

LAUNCHED

Multidisciplinary Team Employs Drones to Capture Data for Cal Poly Smart Campus Initiative

CAL POLY

We Scoot!

Maintaining Momentum with Learn by Doing

2023 has been a bit of a rollercoaster with a slight hiccup: I tore my Achilles tendon during a tennis match in September and spent a couple of months mastering the art of cruising on a knee scooter. But we know it's all uphill from here, right?

Now, onto some fantastic news from the Construction Management Department. Our 2023 was nothing short of amazing, packed with unforgettable moments and historic achievements. It's always tough to pick just a few to share, but this issue of Construction Innovator is packed with inspiring stories about our students putting their classroom learning into real-world action.

The cover story shines a spotlight on innovative projects led by our CM faculty and students who poured their hearts into these projects. And then there's a heartwarming story of service projects helping our communities. I am very proud of what the students have accomplished.

I want to express our gratitude for your financial support in making our success possible. Thanks to you, we've been able to celebrate student achievements and keep the momentum going. On behalf of the students and faculty of the Construction Management Department, a big thank you for championing construction education at Cal Poly.

We're continuing to invest our resources in creating innovative curricula, providing unparalleled opportunities for students and supporting faculty members who are nurturing talent and inspiring innovations. We take immense pride in our reputation for educating the next generation of the built environment, and your support has been instrumental in our success.

Department Head Jeong Woo and CM major Xavier Math bond as scooter buddies while recovering from foot injuries.

I hope you thoroughly enjoy this year's issue! If you have any thoughts to share, feel free to reach out to me directly at jwoo21@calpoly.edu. Your feedback is always appreciated.

Best wishes for a healthy and prosperous New Year.

JEONG WOO, PH.D. | DEPARTMENT HEAD
CONSTRUCTION MANAGEMENT DEPARTMENT

Christine Theodoropoulos

Bidding Farewell

As I reflect on where the College of Architecture and Environmental Design (CAED) stands today, I take pride in our shared commitment to students. Students are where the action is. And students are powerful agents of change. Every class brings new perspectives and experiences that reflect all they are, the communities they come from and the learning communities they form at Cal Poly. I admire their passion for tackling great challenges — climate mitigation, housing, social equity, community resilience — as they explore the breadth of what exists and what is possible.

On behalf of students, I would especially like to thank the Construction Management Department faculty, staff, alumni, friends and partners who support students personally and help them succeed professionally. The opportunity to serve as dean of the CAED has been a true privilege for which I am deeply grateful. I look forward to staying connected. Best wishes!

CHRISTINE THEODOROPOULOS | AIA, PE | DEAN EMERITUS
COLLEGE OF ARCHITECTURE AND ENVIRONMENTAL DESIGN

In This Issue

On the Cover

Evan Cheung (Construction Management, '23) and teammates used drones to capture data that will help create a virtual 3D model — or digital twin — of campus. The team completed the first phase of the multidisciplinary project, known as the Cal Poly Smart Campus Initiative, focusing on all exterior and interior spaces in the campus core.
Pages 20-23

▾ Farm-Fresh Pathways

In more ways than one, construction management student Allison Wild and her senior project team have succeeded in making City Farm SLO's community garden accessible to all. | **Pages 8-9**

Memorial Weekend Becomes A Memorable One for Student Team

RENOVATING CAMP NATOMA

THIRTY-ONE CAL POLY CONSTRUCTION management (CM) students spent a long three-day weekend at Camp Natoma during spring quarter 2023, not to camp, but to give a much-needed makeover to the facility, which has been serving Central Coast children since 1941.

The rigorous weekend renovation projects were the focus of CM Professor Phil Barlow's Construction Service-Learning class. The senior-level course, offered every spring quarter for the past 15 years, is the brainchild of Barlow, who was inspired by the idea that students could learn from a hands-on project-based experience that also aided local community members and nonprofit organizations.

▼ Camp Natoma's cooks' cabin patio, known as "Kooky Nook," was rebuilt to provide kitchen support staff a sleeping platform near the kitchen.

The course has twice won a Cal Poly Community Service Award. The awards, established 37 years ago, are presented annually to students, faculty, staff and community partner agencies for contributions to the quality of life in San Luis Obispo.

Barlow's course exposes students to the entire construction process, from inception to completion, including initial client meetings, project design, code review, contract documents, permit process, risk analyses, safety plans, estimating, scheduling, procuring materials, job tracking, jobsite productivity, construction and the close-out process.

"We typically find construction service projects for nonprofits, the elderly or low-income groups in the Five Cities area," Barlow explained. "We create six teams and raise $2,000 per team for each to buy construction supplies and miscellaneous tools.

"The class emphasizes that the construction process is essentially the same whether the project is a $2 million office building or a $2,000 accessible ramp," Barlow continued. "What makes this course different from simply volunteering time with a community organization is the learning element and the time that is taken to reflect on best practices and lessons learned."

Camp Natoma, located west of Paso Robles, California, offers campers a weeklong immersive wilderness experience in which they sleep outside and connect with nature. The camp was founded more than 80 years ago and needed several upgrades and improvements.

"The facilities were a little 'long in the tooth,'" Barlow said. "We identified five projects. I assigned one six-student team to each project and two teams to the largest project: a new sleeping deck for the counselors."

Other camp projects included separate girls' and boys' shower complexes, a cooks' cabin patio known as "Kooky Nook," a shower facility for counselors in training and a new sleeping platform at Starkie's Camp.

The girls' and boys' showers both needed a major overhaul, according to Camp Natoma Executive Director Emily Zbin.

"The showers have weathered many storms and years of use," Zbin explained. "We wanted the visual design to remain similar but wanted to improve users' comfort."

Students repaired and painted the exterior sheet metal, keeping the same look on the outside; however, on the inside, they designed and installed Trex-deck flooring to replace the broken concrete.

"The cook's cabin deck had rotted beyond repair," Zbin said. "The new improvement allows kitchen support staff to have a sleeping platform near the kitchen. Starkie's Camp platform provides a summer home for Zbin, her husband — the camp's director of operations — and their children.

Both Zbins are thrilled with the improvements. "The students were fantastic," Emily Zbin said. "They had creative ideas, lots of enthusiasm and completed their projects in a remote, hard-to-access, mosquito-filled camp in just one long weekend."

Student team leader Jose Peña and classmates Parsa Mokhtari, Jorge Lara, Leo Geiger and Harlan Warthen worked on the counselor-in-training shower facility.

"We built a permanent platform finished with AZEK decking material," Peña said. "We raised the

▲ Left: Michael Daskarolis builds a frame that will support a new deck in the girls' showers.

▲ Leo Geiger (top) and Jorge Lara install Trex decking over the newly built deck frame in the showers for counselors in training.

▲ The Kooky Nook's new sleeping platform.

▶ The newly renovated shower facilities are ready for camp staff and visitors.

floor and made it level, providing a comfortable and secure feeling for the campers. We power washed the interior and exterior sides of the shower unit and painted it dark green, giving it a fresh, clean look."

The students also installed racks and hooks to hold soap and shampoo and to hang clothes and towels on, and they cleared weeds and brush, creating a distinct and safe path.

Students found the work challenging because of the limited site visits and scarce resources at the camp. "Last year's extreme rainfall destroyed the roads leading to the camp site, which prevented our group from fully preparing for this project," Peña recalled. "The distant and rural location of the campsite made it difficult to have utilities available at our convenience. The camp's shop served as a great resource, but not having enough power sources nearby caused a lag in sequence as different groups had to share power tools."

Oftentimes figuring out how to overcome challenges requires creative thinking and results in new ways of doing things. This Learn by Doing experience was no exception. Peña made some discoveries along the way.

"I recognized my weaknesses and learned that I need to be more assertive and more knowledgeable about field operations and 'office' operations, like estimates and schedules," he said. "My previous

▲ Opposite: The deck building team enjoys their handiwork. In front (from left): Bradley Blakemore and Julian Chavez. In back (from left): Enrrique Zarate, Daniel DeSoto, Braden Deck, Reed Aitken, Jaden Green, Aleena Panchal, Jack Minor and Jonathan Laratonda.

construction experience served as a key strength coming into this project, but there's always more to improve on. It's better to be proactive beforehand to avoid being reactive in the future."

Peña's team was pleased to see their design concept become a reality. "We spent such an arduous amount of time coordinating all aspects of this project," Peña said. "It felt amazing to see a tangible finished product that we built with our own hands."

Peña stressed that "things will never turn out how you want them to turn out. Something will always come up," he explained, "So it is crucial to be as prepared as you can be and to expect the unexpected." ■

THANK YOU, SPONSORS

Every year, several companies step up to fund the $12,000 required for renovations. Those companies for 2022-23 were: Nibbi Brothers General Contractors, Hensel Phelps Construction, McGuire and Hester, DPR Construction, Clark Construction and W.E. O'Neil.

IT TAKES A TEAM

Students participating in the project are (in alphabetical order) Reed Aitken, Henry Anderson, Bradley Blakemore, Mason Canton, Joey Catania, Julian Chavez, Michael Daskarolis, Braden Deck, Daniel Desoto, Dillon Elliott, Griffin Finnane, Leo Geiger, Jaden Green, Dino Kuljancic, Jorge Lara-Gonzales, Jonathan Laratonda, Jessica Merchant, Jack Minor, Parsa Mokhtari, Aleena Panchal, Jose Peña, Jack Riddle, Sean Ross, Sydney Sackmann, Jack Sirich, Ryan Sutton, Harlan Warthen, Enrrique Zarate and Jonny Zepeda.

A GARDEN FOR ALL

Students' Senior Project Improves Access to City Farm SLO's Community Garden, Thanks to Funding from CMAC

LAST YEAR CMAC (Construction Management Advisory Council) awarded five Senior Project Grants ranging from $500 to $2,000 to support students and Cal Poly's Learn by Doing philosophy.

One project, A Garden for All, received $2,000 to create an educational space for students of all ages and abilities at City Farm SLO. Team members included construction management (CM) students Allison Wild, Kieran Barker, Rob Dasch and Reed Aitken.

City Farm SLO (https://cityfarmslo.org) is a licensed nonprofit agency that has managed a 19-acre parcel along Highway 101 since 2013, according to its long-term lease with the city of San Luis Obispo, which owns the land as part of the Calle Joaquin Agricultural Reserve.

The farm aims to empower people to live healthier, more prosperous lives through sustainable agriculture and farm-based education, especially for at-risk and underserved youth, and provides affordable land to small, sustainable farmers while fostering a diverse community.

Wild's Garden for All project (https://www.cityfarmslo. org/a-garden-for-all) was initiated to help the farm meet its students' diverse needs. Much of the farm was inaccessible to individuals with disabilities, but thanks to a handful of Cal Poly students, the garden is now fully accessible. The garden is just the beginning of a larger effort to increase universal accessibility to the entire farm.

"Each of us completed a different part of the project," Wild said. "The goal was to build a wheelchair-accessible learning space for the many school groups that come to the farm. I built seven planter beds of different sizes and designs. The variety in design allows anyone to be able to access learning opportunities, no matter their ability or height. One planter bed is wheelchair accessible with slanted boards to allow for someone to roll up and participate with the rest of their classmates."

Barker built approximately 500 linear feet of decomposed granite pathways to connect A Garden for All to other critical points on the farm and to make the whole farm a more accessible space.

Dasch built three picnic benches with detachable tables and a station to wash produce. The detachable benches give students a place to sit and learn while allowing for maximum accessibility.

Aitken built a shade structure over the center of the garden and the picnic tables, which provide a canopy and some flexibility for the space.

"Although the donation from CMAC didn't cover all our costs, it truly helped us support the farm and create a long-lasting community impact," Wild said. "We have already had such good feedback from the farm managers and the students who came to visit."

◀ Opposite: Farm Manager Shane Lovell and a farm visitor appreciate the raised planters.

▲ Reed Aitken (pictured) built a shade structure over tables and benches built by fellow team member Rob Dasch.

◀ Allison Wild initiated the senior project and realized its goals with her team's help.

▶ Kieran Barker built pathways for easy access to other areas of the farm.

The Garden for All Project is one of several senior projects contributing essential infrastructure to City Farm, according to Steven Marx, City Farm SLO board chair. The students are provided with financial assistance from CMAC, business partners and sometimes their families.

"Under the guidance of CM Department Head Jeong Woo, this program has developed growing momentum over the last three years," Marx said. "The CM senior projects have provided us with essential facilities that will continue to enhance our programs for many years to come. They've been built with exceptional skill, generosity and high spirits."

"CMAC strives to support senior projects," said Rachell Smith, CCCE (California Center for Construction Education) program manager. "Board members recently approved an additional $5,000 for the Senior Project Grant program, bringing the total to $15,000 to help seniors in the upcoming school year." ■

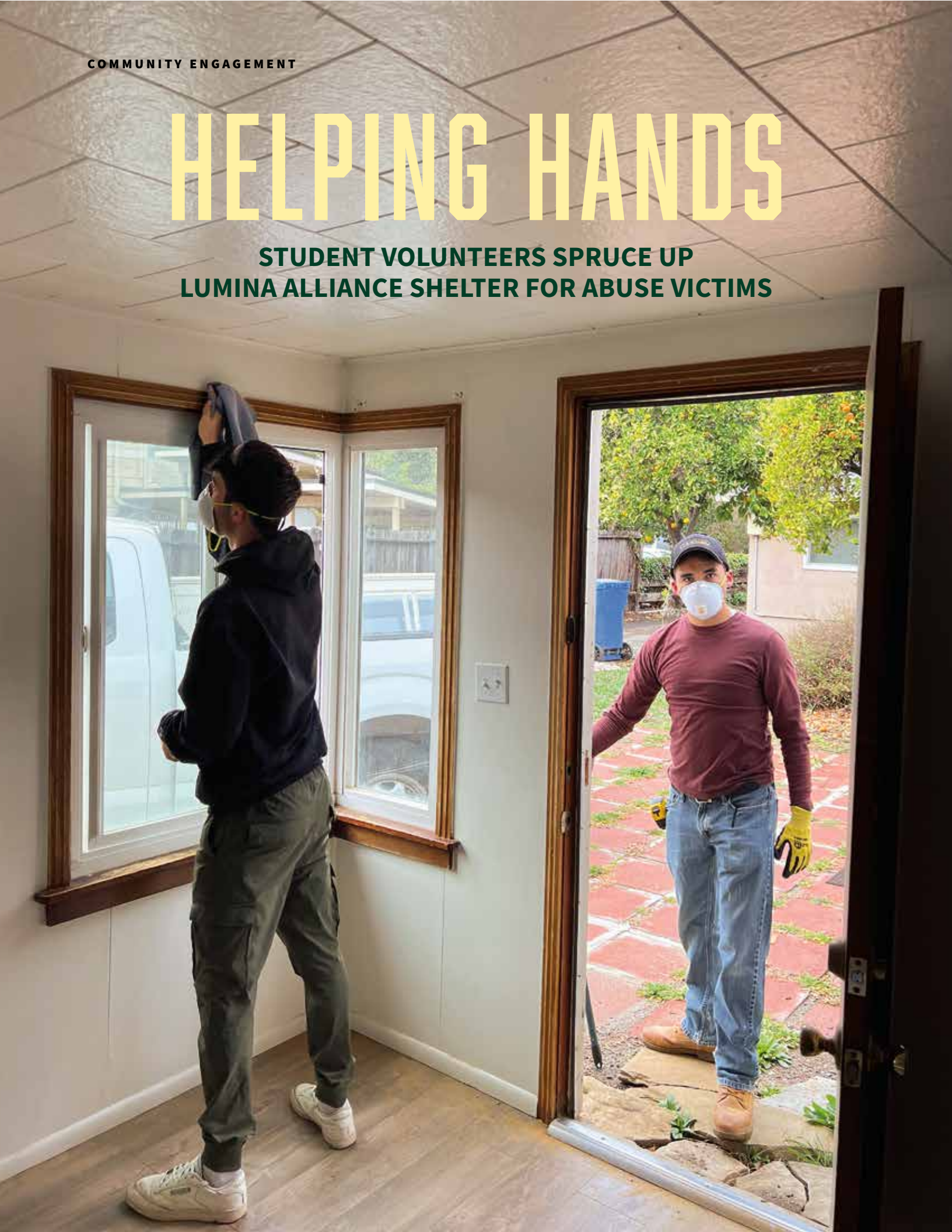
A BOUNTY OF BENEFICIAL SENIOR PROJECTS

City Farm SLO has benefited from several construction management students' senior project initiatives since 2021, when Connor Morinini ('21) built a produce cooler at the property. Additional projects include The Lookout, an observation deck built by Eric Cederstrom ('22), Brett Jones ('22) and Lane Lagomarsino ('22), and The Olive Gate, designed and built by Mackenzie Ramse ('22).

This year, in addition to A Garden for All, projects included a mobile pizza oven built by Koby Ramage ('23), an animal feed shed by Jake Pizzifred ('23), a pump fence and custom gate by Joey Martin ('23) and a deer fence and gate by Jorge Hernandez ('23). "All of these projects have benefited from on-site advice by Farm Manager Shane Lovell," said Steven Marx, City Farm SLO board chair.

HELPING HANDS

STUDENT VOLUNTEERS SPRUCE UP LUMINA ALLIANCE SHELTER FOR ABUSE VICTIMS



ABOUT 30 CAL POLY construction management (CM) students came together one day during finals week in spring 2023 to help create a warm and welcoming environment for victims of sexual and intimate partner violence who are living in transitional housing provided by Lumina Alliance.

The community service project also attracted the help of CM Department Head Jeong Woo and faculty members Bryan Knakiewicz and Eric Brinkman.

"Helping our community agencies in need is very much part of what the Construction Management Department does," Woo said. "I hope our students do the same and inspire others wherever their journey takes them."

Believing that everyone has the right to live free from sexual and intimate partner violence, Lumina Alliance provides a safe residential program — among other services — for survivors and their children.

The partnership between the nonprofit agency and the CM Department began when Transitional Housing Manager Yvonne Morales contacted Woo to see if any faculty and students could lend a hand to fix cabinetry, paint, tile and lay floor at its transitional housing units.

"I began researching local programs in the community," explained Morales. "We needed assistance with various projects, and the search led me to Cal Poly. I was impressed with the quick and kind communication from the team."

CM student Angeline Witt, a junior at the time, was a willing volunteer who led a group of five student painters. "I wanted to become more involved with Lumina Alliance since hearing about it," she said. "Having the opportunity to help them in a hands-on, construction-related way was the best of both worlds. I helped prep and paint temporary apartments for women and families who are survivors of domestic violence. Places like these help women retreat from unfortunate situations."

Witt said that a lack of materials created her biggest challenge. "We had such a tremendous turnout of volunteers that we were short of paint brushes and rollers," she explained. "We had to get creative and use sponges."

Since this service project, Witt has volunteered at similar events. "This definitely kickstarted a passion for construction service projects," she said.

Morales echoed Witt's enthusiasm. "Any time we partner with the community, it reminds me of the great support we have," Morales said. "Having the students take the time to help fix up and make improvements to our transitional housing property was really inspiring. We are so grateful for the Cal Poly construction team." ■

◀ Enrique Duran (in doorway) was among the CM students who freshened up a transitional housing residence for Lumina Alliance.

▲ Top: Ryan Walther (left) and Wilson Kiff apply a fresh coat of paint to cabinetry.

▲ Angeline Witt enjoyed heading up the painting team and wielding a roller.

▶ Lucas Van Dam preps a built-in drawer.

ABOUT LUMINA ALLIANCE

Lumina Alliance (https://luminaalliance.org/contact/) serves all who have been impacted by and are survivors of sexual assault, and those who have or are experiencing domestic violence. It also serves those who experience child abuse. The agency offers free therapy, housing assistance, emergency shelters and legal resources. There is a staffed 24-hour information and crisis hotline ready to help at 805-545-8888.

TEE TIME

Inaugural NECA Golf Tournament Proves Perfect Networking Opportunity for Students and Pros

CAL POLY'S STUDENT CHAPTER of the NECA (National Electrical Contractors Association) joined forces with the Central Coast NECA chapter to host the Construction Management (CM) Department's first golf tournament.

The tournament, held in May 2023 at the Eagle Ridge Golf Club in Gilroy, California, was organized to help develop a closer relationship between the NECA member contractors and CM students.

"This was an opportunity for Cal Poly CM students and faculty to connect and network with the professionals of many electrical contractors from throughout California," said Assistant Professor Joe Cleary.

Forty-eight players turned out for the event. They included alumni, colleagues, friends, faculty and students.

The tournament was a scramble format with a shotgun start.

"Each golfer received a raffle ticket at check-in, and all were provided an opportunity to buy more throughout the day," said Jake Weiss, NECA student chapter president and co-organizer of the event with NECA student chapter officer Lance Brack. "The round concluded with a tri-tip dinner in the club house, a raffle, contest hole awards for longest drive and closest to the pin, with team prizes for first, second and third place."

The event generated approximately $13,000, which the team used to help offset expenses to attend the annual NECA Conference in September 2023 in Philadelphia. Remaining funds will be used to help pay next year's club expenses for things like the annual training trip to San Jose, local electrical project jobsite tours and preparation for the Electrical Contracting and Innovation Challenge.

"The golf tournament was a great way for our chapter to interact with the industry and further promote our club," said Weiss. "We had a great time hosting this event and are excited to continue this new tradition."

Cleary added, "This was a great turnout for the first event. We expect the event to grow to a full course in years to come." ■

▼ Members of Cal Poly's NECA student chapter networked over golf and a barbecue with members of the national organization.

STAYING CONNECTED

CMAC and CCCE Activities Round Up Alumni, Students and Industry Partners

CMAC WELCOMES NEW PRESIDENT AND SECRETARY

The Construction Management Advisory Council (CMAC) has elected two new Executive Committee members who began their tenure in July 2023. Brad Denney, COO of Suffolk Construction, is serving a two-year term as president, and Cory Keller, vice president of operations at Truebeck Construction, is the new secretary.

"CM alumni Brad Denney ('98) and Cory Keller ('99) hold leadership roles in their respective companies," said Rachell Smith, CCCE (California Center for Construction Education) program manager. "They, along with the other dedicated members of the Executive Committee, strive tirelessly to uphold the excellence of Cal Poly's CM program, fostering a legacy of alumni who emerge as influential leaders in the construction industry."

CMAC held four mixers throughout California in August, generously hosted by Swinerton, Level 10, DPR, VEC, McGuire and Hester, and Largo Concrete. The social events are intended to spur networking opportunities for alumni and CMAC members while also promoting the Construction Management (CM) Department to industry partners and supporters.

▲ CMAC rallied its members in June 2023 for an All-Hands Meeting in the courtyard of the Simpson Strong-Tie Materials Demonstration Lab at Cal Poly.

"The annual growth of these events is truly remarkable," said CM Department Head Jeong Woo. "The Los Angeles gathering saw an impressive turnout of 80 alumni, with generous sponsorship from Largo Concrete Inc. We extend our heartfelt gratitude to our industry partners who played a pivotal role in hosting this year's mixers."

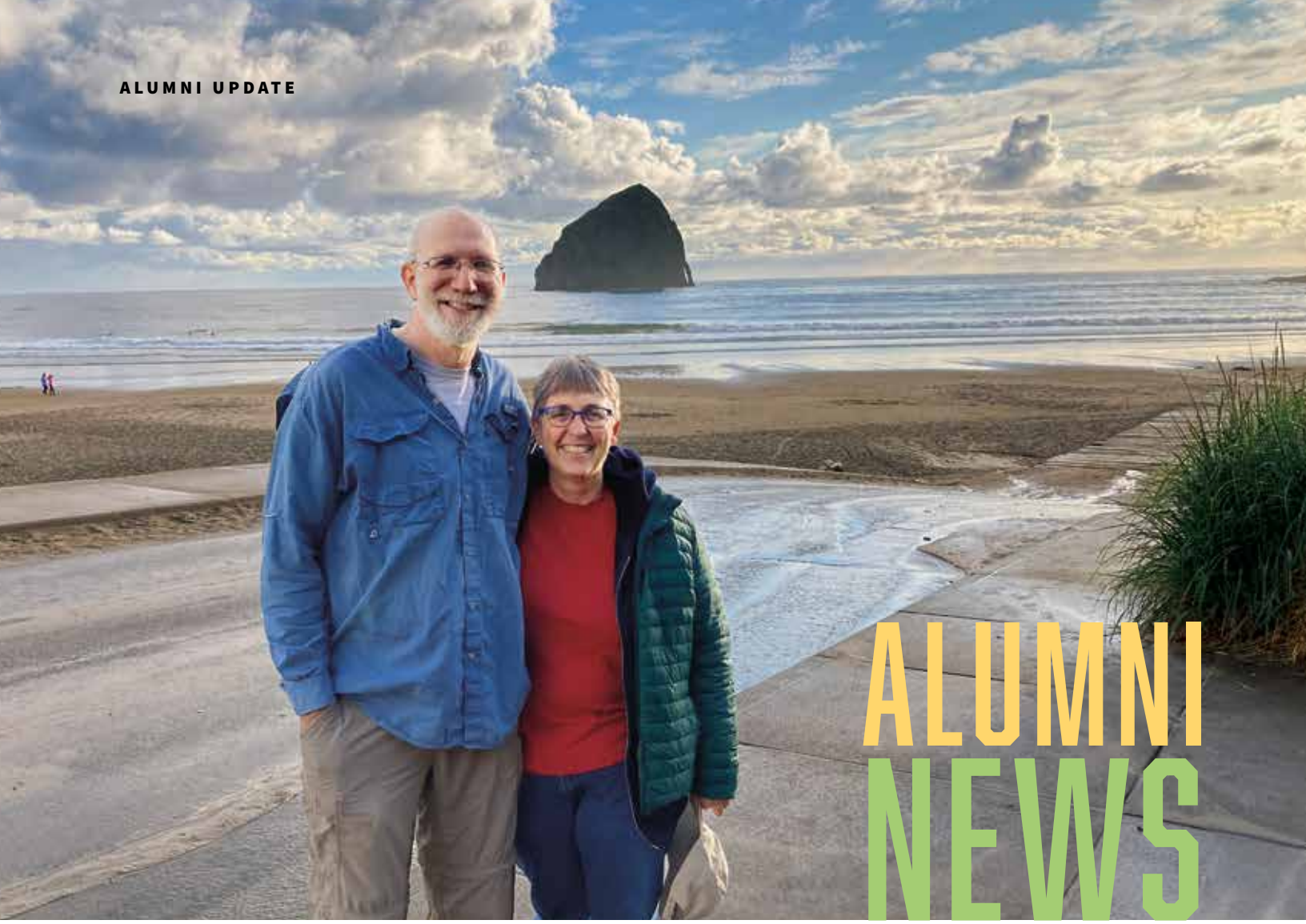
CCCE CONTINUES TO GROW, OFFER ENRICHMENT ACTIVITIES

The Carpenters Apprentice Program, which is part of the CCCE, placed 25 student interns in summer 2023. The students gained field experience at CMAC-sponsored companies located in Northern and Southern California.

The CCCE's Construction Management Career Fairs continue to be a big hit with both companies and students. More information on the career fairs can be found online at: https://ccce.calpoly.edu/cm-career-fair/2022-fall-2023-winter-construction-management-career-fair-insights/.

Strategic and administrative efforts of the center continue to expand, according to CCCE Director Scott Kelting. Activities included a faculty-in-residence program in partnership with Anvil Construction intended to enrich the classroom experience of CM students by providing opportunities for selected faculty members to gain construction experience through summer internships with CMAC-member companies.

In addition, the CCCE hosted a boot camp training for the Associated Schools of Construction. Three Cal Poly CM faculty members trained approximately 40 faculty from universities across the country. Training sessions were conducted in mechanical, electrical and plumbing and in virtual design and construction. ■



ALUMNI NEWS

The Construction Management Department enjoys getting news from its alumni, listed here in chronological order. Share your updates about jobs, promotions, retirement activities, relocations, marriages, births and more by contacting Project Coordinator Jenay Reynolds-Sibbach at 805-756-6385 or jreyno00@calpoly.edu.

Chris Manning (CM, '86) joined Overaa Construction in 1986 as a project engineer and was named CEO in 2021. Over the years, he has delivered projects for such notable Bay Area clients as Bay Area Rapid Transit, Chevron, Kaiser Permanente, Saint Mary's College of California, Lawrence Livermore National Laboratory, Stanford Linear Accelerator, NASA, UC Berkeley, The Oakland Zoo, San Francisco International Airport and East Bay Municipal Utility District. Under his leadership, Overaa has secured $1 billion in backlog and has been named a Best Place to Work for the seventh time by San Francisco Business Times. Overaa was ranked one of the Top Environmental Firms in the nation by ENR. Manning attributes his success largely to Overaa's vibe. "We are passionate about construction here," said Manning. "Or maybe it's all of our Cal Poly alumni!" Overaa

▲ Paul Hamalian, now retired after working 29 years with Habitiat for Humanity, enjoys life on the Oregon coast with his wife, Nancy.

◀ Serving as Overaa Construction CEO keeps Chris Manning busy with a never-ending list of Bay Area projects.

currently employs more than 20 Cal Poly alumni in leadership positions. Manning serves on the College of Architectural and Environmental Design Dean's Leadership Council, and he is a member of the Design-Build Institute of America (DBIA). Manning met his wife, Monya, while they were both undergraduates. They are the parents of two sons.

Paul Hamalian (CM, '88) retired in June 2023 after 29 years with Habitat for Humanity International, where he served in several capacities. In addition to working in construction in Nicaragua, Hamalian served as country director in Ecuador, held global executive roles in finance, was vice president of strategy and concluded his tenure as the global chaplain during the pandemic. "I have relocated to Salem, Oregon, where I am taking on leadership in my local church, becoming a Rotarian and building an elaborate 'she-shed' for my artist daughter-in-law," he wrote.

Jason Rich (CM, '99) was promoted to chief executive officer of Snyder Langston, one of Southern California's leading commercial and multifamily builders, now in its 64th year. As CEO, Rich is responsible for setting the vision of the company and furthering its reputation as a trusted advisor. He joined Snyder Langston over 20 years ago and credits his success to the company's "amazing culture" to train and grow from within.

Ray Boff (CM, '05), national prefabrication leader at DPR Construction, is spearheading a revolution in construction through industrialized methods of construction and offsite manufacturing adoption. His pioneering work in defining the prefabrication ecosystem, introducing manufacturing processes and building automation tools has improved efficiency while reducing waste. Boff's groundbreaking achievement lies in translating the builder's mindset into computer programs, addressing the aging workforce and promoting innovative project planning. With a focus on prefab adoption across DPR, he's leading the industry into a new era of construction and helping to drive the construction industry's transformation toward greater predictability and technological advancement.

Daniel Wiens (CM, '10), founder and president of Journeyman International (https://www.journeymaninternational.org/), continues to expand the reach and scope of JI. Wiens founded JI as his senior project in 2009 with a mission to inspire and train the next generation of humanitarian designers; design and engineer safe, sustainable and appropriate humanitarian facilities; and connect university students and professional volunteers with critical needs around the world. The nonprofit agency's network of designers, builders, universities and humanitarian organizations has grown extensively in recent years. JI's 2022 Annual Report highlights the year's accomplishments, including more than 13,000 hours of donated design work in 2022. The nonprofit completed work on the Malawi Children's Village for orphans, a free school for vulnerable children in Rwanda and a school for children in Bali, Indonesia. Projects currently being designed include a medical center in Rwanda, a safe house for victims in Zimbabwe, a vocational training center in Cameroon, key infrastructure on a typhoon-devastated island in the Philippines and a hospital in a war-torn region of Ethiopia. ■

▲ Left: Jason Rich was promoted to CEO at Snyder Langston.

▲ Right: Ray Boff is DPR Construction's national prefabrication leader.

▼ The 2022 completion of a children's school in Bali, Indonesia, exemplifies Daniel Wiens' continued humanitarian work as Journeyman International founder and president.

CONCRETE CONVERSION

Cal Poly Alumni Effort Spearheads Extensive Concrete Lab Renovation

WHAT BEGAN AS a small project "to solve some very simple functionality problems with the Concrete Lab" has turned into a major transformation, led and supported by a team of dedicated alumni.

The lab, located in Engineering West (No. 21), was built in the late '70s and was long overdue for renovation. The lab provides students in both construction management (CM) and architectural engineering (ARCE) a safe place to test concrete batching, mixing and proportioning.

"We brought in new technology and equipment to use the space more efficiently," CM Department Head Jeong Woo said. "We removed the concrete curing room and installed concrete curing boxes so that students can use the room as a workspace."

The lighting fixtures were upgraded to LED, making the lab more energy efficient. The old ceiling and wall tiles were removed, and new furniture and televisions were added. Paving was removed from the concrete yard and a new reinforced concrete slab was poured in its place.

There's also a new concrete mixer, worktable and washout pit, where recycled concrete goes. A new door opening to the lab was installed with windows to provide natural light, and it allows students to get equipment in and out with ease. The new opening, however, required significant structural retrofit work.

The entire project was managed by a handful of Cal Poly graduates who believe in "giving back to Cal Poly and supporting our students," Woo said. Some current students also helped, turning the project into a valuable Learn by Doing experience.

The first alumnus to sign on was Ron Yen (Civil Engineering, '00), managing partner and director of the Build Group of

◀ Cal Poly President Jeffrey D. Armstrong (right) thanks industry partner and alumnus Ron Yen, who volunteered his time and expertise to help complete the lab renovation project.

▲ The volunteer team installs reinforced concrete slab in the concrete yard.

▶ Keenan Brekke, one of several alumni who volunteered their time on the project, oversaw the renovation crew.

Companies. "During a visit, Jeong was discussing how he wanted to update the Concrete Lab," Yen recalled. "That was a goal — to modernize and beautify that drab lab space. I have a concrete company; how could I not help?

"Over the next few weeks, we laid out some plans," Yen continued. "That was one-and-a-half years ago." The lab was completed just in time for fall quarter.

Yen is also a partner in Pacific Structures, part of the Build Group of Companies and the company that donated $500,000 in labor, supplies and materials to the project. The lab is named the Pacific Structures Concrete Innovation Lab.

Yen, who serves on CMAC (Construction Management Advisory Council), supports Cal Poly partly because of its pool of CM graduates. "Many of our young leaders — our up-and-comers — are Cal Poly grads," he said. "Three of our company's managing partners and board members are Cal Poly alumni."

One up-and-coming graduate is Keenan Brekke (CM, '18), also a CMAC member and project manager at Pacific Structures who returned to campus every week to oversee a crew working on the renovation.

"My hope is that the lab will provide another space for students to expand their hands-on skills in specialty construction and design, and inspire innovation within our industry," Brekke said.

CONTINUED ▶

▲ Interior renovations included removing ceiling and wall tiles, upgrading the light fixtures to LED for energy efficiency and adding new furniture and a TV.

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In addition to being in charge of material and labor donations from trade partners and other specialty contractors, Brekke managed the lab renovation's design, scheduling and physically helped build the lab. "I came down the last week of July, each week in August and September," he explained. "We worked a few days each week through the weekend to complete the project. In total, we worked 24 days over 10 weeks."

Additional Cal Poly alumni who helped with the renovation were Abraham Ochoa (Civil Engineering, '22) and Harrison Woods (CM, '19). Pacific Structures' staff performed the demo, structural retrofit and modifications; dry-finished the existing concrete walls; installed new electrical equipment, including LED lights — provided by Cupertino Electric on behalf of Dom Cacciatore (CM, '10) — plumbing and cabinetry; installed formwork, rebar, aggregate mockups and signage, among other improvements.

Another alumnus, Joe Gulden (Architectural Engineering, '05), project executive at IMEG engineering consultant firm, led the engineering aspect and developed the structural drawing set for the project.

"We knew that a new door was needed, and we knew that it would create a weakness in the structure," Gulden said. "So we created two concrete piers on either side of the opening and a new header across the opening to give it enough strength to accommodate the new door opening. This put more concentrated loads into the foundation, so we also enlarged the footing in this area to help better redistribute gravity and seismic loads.

"In this case, we wanted to punch a large hole through the building's exterior wall, which serves two structural purposes: it supports gravity loads, and it provides seismic resistance," Gulden added. "We took the lead on developing a simple, cost-effective structural solution to locally strengthen the structure so that we could still maintain the same level of gravity and seismic resistance while accommodating the new door. To make this happen, we ran several analysis models to vet out our concept, went through a peer review process and ultimately developed drawings that the contractors could use to construct the renovations."

Fifth-year CM and architecture student Kenzie Pelletier signed on to help, knowing that her involvement would enhance her educational experience. She helped develop design documents and was involved with the project's permitting process.

▶ Besides the newly installed concrete slab, the concrete yard boasts a new mixer, worktable and washout pit. An added lab door with windows provides natural light and increases access to move large equipment in and out.

"Both of these roles required frequent communication between other students working on the project, the CM Department, campus facilities, various consultants and the project donor," she explained. "The project gave me and other students the opportunity to work with multiple disciplines, a client (Cal Poly) and a donor, much like how projects are run in the industry.

"The project was also close to my heart, as the Construction Materials and Assemblies Lab class that is taught in the Concrete Lab helped me discover my passion for construction management," Pelletier continued. "I loved being able to contribute something that can help other students discover their passion for the design-build industry."

The renovation gave students valuable hands-on experiences. "Students went through the design and engineering process with the university's Facilities Management and Development staff," Woo said. "CM students developed the engineering drawings and reached out to vendors and local subcontractors to obtain price quotes, develop estimates and schedules, and coordinate procurement with donor companies."

Recent graduate Farbod Mobed (CM, '23) worked on the renovation during his final year at Cal Poly. "I worked as a precon manager of sorts to put together CD drawings while also mapping the site on a civil plan for the excavation of the concrete," Mobed said. "I also worked on as-builds of the building as a whole."

CM senior Lance Brack designed the electrical drawings to "ensure that they would get through the permitting process. I also found it a good opportunity to connect with more people and better integrate myself into Cal Poly's motto of Learn by Doing," he said. "The renovated lab will help CM students get more opportunities to work with the best technology and materials that Cal Poly has to offer."

For the students involved in the project, helping was a Learn by Doing activity. For alumnus Gulden, it was an opportunity to give back.

"Cal Poly is a special place, and there's a unique bond among Cal Poly alumni," he said. "It's important to keep those connections strong and to give back to the university to make sure future grads have the same experience. It was a great honor to come back and help make something better for the next generation of students.

"I have good memories of the Concrete Lab, and I hope that by supporting this project, a whole new generation of students will have a similar experience," Gulden continued. "I remember mixing up my first batch of concrete in the courtyard, then performing a slump test on our mix. It was one of those 'aha' moments when you realize you are studying all of these ideas in the classroom and then here we are actually making what we had been studying and designing. It connects the theoretical design part of the profession with the actual physical construction part."

Those hands-on experiences had a lasting impact. "The Learn by Doing mantra that comes from a Cal Poly education is unique, and I've had many conversations with fellow alumni about how that has helped them," Gulden said. "One consistent thing I hear is that it gives a sense of practicality to your work. The Learn by Doing experience gives us a better grasp on how to create practical and constructable designs and how to work with our partners in the field to overcome challenges.

"When you've gotten your hands dirty yourself, it's a lot easier to understand and problem-solve with workers in the field," Gulden said. ■

CREATING A DIGITAL TWIN

AMBITIOUS PROJECT AIMS TO CAPTURE 3D CAMPUS MODEL

PRE-FLIGHT HURDLES

FACULTY AND STUDENTS in the Construction Management (CM) Department have joined an ambitious multidisciplinary effort to create a virtual 3D model — a digital twin — of campus in order to visualize and organize data that will drive campus management, planning and development.

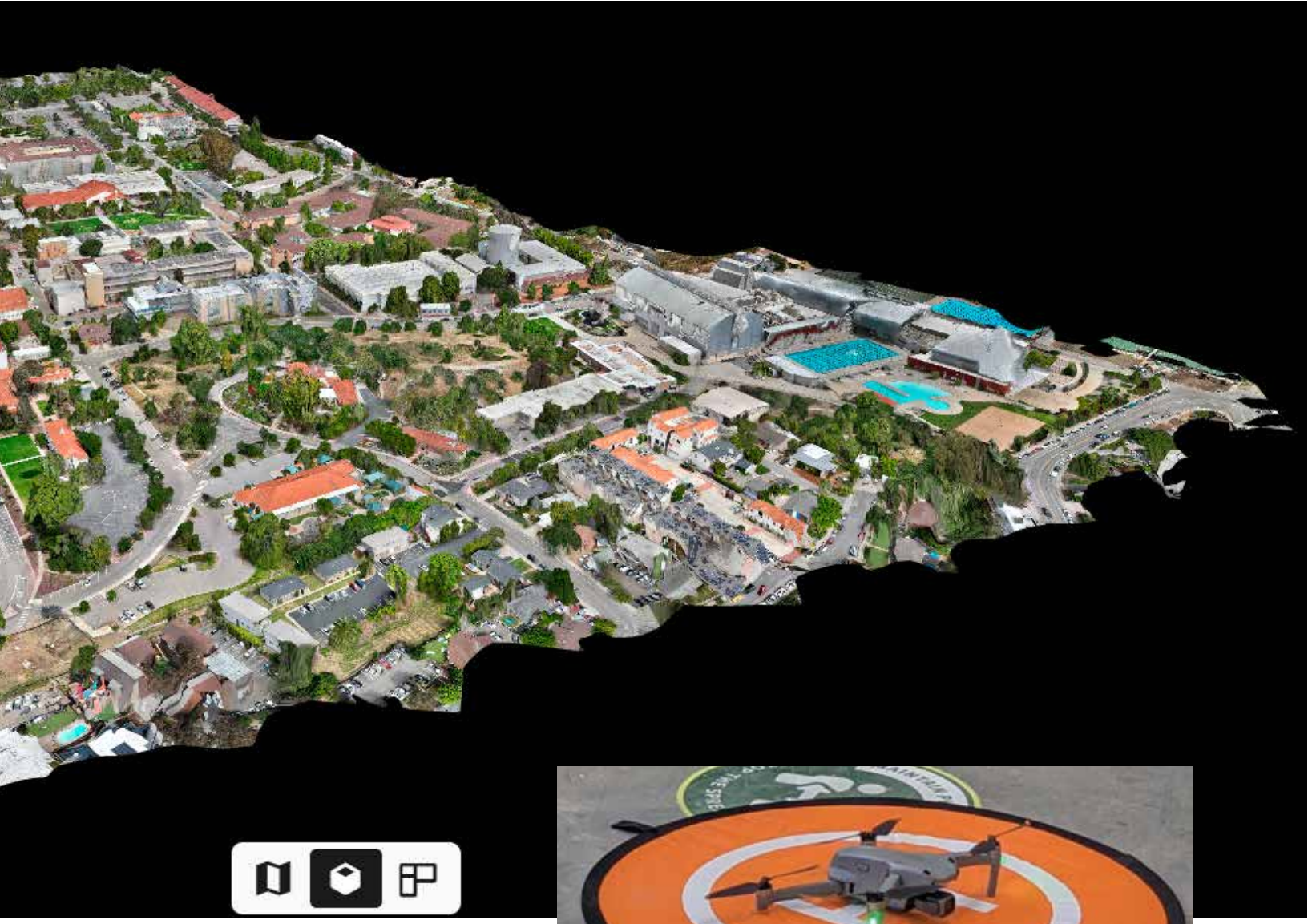
The use of drones for data capture has become commonplace in the construction industry; therefore, it was fitting for the CM Department to spearhead this project. "The geospatial data from this project can be analyzed for campus efficiency and planning, which is a cutting-edge application of drones for collegiate campus management," said full-time CM Lecturer Bryan Knakiewicz, who is leading the charge on this project as faculty advisor.

The initiative, known as the Cal Poly Smart Campus Initiative, involves capturing the exterior and interior spaces of the entire campus core in three separate phases. The completed model will be used to guide the university on such issues as resource, facility and asset management; future land development and matters related to the Americans with Disability Act requirements.

"The 3D map can determine various slopes, distances and grades, as well as detect areas where there might be safety concerns due to potential mud slides or earth retainage," Knakiewicz said. "It can even help us identify dead trees that need to be removed because of fire hazard."

The digital twin can also help determine 5G coverage for the entire university as well as guide marketing initiatives. "We can show potential students, faculty and staff the interior and virtually

▲ The multidisciplinary team involved in the Cal Poly Smart Campus Initiative employed drones to capture data of the entire campus core and ultimately produce detailed 3D maps of interiors (left) and exteriors (right).



every square foot of any building they want to see," Knakiewicz said. "We can also use these 3D models to create potential renderings of equipment placement and space usage. It can be used in agriculture, too, for things like topography for drainage. Generally, it will allow us to use space more effectively."

Knakiewicz, CM students Evan Cheung and Enrique Duran, and civil engineering student Andrew Rasas were part of the student reality capture team, which used drones, or small unmanned aircraft systems (sUAS), to complete the first phase of the initiative. The data will be passed to the City and Regional Planning Department for further analysis.

However, before any drones could be flown — before any plans could be put into motion — the students had multiple logistical hurdles to overcome.

"It took months before we could fly the drone," Knakiewicz said. "The preflight requirements were harder than the actual flights."

The students were first required to pass the Federal Aviation Administration Part 107 knowledge test before becoming FAA-certified drone pilots. "The exam covered aviation topics regarding aeronautical charts, weather, safety and best practices for piloting unmanned aerial craft," explained Knakiewicz.

And that was just the beginning. The students had to go through the rigorous approval process put in place by the California State University, Cal Poly, FAA and the San Luis Obispo County Regional Airport. CONTINUED ▶

▲ Drones, or small unmanned aircraft systems, have proven invaluable as tools to the construction industry as well as college management projects such as the Cal Poly Smart Campus Initiative.

▲ The student reality capture team members completed extensive training to become FAA-certified drone pilots.

◀ Team members posing for a drone selfie are 2023 CM graduate Evan Cheung (front left), CM senior Enrique Duran (front right) and civil engineering senior Andrew Rasas.

CONTINUED FROM PREVIOUS PAGE

The CSU outlines strict criteria for drone flights on the Cal Poly campus, including reviews and approvals by the university's UAS Committee, approval by the FAA and the local airport, and review and approval by the university's Flight Readiness Committee.

"The CSU requires an initial application, a review of the application and at least two Zoom meetings with the campus UAS Committee — per flight — even if we are doing the exact same operation as our last flight," Knakiewicz said. "Our UAS Committee requires extensive documentation for risk and safety purposes. For this project, I've presented the flight and risk mitigation plans several times before approval was granted."

Civil engineering student Rasas concurred. "We had to prepare a flight plan and a risk and hazards assessment, give a presentation to the campus UAS Committee and secure FAA waivers to fly in airspace that's in such close proximity to the airport," he explained.

And still, obstacles remained. Undaunted, the students learned how to plan a flight route. They learned new software. They learned about flight procedures and weather conditions and best practices.

GETTING CLOSER

"Even after all that, we can't just go out there and fly a drone," Knakiewicz explained. "We have to find a time in which all the student researchers are available during a time when the university has minimal foot traffic for safety/risk purposes. Then we have to consider the turnaround time to gain FAA approval. The entire approval process to get a flight to collect data takes months."

And patience.

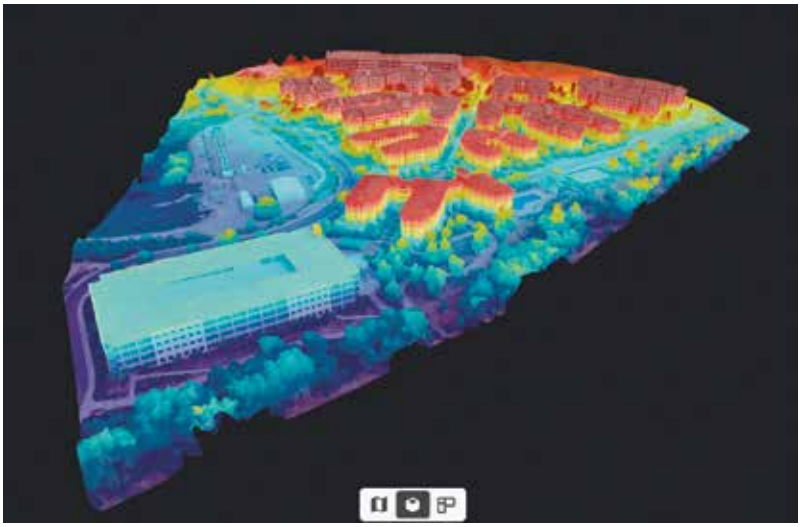
The team's hard work and perseverance paid off. Over the summer months, students completed phase one of the project, which included scanning the entire campus core, as well as the interiors of the Architecture and Environmental Design Building (No. 5), Dexter Building (No. 34), Engineering West (No. 21), Construction Innovations Center (No. 186), Simpson Strong-Tie Materials Demonstration Lab (No. 187), Frost Center for Research and Innovation (No. 181) and E&J Gallo Winery and Family Building (No. 156).

"After the flights were conducted, the photos, videos and data captured from the drone were uploaded to the project's database in Autodesk Construction Cloud (ACC)," explained Cheung (Construction Management '23). "ACC allows for the storage of large media files, especially point cloud files. Once the data was transferred to the shared database, the media was uploaded to the project dashboard in DroneDeploy. The coordinates for the established ground control points and the photos from the scans were uploaded to the project and stitched together. Once the stitched scan was processed, DroneDeploy created both a 3D model of the campus, which can be exported as a point cloud file, and a 2D orthomosaic image."

The technique the students employed in phase one of the project is known as aerial photogrammetry, which Knakiewicz teaches in his Construction Surveying class. Basically, aerial photogrammetry involves recording images of the ground from an elevated position.

Faculty and students will continue to work on phase two of the digital twin project over the next year, with phase three following. Phase two will involve scanning the inside of all campus buildings. The final phase will mostly be done by the CRP Department, which will put the model on the Geographic Information System (GIS) platform and develop a software interface to connect the aerial scan with different databases so the data on different aspects of campus operations can be widely accessed.

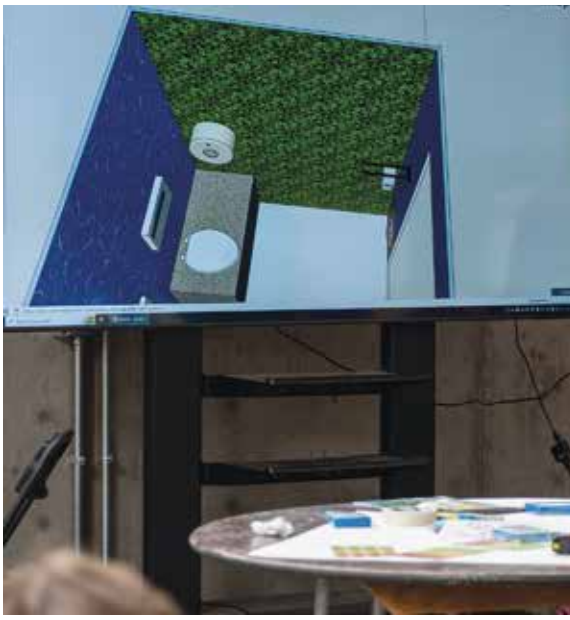
"This project shows Cal Poly's commitment to being at the forefront of technology," Knakiewicz said. "It can be modeled internationally, and it's a prime example of Learn by Doing, with students conducting research with guidance by faculty and funding by administration." ■



▲ The team captured a digital twin of Poly Canyon Village (top), which was used to render a thermal 3D image.

REDESIGNING THE PORTA-POTTY

Hackathon Participants Brainstorm Innovative Ways to Improve the User's Experience



▲ Hackathon participants teamed up and crafted cardboard models to convey their porta-potty improvement ideas. From left: Angeline (Ange) Witt, Jake Torres, Avery Onan and Brendon Duran

LAST YEAR IT was safety vests; this year it's the porta-potty.

Those are just two of the items currently under scrutiny by Construction Management (CM) Department faculty member Stacy Kolegraff, who — as a female in the still-male dominated field of construction — would like to see some improvements made to ensure the safety of everyone working in the industry.

The building trades traditionally have been dominated by male workers whose equipment and safety gear were designed with them in mind. Today, more women are entering the field of construction, and the lack of properly fitting safety attire, among other things, is something that Kolegraff is concerned about.

So she teamed up with sociology and criminology Assistant Professor Kylie Parrotta to organize and host the second annual VEST (Verifying Everyone's Safety Together) Hackathon. Their efforts secured an $18,000 grant from the Cal Poly Division of Research's Research Scholarly and Creative Activities program for the 2023 hackathon and $9,500 from the College of Architecture and Environmental Design Teacher-Scholar Grant program for the 2024 event.

The 2023 hackathon brought together about 40 Cal Poly students, faculty members and industry representatives to evaluate the porta-potty and come up with innovative solutions to the challenges and barriers they identified.

Third-year student Karina Ruplenas participated as a way to support female CM students. "Construction management is very male dominated," she said. "When I found out that the hackathon was run by multiple women, I wanted be there to listen and learn from CM seniors that have successfully made their way through this four-year program as a minority. I value what they have to say and wanted to work together with these leaders and other attendees to brainstorm solutions to an issue they believed was significant enough to discuss."

The event, held June 8-9 in the Simpson Strong-Tie Building, focused on access, sanitation and health issues, with the intent to discover better ways to serve the more marginalized population. In this case, women in construction.

"We want everyone to benefit," Kolegraff stressed. "Especially the individuals on the fringes."

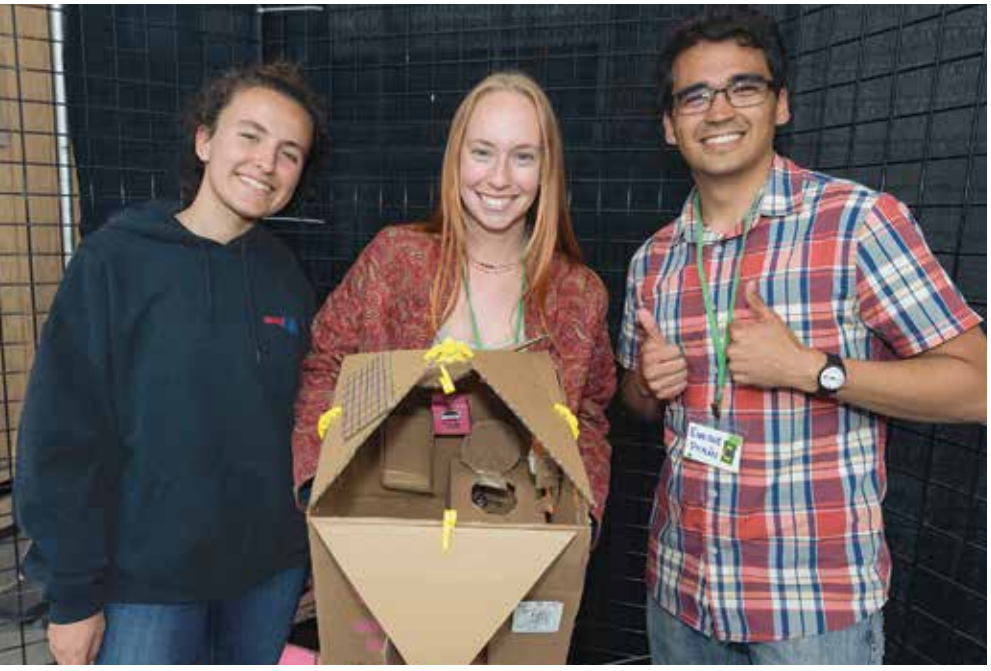
At the event, Kolegraff instructed three teams to identify porta-potty barriers and come up with "small tweaks" to improve the user experience. "Ventilation was an issue," Kolegraff said. Access and lighting were additional issues.

"In some cases, women had to go get a key to gain access to the porta-potty," Kolegraff said. "We're thinking about using scannable QR codes to gain access electronically. And we are thinking about adding lighting because some of these facilities are very dark.

"Although some ideas completely redesigned the porta-potty with mood lighting and themes, most ideas were minor improvements that really shouldn't take much work to implement to make the facility more convenient," Kolegraff continued. "Improvements like shelves, easier access and trash bins to dispose of sanitary products. It's about making woman feel more comfortable on the job site."

Marianne Bishai, a CM junior, said that events such as the hackathon help people "understand the varying impacts that components of the construction field have on its operators. The more often we can collectively dig into something that causes harm to a group, the more quickly we can improve it for the greater majority," Bishai said. "Whether it was safer lock options for the women's porta-potty or methods for improved ventilation, all of the concepts discussed at the event, if implemented by manufacturers, will significantly improve the quality of bathrooms on a construction site."

Ruplenas concurred. "Hackathons are important because they give the



▲ Team members (from left) Avery Onan, Angeline (Ange) Witt and Enrique Duran present a mockup of their redesigned porta-potty.

community an opportunity to come together and make a change. These events bring light to issues that some people may have not even considered a problem and then allow us to produce a possible solution. I had never thought about how women in the construction industry are affected by the traditional porta-potty; therefore, it gave me a new perspective on the topic."

At next year's VEST hackathon, to be held during spring quarter, Kolegraff and her band of faculty and students will tackle improving hard hats. ■

2024 ACTIVITIES

FEB. 1
Semi-Annual Construction Management Job Fair
Alex Madonna Expo Center
San Luis Obispo, California
https://ccce.calpoly.edu/cm-career-fair/

FEB. 2
Associated Schools of Construction
Region 6 and 7 Mock Presentations
Cal Poly campus

FEB. 7-10
Associated Schools of Construction Competition
Sparks, Nevada
https://www.asc67.org/competition.html

FEB. 8
CMAC Mixer at the
Associated Schools of Construction Competition
Sparks, Nevada

FEB. 27- 29
National Association of Home Builders Competition
Las Vegas, Nevada
www.buildersshow.com

APRIL 11-13
Cal Poly Open House
Cal Poly campus
https://orientation.calpoly.edu/

MAY 31
Construction Management Advisory Council
(CMAC) All-Hands Meeting
Cal Poly campus

MAY 31
Construction Management Senior Banquet
and Scholarship Awards Ceremony
Location to be determined.

JUNE 1
Associated Students of Construction Management
Golf Tournament and Wine Tasting
Location to be determined.

JUNE 15-16
Spring Commencement, Cal Poly campus
Check website for updates.
https://commencement.calpoly.edu/spring

SUMMER 2024
CMAC Mixers
Dates and locations to be determined.

2023-24 Scholarships

Spotlight on Beavers Heavy Construction Endowment, Supporting Students for More Than 30 Years

THE CONSTRUCTION MANAGEMENT (CM) Department awarded a total of $66,200 in scholarships to 14 deserving CM students during the annual end-of-year banquet held in June 2023 at SLO Brew Rock.

Among those scholarships was the Beavers Heavy Construction Scholarship, established in 1991 by the nonprofit Beavers Charitable Trust. That endowment is now valued at nearly $500,000. CM senior Jake Torres was awarded $5,500 as one of three students to receive the scholarship.

Torres was "excited and surprised" to hear he was the recipient of the scholarship. "Beavers Heavy Construction has always generously supported our Reno Heavy Civil Team at the ASC student competition and helped us succeed."

Torres is completing his final fall quarter before graduating in December. "This scholarship has helped fund my extra quarter in addition to my three months of housing in San Luis Obispo," he said. "Thank you to Beavers Heavy Construction for all the support during my time at Cal Poly, and special shout out to Bruce Daseking and Dave Woods!"

Daseking (Civil Engineering, '83), executive vice president of Business Development for McGuire & Hester — a Beavers contractor member — and Woods, executive director of Beavers Inc. and the Beavers Charitable Trust, know the value of a Cal Poly CM education and are pleased that these scholarships help ease the financial burden for some students.

"The Beavers Charitable Trust was formed in 1977 with the express purpose of supporting and encouraging college students to pursue careers in the heavy construction industry," Woods explained. "Initially the trust gave out individual scholarship grants to schools, but as the corpus of the trust grew, endowed scholarships were established to generate annual scholarships. Over the years, scholarship endowments have been set up at 48 schools across the country in civil engineering and construction management programs.

"The trust also rewards schools that place in the top three in the ASC Estimating Competition's Heavy Civil category," Woods continued. "This has increased the endowment, especially this year when Cal Poly took first place."

Daseking has been active with Cal Poly's CM Advisory Committee (CMAC) for eight years and the Granite Heavy Civil Minor Advisory Committee for four.

"The Beavers surveys its members to find out from what schools they are recruiting, and Cal Poly's CM program has consistently appeared in the top few schools," Daseking said. "Given how attractive Cal Poly's CM program is to our members, it is only logical that the trust would invest in the CM program as well as the Granite Heavy Civil Construction Minor program." ■

2023-24 SCHOLARSHIP RECIPIENTS AND DONORS

Scholarships are listed alphabetically by last name of the first donor, with recipients following alphabetically.

Beavers Heavy Construction Scholarship
$5,500 each: Jayson Downs and Jake Torres; $7,000: Julian Chavez

Caterpillar Scholarship
$1,000: Julian Chavez

Kris Cello Scholarship
$1,800: Simon Ingram

Don Chapin Company Scholarship
$1,800 each: Brayden Groshart, Amanda McDowell, Jacqueline Yeung

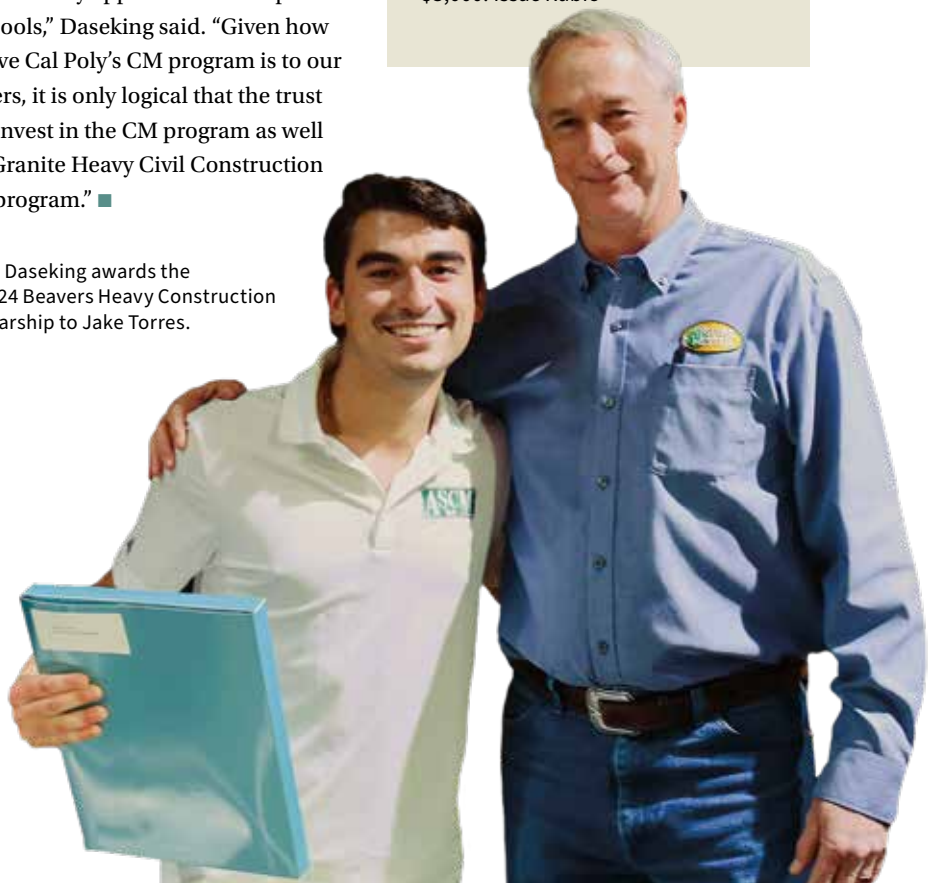
William Cosko James Hearn Scholarship
$1,000: Isaiah Regalado; $2,000 each: Mauricio Rodriguez and Alonso Velazquez

Allen and Nancy Minton Scholarship $25,000: Mateo Gonzalez

Montoya Family Scholarship
$2,000: Jake Weiss

Blair Tulloch Memorial Scholarship
$5,000: Jack Pollin

Vinnell Foundation Scholarship
$3,000: Issac Rubio



▶ Bruce Daseking awards the 2023-24 Beavers Heavy Construction Scholarship to Jake Torres.

WINNING STREAK CONTINUES

Students Shine in Regional, National and International Competitions

▲ CM junior Braden Deck, named Most Valuable Presenter at the March 2023 MCAA Competition, is honored by Andy Palcan from Helm Mechanical (left) and MCAA President Bob Bolton.

Cal Poly's construction management (CM) students continue to achieve impressive results in regional, national and even international competitions. Below are highlights from several competitions in which students took home trophies in 2022-23.

CM TEAM PLACES SECOND AT MCAA COMPETITION; STUDENT BRADEN DECK EARNS RECOGNITION

A team of 10 CM students earned second place, and CM junior Braden Deck was named Most Valuable Presenter at the Mechanical Contractors Association of America (MCAA) Competition held in Scottsdale, Arizona, in March.

The team received a trophy and check for $5,000; Deck won a trophy, $500 and a seat at MCAA's Preparatory Institute for Project Management.

"Winning Most Valuable Presenter award was a great bonus," Deck said. "However, this competition is won by a team. We could never have gotten second place without such a great team."

Cal Poly competed against 21 MCAA student chapters. Pittsburg State University students won the top prize.

Faculty advisors Joe Cleary and Paul Redden accompanied the students, all of whom were recognized at the Awards of Excellence Breakfast at the conference.

MULTIDISCIPLINARY TEAM TAKES THIRD IN NATIONAL HOME BUILDERS COMPETITION

A multidisciplinary team of students placed third in the 2023 Custom/Small Build Competition, sponsored by the National Association of Home Builders (NAHB) during its annual conference in Las Vegas.

The competition gives architecture, business, graphic communication and CM students the opportunity to apply their skills to the real world by completing a management project or proposal for a real or potential project.

The team competed against 20 teams. "We've been competing since 2001 and have placed in the top five 17 times," said faculty advisor and assistant professor Stacy Kolegraff.

The Small Build Competition challenges students to identify an opportunity for a small home builder to build homes and produce a return on investment in a given market. Teams must follow local building and zoning codes. Their proposals must include a market analysis, justification of the project site and residence, an analysis of competitors, preconstruction and construction management plans, project estimate and schedule, sustainability goals, site logistics plan, a detailed safety plan and more.

"The students worked through fall quarter to get their deliverables in," Kolegraff said. "They did a great job working together, learning the area and product offerings, and coming up with all deliverables."

INTERDISCIPLINARY TEAMS SWEEP REGIONAL ASC COMPETITION

Eleven Cal Poly student teams brought home first, second and third place trophies in their respective categories at the 2023 Associated Schools of Construction (ASC) Region 6 and 7 Competition, held in Sparks, Nevada.

The teams, which included students in CM, civil engineering, architectural engineering and architecture, won four first-place awards, six second-place awards and one third-place award.

"This is the best record since we started competing in this competition in 1988," said CM Department Head Joeng Woo. "The results of this competition show the power of Learn by Doing together. A special shout out to all coaches who paved the way to our

▲ The Mixed Use Team was awarded first place in the Associated Schools of Construction Region 6 and 7 competition.

students' success, and thank you to all sponsors and mentors who provided financial support and professional guidance for our students."

This year Cal Poly teams competed against 1,613 students on 217 teams from more than 57 U.S. universities.

The competition is fast-paced and highly charged. Teams are given a problem statement and materials generated by their team sponsors. Each team must adhere to specific time frames, deadlines, schedules, locations and conditions.

"None of us students can thank the CM faculty enough for their dedication to their students and the overall success of the program," said recent CM graduate Brayden Groshart. "From the practice presentations to the jobsite visits, the department provided us with everything that we needed. I'm glad we could bring home some hardware this year."

STUDENTS PLACE FIRST, THIRD IN INTERNATIONAL COMPETITION

CM students showcased their competitive prowess worldwide, winning first- and third-place awards at the ASC Region 8 International Student Competition, held in 2022 at the Czech Technical University in Prague, the Czech Republic.

Five Cal Poly students representing two teams placed in the competition's two tracks. Both teams were joined by students from the Czech Technical University (CTU). Cal Poly team members Evan Cheung and Nick Fregulia, both seniors, and two Czech students won first place in the CM/QS (Estimating) category. Seniors Sam Wong, Thomas Camargo and Robert Dasch and three CTU students placed third in the International Design/Build category.

Region 8 is the European-based arm of the ASC, and its competition connects construction students from all over the world and challenges them to adapt to the differences between European and American construction.

For the 2022 competition, 15 universities competed — eight from the U.S., five from the United Kingdom, one from Ireland and one from the Czech Republic.

"One of the great joys of the competition was introducing the students to an international forum in Prague," said CM Professor Lonny Simonian, faculty advisor.

The most challenging part of the CM/QS category competition, according to Cheung, was that the problem focused on a residential development within Prague. "We had to utilize the metric system as well as the Czech currency for our budgets," he said.

Simonian was proud of the students. "All the students did great, as affirmed by their first and third placement," Simonian said. "Participation in these international, industry-sponsored competitions offers students a great opportunity for personal and professional development and enables them to showcase their ideas in front of employers, academics and fellow teams. ■

THE WINNING TEAMS

Team members listed are CM majors, unless otherwise noted.

ASSOCIATED SCHOOLS OF CONSTRUCTION REGION 3

First Place

Concrete: Lily Brown, Justin Coffin, Alejandro Gonzalez, William Killmond, Katelyn Lowry and Jack Ritchie.

Preconstruction Services: Sofia Amalfitano, Bradley Blakemore, Colette Burd, Carlin Cook, Tara Keene and Jacqueline Yeung.

ASSOCIATED SCHOOLS OF CONSTRUCTION REGION 6 AND 7

First Place

Heavy Civil: Gus Coluccio, Morgan Conway, Samantha Lopez, Henry Miller, Kyle Passey, Blaize Twisselman; alternates Robert Byrne and Austin Gauerke.

Mixed Use: Reed Aitken, Brett Butler, Dana Craighead, Anna Knutson, Teddy Koffman, Adam Walsh; alternates Camryn Berger and Cole Lewis.

Preconstruction: Sofia Amalfitano, Kieran Barker, Gavin Beadle, Bradley Blakemore, Colette Burd, Ryan Preciado; alternates Tara Keene and Samuel McClintock.

Project Management: Brayden Groshart, Jonah Kim, Madison Lightfoot, Luke Martin, Reagan Tonda, Jake Torres; alternates Grace Arnold and Ryan Strain.

Second Place

Commercial: Robert Dasch, Joseph Miller, Isabella Peterson, Jake Pizzifred, Cade Rees, Jake Schulman; alternates Connor Kall and Kyle Vaughn.

Design-Build: Katie Chriss, Gage Davenport, Catie Dines, Alex Dominé, Ryan Manesh, Kenzie Pelletier: alternates Azzah Bensrhir and Jack Manning.

Electrical: Duncan Catley, Heather Sailor, Evan Sell, Jake Weiss, Allison Wild, Ange Witt; alternates Lance Brack and Jack Gugale.

Integrated Project Design: Calvin Clauson, Nicholas Lew, Audrey McGowan, Katie Mendoza, Julia Ralston, Samuel Wong; alternates Madisen Berube and Remy Hickle.

Mechanical: Braden Deck, Daniel DeSoto, David Economos, Ryan Fehrenbach, Kristina Poliseri, Sam Varney; alternates Spencer Gardner and Misael Gonzalez.

Virtual Design in Construction: Mason Canton, Evan Cheung, Esai Contreras, Enrique Duran, Tony Ibarra, Andrew Rasas; alternates Julian Chavez and Andrew Rasas. (Nicolas Fregulia was out sick.)

Third Place

Sustainability: Jacqueline Badal, Veda Guillermo, Simon Ingram, Ryan Mccann, Olivia Pisani, Gianna Rocca; alternates Dylan Glass and Lucca Pracilio.

ASSOCIATED SCHOOLS OF CONSTRUCTION REGION 8 INTERNATIONAL STUDENT COMPETITION (2022)

First Place

CM/QS (Estimating): Evan Cheung, Nick Fregulia and two Czech Technical University (CTU) students.

Third Place

Design/Build: Sam Wong, Thomas Camargo, Robert Dasch and three CTU students.

MECHANICAL CONTRACTORS ASSOCIATION OF AMERICA

Presented: Braden Deck (MVP), Daniel Desoto, Spencer Gardener, Nathan Haub and Kristina Poliseri. **Attended:** Grace Arnold, Ryan Fehrenbach, Misael Gonzalez, William Riviere and Sam Varney.

NATIONAL ASSOCIATION OF HOMEBUILDERS

Leo Dickson, Brendon Duran, Max Helfman, Estevan Hurtado, Madison Lightfoot, Mike Schuler, Russell Sprague, Cooper Strong; business administration students Ali Suleiman and Russell Cline; architecture student Hannah Vo; and graphic communication student Katie Pomerleau. ■

THANK YOU, 2022-23 SPONSORS!

Praise Worthy

JACQUELINE BADAL
OUTSTANDING LEADERSHIP AWARD

"It is important that I find purpose in my craft," said Jacqueline Badal, winner of the Construction Management (CM) Department's 2023 Outstanding Leadership Award. "There is such purpose in the work that contractors do, as the structures they build help those in need."

Helping others is something that comes naturally to Badal, who served as co-president of the Associated Students of Construction Management (ASCM) her senior year.

"I took on this role and dedicated many hours to planning both social and professional events," she recalled. "We had a formal, a golf tournament, a senior banquet and barbecues, as well as various philanthropic events.

"I had one vision as co-president, Badal continued. "I wanted to contribute a similar if not better experience for younger students than I had. I wanted to give them opportunities to meet industry members, get internships, join clubs and create friendships. I felt gratitude for winning the award. It was an incredible way to be recognized for the work that took place."

Badal, like most college students, experienced a mix of rewards and challenges. "College is a big transition," she said. "Moving away from home, meeting new people, figuring out career plans. Being far from home and navigating school, work and friendships were stressful at times. But in those difficult moments, I learned to lean on the people closest to me, appreciate the little joys and remember that the challenge will pass."

Badal, who grew up in Danville, California, is working in San Francisco as a project engineer at Whiting Turner. She advises today's students to "be your most authentic self. Everyone has gifts and strengths that are unique to them. When working on teams and in groups, it's important to know yourself, your talents and your values. Don't compromise who you are and what you believe. We were all created with different strengths and weakness so that when we come together, we complement each other well."

Jacqueline Badal

Gus Coluccio

GUS COLUCCIO
OUTSTANDING LEADERSHIP AWARD

Gus Coluccio jokes that he enrolled at Cal Poly "to get away from the rain in Seattle," however, the No. 1 reason he chose Cal Poly was "because of the program and community" he found during his first visit to campus.

"The natural beauty and many outdoor activities available in San Luis Obispo and the Central Coast were also huge factors in my decision," he said.

His "passion for design and building" sparked his interest in construction management (CM). "As a kid, I tinkered and built all sorts of different creations," Coluccio said. "These experiences taught me the process of trial and error. In construction, we plan and prepare as much as possible; but with every project, we are still learning and growing from both failure and success."

Coluccio has never shied away from commitment. He served as president of the board of the student chapter of the Associated Students of Construction Management (ASCM), competed three times in the ASC (Associated Schools of Construction) competitions and this summer participated in the Prague study abroad program.

He was "honored" to be selected for an Outstanding Leadership Award. "I was very appreciative that the time and energy that I put into ASCM was recognized," he said. "As president and an executive board member, there was a lot to do and be responsible for," he said. "Along with the challenges — like putting on multiple 200-300 person events that included a lot of coordination, organization and leadership over many months — our ASCM team had many great, memorable experiences."

Coluccio, who officially graduates after fall quarter, believes in the power of Learn by Doing. "It solidifies that we are all students of the world; we don't have all of the answers," he said. "Learning by Doing, learning from others and learning from your mistakes will take you far in life."

Every year, the Construction Management Department singles out a handful of exemplary graduating seniors to receive the department's Outstanding Senior Award, which recognizes academic excellence, outstanding leadership, exemplary service and other exceptional traits. This year's award winners are highlighted below and on the following pages.

BRYAN CRUZ VALENCIA
SERVICE TO THE DEPARTMENT AWARD

Bryan Cruz Valencia has fond memories of his undergraduate days at Cal Poly, visiting downtown San Luis Obispo with his roommates during the weekends and Thursday nights for Farmers Market.

The Salinas, California, native chose to attend Cal Poly in part because of its close proximity to his hometown. "Cal Poly has a good construction management (CM) program, and it allowed me to stay close to my hometown," he said.

Even so, he acknowledges that his first year was challenging. "There's a definite learning curve for freshmen figuring out how to live independently and handle the voluminous classwork," he said.

Valencia's career path in construction was a natural choice. "Construction has been an interesting field to me because of the many parts involved, from the exterior of the building to the interior finishes," he said.

After graduating, he joined L&D Construction full time in the field as an assistant superintendent. "I'm working on a five-story affordable housing project in San Jose," Valencia explained. "I'm seeing the work take place firsthand, and I'm learning a lot."

Cal Poly's Learn by Doing prepared Valencia well. "Both during my time at Cal Poly and since I've started work full time, I've learned that getting hands-on experience is the best way to learn. There is a big difference between hearing or reading how to do something and doing it yourself."

Valencia appreciated the recognition of winning the 2022-23 Service to the Department Award, which he earned by helping out the CM Department with special projects, including "assembling TV stands for classrooms and setting up for special events, such as the CM graduation ceremony."

He advises current students to be active. "Participate in as many activities as you can," he said. "College years are a good time to learn."

Bryan Cruz Valencia

Catie Dines

CATIE DINES
OUTSTANDING LEADERSHIP AWARD

It wasn't a difficult choice for Catie Dines to embark on a degree in construction management (CM) at Cal Poly. "I always enjoyed 'house building games' on my iPad when I was younger," she said. "I wanted to explore this passion alongside technical engineering to appeal to my STEM (science, technology, engineering, mathematics) interests, as well."

Like so many of her classmates, Dines picked Cal Poly for "the location, student life and nationally ranked CM program." Also, like so many of her fellow students, she said that finding a balance between schoolwork and social activities proved challenging.

And no wonder. Dines was involved in Greek life, served on the ASCM (Associated Students of Construction Management) executive board for four years and was a member of the Design-Build Team that competed in the ASC (Associated Schools of Construction) Student Competition in Reno and the DBIA (Design Build Institute of America) Team for three years.

Her biggest accomplishment — her senior project — helped her secure the leadership award. For her project, Dines created and hosted the inaugural Hasslein College of Architecture and Environmental Design Collaborative, created in honor of the college's founding dean, George Hasslein.

"This competition involved students from all five CAED disciplines joining together to come up with a solution for a new development and present it to a panel of industry professionals," Dines explained. I'm honored that my time at Cal Poly has left a lasting impact on the CM Department, as the Hasslein CAED Collaborative competition will be enjoyed by CAED students for many years to come."

Dines traveled for two months after graduation, then started work as a project engineer at Swinerton in her hometown of San Diego.

She will miss the "CM faculty, the opportunities they provided for the students and the friends I made throughout the four years."

Praise Worthy

CONTINUED

ENRIQUE DURAN
KEN BRICKWEDEL ISA AWARD

Growing up in Lakewood, Colorado, with an architect father, Enrique Duran was "inspired to follow a path in design at Cal Poly" and originally applied to the architecture program. He soon discovered that construction management was a better fit.

"I found out the CM program packaged all my interests in design, business, engineering and construction," he said.

Duran won the Ken Brickwedel ISA Award, given to the best instructional student assistant of the year. Duran said he enjoyed helping his peers "find their strengths and develop their talents" in the BIM (building information modeling) class.

"The class is very technical, and everyone has a different learning pace" Duran said. "To be an effective teacher and assistant for the students, patience is a must. It felt great to spend time with students and work out issues with them."

Before he landed his job helping other students, Duran struggled to transition back to Cal Poly after the pandemic.

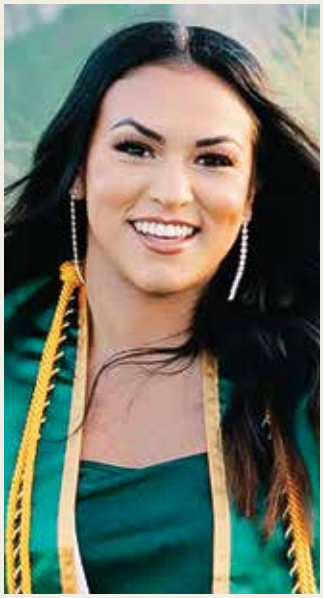
"Returning to San Luis Obispo in fall 2021, after one-and-a-half years, was very difficult," he said. "While we were virtual, I took a few quarters off when I had to return to Colorado during the pandemic."

Then trying to find housing in San Luis Obispo upon returning from out of state was a challenge.

"After couch surfing for a few months fall quarter, I finally secured housing," Duran said. "Achieving a high academic record, working remotely, all while searching for housing and supporting myself was challenging for sure. That time showed me the great support I had from my family, friends and mentors to get me through."

Duran, who will graduate in December 2023, started an internship as a project engineer with Precision Construction Services in San Luis Obispo. "My goal is to stay in San Luis Obispo for a few years after finishing school," he said.

Enrique Duran



Jennifer Padilla

NATHAN GIANNINI
OUTSTANDING SENIOR AWARD

Not available for interview.

JENNIFER PADILLA
OUTSTANDING LEADERSHIP AWARD

When Jennifer Padilla encounters a problem, she doesn't give up; she considers it a challenge to overcome. That quality led her to help found and serve as president of CASA, (Community And Student Achievement), the CM Department's latest club, created to support LatinX students — especially those who are first-generation.

"Construction is a predominately white male dominated field," Padilla said. "Oftentimes students of color do not feel welcomed or supported in their endeavors. We established this club as a home away from home for minority and first-generation students. CM CASA became my home away from home and encouraged me to use my voice for others."

CM CASA promotes diversity and inclusion among the student body and in the curriculum. It offers students an opportunity for mentorship and guidance while they navigate the college experience while also supporting outreach efforts to ensure a diverse student body and facilitating the participation of LatinX CM students in other clubs, activities and competitions.

Padilla said she was both shocked and honored to win the Outstanding Leadership Award. "It was rewarding knowing that our board's contributions and hard work paid off and that the industry noticed the importance of establishing such a club within a university setting," she said.

In addition to her involvement in CM CASA, Padilla, who hails from Livermore, California, was active in WIC (Women in Construction), CPRE (Cal Poly Real Estate Club) and Sigma Lambda Chi, the only honor society for students in construction-related fields.

Leading CASA was an important milestone for Padilla, who advises current students to "get out there, explore new opportunities, take risks, never be afraid to be your true self and advocate for others."

Padilla is a project engineer at AvalonBay Communities and an office manager at Padilla Masonry Inc.

HEATHER SAILOR
LIGHT MAKER AWARD

Heather Sailor got an early start on her construction management (CM) career. "When I was 9, my parents began building their own home," she recalled. "Every Wednesday the contractor would meet with my parents. Before long, I started preparing my own construction documents — a stack of colored construction paper drawings and newspaper/magazine clippings — with my own ideas for the house. Some of my most notable ideas were related to design, such as making a loft with a slide in my room, building a horse stable next to my bed and replacing the wall between my room and bathroom with a giant aquarium."

Although those ideas didn't make it into the final design, Sailor, from Morgan Hill, California, did get to design and source all aspects of her room and bathroom, including paint, tile designs and hardware. The young entrepreneur's interests "turned from design to construction when our house construction was delayed over a year," she said. "I recall visiting the site and trying to expedite construction by cleaning and aiding in framing."

Fast forward several years to spring breaks 2022 and 2023, when Sailor led teams of students to the Navajo Nation to install solar systems on the homes of people who had no electricity. "In the months prior to our trip, we planned, procured, studied the systems and practiced to ensure that we would be as efficient as possible," she said. "Every person involved improved their leadership, project management and collaboration skills. I am so proud to have led this team."

Sailor won the department's Light Maker Award, created specifically to recognize her interest and experience with electrical subcontracting. "I became a resource for anything electrical in the department," she said. As an undergraduate, she completed four internships at Rosendin, a large electrical subcontractor in San Jose, where she now works as an assistant project manager in the commercial division.

Heather Sailor


Allison Wild

ALLISON WILD
SERVICE TO THE DEPARTMENT AWARD

Allison Wild is glad that she heeded the advice of her high school shop teachers to pursue a career in construction management.

The Rohnert Park, California, resident won the Service to the Department award because she was involved in so many activities, including serving as president of the Women in Construction club; working as a student assistant in the Simpson Strong-Tie Lab; and leading the Electrical Team that competed in the Associated Schools of Construction Reno and Chicago competitions her senior year.

"I was always being recruited to talk to incoming freshmen or to lend a helping hand to the department," Wild said. "I was honored to win this award. It was great to see all my hard work be noticed and recognized by the department."

Wild came to Cal Poly because "it felt like the best place to learn about construction and was such a gorgeous place to live."

Unfortunately, campus life was upended during the COVID-19 pandemic, and she was sent home her freshman year, "just after making all new friends." She admits that having to learn on her own was tough.

"The rapid change of learning style while teachers were still figuring things out was definitely a struggle," Wild recalled. "Also being disconnected from all of the new friends and relationships I had made was really hard."

Fortunately, the following year, she was able to return to campus, where Learn by Doing "changed my college experience and helped me remember and experience things that I never would have otherwise experienced."

After graduating in June, Wild traveled extensively before embarking on her career as a project engineer at Prime Electric in the Bay Area.

She said that she misses being around her friends and the people in the CM Department. "I also miss the consistent learning and growing and flexibility of college," she said. ■

Emma Blair

Welcome ...

Alumna Emma Blair Joins CM Department Staff

The Construction Management (CM) Department welcomed Administrative Coordinator Emma Blair (Agricultural Communication and Spanish, '21) to campus in October 2022. In her new position, Blair is responsible for creating quarterly class schedules, recruiting tenure-track faculty, processing faculty contracts and coordinating retention, promotion, tenure and periodic evaluation processes.

The Wilton, California, native is quite familiar with Cal Poly as both a student and a student assistant. "All four years of college and even for a while after I graduated, I worked at the Poly Plant Shop on the Floral Design Team," she said.

Blair has worked in marketing and communications, but always had an interest in higher education. "I'm so excited to be back at Cal Poly working in a department with such amazing faculty, staff and students," she said. "My favorite thing is helping students progress in their degree so they can graduate when they expect to."

Blair plans to pursue a master's degree in higher education counseling and student affairs at Cal Poly starting in fall 2024 while continuing to work in the CM Department.

Julie Zafiratos

... and Farewell

Department Bids Adieu to Staffer Julie Zafiratos

The Construction Management Department lost a valued staff member last fall when Administrative Coordinator Julie Zafiratos moved to Boulder, Colorado, to be closer to family.

Zafiratos came to Cal Poly in March 2015. "My focus was on coordinating faculty recruitments and evaluations, budget planning, and especially class scheduling and prepping advising materials for incoming freshmen, transfers and change of majors," she said.

Although she misses San Luis Obispo, Zafiratos said, "I was so fortunate to have the opportunity to work with people that could laugh while working hard. I enjoyed the enthusiastic students who were so motivated to capture their courses and succeed in the program and a really great group of committed faculty that prized academic excellence and cared deeply about their students."

Zafiratos landed a job in the Dean's Office in the Leeds School of Business at the University of Colorado at Boulder.

"I am so grateful to have landed at the University of Colorado, where my dad taught and where my brother and sister-in-law worked, and to be with another really fantastic group of people," she said. "I'm enjoying spending time with my immediate family and watching my nephew grow up. Boulder is another beautiful place to live, so I have lots of beautiful nature to see here too!"

CONSTRUCTION INNOVATOR STAFF

Comments and content contributions are welcome for Construction Innovator, an annual publication of Cal Poly's Construction Management Department. Please contact **Project Coordinator** Jenay Reynolds-Sibbach at 805-756-6385 or jreyno00@calpoly.edu. **Content manager:** Department Head Jeong Woo **Writing and copy editing:** Jo Ann Lloyd | **Publication design:** Shirley Howell | **Photography:** Dylan Head; Josef Kasperovich; courtesy photos.

Invaluable Additions

Two Accomplished Educators Come Aboard As Assistant Professors

Elizabeth Adams

Maryam Kouhirostami

ELIZABETH ADAMS

Previleged to foster students' personal and professional growth

The Construction Management (CM) Department welcomed Elizabeth Adams, a seasoned industry professional with teaching experience and a doctorate in civil engineering, as assistant professor, effective fall quarter.

Adams, who previously taught at Cuesta College and Fresno City College, will be teaching CM 314: Heavy Civil Construction Management, ARCE 211: Structures I and ARCE 212: Structures II.

Prior to teaching, Adams worked as a consulting engineer on a variety of projects in the U.S. and abroad.

"I began my career working on transportation projects, and my portfolio of experience subsequently grew to include environmental and infrastructure projects as well," she said. "During my time at Arizona State University, I began teaching engineering courses part time at Mesa Community College, and I quickly discovered my passion for engineering education."

She enjoys connecting with her students and helping them achieve their academic and professional goals.

"It is such a privilege to witness and be part of the intellectual and personal growth that students achieve while in pursuit of their degrees," Adams said. "In addition to key course learning outcomes, I hope that students take away the importance of community and working as part of a team. I hope that students leave my classes feeling proud of what they were able to accomplish — knowing that through commitment and effort they are able to gain the knowledge they seek and chart their own course."

MARYAM KOUHIROSTAMI

Eager to take part in growing knowledgeable professionals

New Construction Management (CM) Department Assistant Professor Maryam Kouhirostami comes to the department with a doctorate in construction management from the University of Florida and an eagerness to instill in her students the skills to be a "fast learner, curious and flexible in their future jobs."

In her new tenure-track position, she will teach CM 310: Construction Means and Methods and CM 317: Sustainability and the Built Environment.

Neither construction nor teaching are new to Kouhirostami. She grew up in a family that worked in construction, and she has a background in architectural engineering. Kouhirostami had her first teaching assignment when she was in her early 20s.

"When I was 23 years old, a family friend asked me to teach software in design and construction," she recalled. "I was not sure about the offer, but I thought the experience might be worth it. After a few months, I realized that it was something that I wanted to do. Teaching brings me joy and happiness."

Kouhirostami wanted to teach at Cal Poly because it is "a pioneer in construction management. It was always my dream to be part of this amazing team and have my share in growing knowledgeable professionals." ■

> **"It is such a privilege to witness and be part of the intellectual and personal growth that students achieve while in pursuit of their degrees."**
> **Elizabeth Adams**
>
> ■ ■ ■
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> **"It was always my dream to be part of this amazing team and have my share in growing knowledgeable professionals."**
> **Maryam Kouhirostami**

▲ Construction management alumnus and part-time lecturer Enrique Ivérs also works at Dragados on transportation, hydraulic and underground infrastructure projects.

Fresh Perspectives

Four New Lecturers Enrich Lessons with Expertise, Enthusiasm

The Construction Management (CM) Department welcomes its new faculty members, listed here in alphabetical order.

TAYLOR GILMORE

Alumna shares her technology expertise

With an expertise in virtual design and construction (VDC), including BIM (building information modeling), new construction management lecturer Taylor Gilmore (Architecture, '10) is tailor made for her part-time role: teaching CM 280: Introduction to BIM.

"I have a strong understanding of how technology in the construction industry can be used to foster collaboration, communication and allow for a deeper understanding of the project," Gilmore said. "Looking back at my own learning experience as a student at Cal Poly, I greatly valued hearing real-world examples of how what I was learning would be applied in practice. I hope to provide that insight to my students."

Her foundation in technology and construction has been solidified through her role as the operating group integrated construction director for Mortenson's Data Center Group. "In my role, I support the virtual design and construction team through planning, staffing and scheduling while also aligning best practices for BIM across multiple projects," she said.

Gilmore met her husband of 11 years while both were students at Cal Poly. They have two children. "We are happy to be back in San Luis Obispo near family. I now live just a couple of blocks away from the hospital where I was born and am excited for my kids to grow up by the beach, like I did."

ENRIQUE IVÉRS

Alumnus wants to have a positive impact

In his role as a part-time lecturer in the Construction Management Department, alumnus Enrique Ivérs (CM and General Engineering, '17) hopes to have the "same positive impact on others" that he received as an undergraduate.

"As a student, I was fortunate to have had support and understanding from most of my instructors, whether I was participating in competitions, extending internships to span an additional quarter to help manage costs or pursuing my double major," he said.

Ivérs began teaching remotely in spring 2021 and held his first in-person class in winter 2023. Returning to Cal Poly to teach had been a long-term goal of Ivérs, who teaches CM 232: Evaluation of Cost Alternatives, CM 314: Heavy Civil Construction Management and CM 318: Housing and Communities.

"I was a teaching assistant for most of my education at Cal Poly, and being able to return as part of the faculty is a dream come true," he said. "I enjoy interacting with students. I think the next generation of construction professionals will spend the formative portions of their careers during intense growth and change in the industry. Accordingly, they'll have a large influence on the industry."

Ivérs thinks that Cal Poly's "reputation for ingenuity" draws applicants who exhibit that trait. "Being able to figure things out is an important skill to have within the industry," he said. "I've found that the vast majority of students have already started to hone that skill."

In addition to teaching, Ivérs works full time for Dragados, the primary construction subsidiary for ACS Group, a leading international firm specializing in transportation infrastructure, hydraulic and underground infrastructure work.

Navigating the responsibilities for both jobs has been both a challenge and an opportunity for Ivérs to improve his time management skills. "I'm grateful for Dragados' support and for Cal Poly scheduling my courses later in the day," he said.

JULIA ROGERS

Alumna blends passion and purpose

Part-time lecturer Julia Rogers, a "proud Cal Poly grad," joined the Cal Poly faculty in fall 2022, teaching a course she created to integrate multidisciplinary topics into the Orfalea College of Business's real estate concentration. She now also teaches a course in the Construction Management Department: CM 475: Real Property Development Principles.

Born and raised in Italy, Rogers moved to the U.S. at 19 to "start a new life and pursue greater opportunities." It appears she succeeded. She earned a Bachelor of Architecture degree from Cal Poly and a California Real Estate broker's license. She has worked in construction, architecture, real estate development and consulting, while managing projects of various scopes and sizes in California, Mexico and Europe.

"I started my career as an architectural designer and decided I wanted to learn more about the broader built environment industry," she said.

She decided she wanted to teach to make a difference. "Through teaching, I can actively contribute to driving positive change in areas that matter to me, such as sustainability, social equity and smart growth in the built environment — all topics that have gained unprecedented importance in the built industry," Rogers explained. "This profession allows me to align my passion with a purpose, making a meaningful impact within an industry that I am passionate about."

GREG SIMONS

Eager to share his industry experience

With more than 45 years of commercial construction experience, lecturer Greg Simons has a wealth of knowledge to share with students in CM 102: Introduction to Construction Management.

"Although students should rightfully be focused on the goal of earning their degrees," Simons said, "I will seek to achieve a broader objective: to prepare students to begin their construction management careers with confidence by blending their academic lessons with exposure to realities they will face in their working careers."

Simons started out on commercial jobsites, progressing through the ranks of project engineer, estimator, project manager, various executive roles and ultimately retired as president of Bernards, a large general contractor construction management design-build firm with offices throughout California.

He earned an associate degree in carpentry from Los Angeles Trade Technical College, a bachelor's degree in construction management from CSU Long Beach and an MBA from Loyola Marymount University. He also held California general engineering and general building contractor licenses. ■

- Top: Architecture alumna Taylor Gilmore hopes to teach students the value of using technology for real-world projects.
- Middle: Wanting to make a difference inspired architecture alumna Julia Rogers to pursue a teaching career.
- Bottom: Greg Simons has more than four decades of construction industry experiences to share with students.

Continuing to Excel

With Pride, Our Students Consistently Demonstrate the Power of Learn by Doing

As a Cal Poly alum, I'm happy to see Learn by Doing is going strong in the Construction Management (CM) Department. As a colleague and interim dean, I write with great pleasure and admiration commending their accomplishments. The energy and enthusiasm throughout the CM Department has propelled the student experience to include interdisciplinary competitions, design-build activities and community outreach. The experiences provided by the department, devised by the faculty and willingly supported by staff enrich our students' learning and create lasting memories. It's been amazing to watch and learn about the impactful, insightful and life-changing experiences for our students.

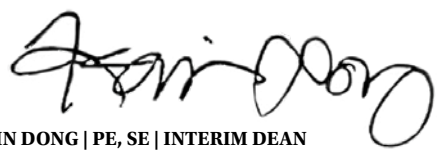
As a fellow faculty member, I am always amazed to see how well our CM students perform in national and international competitions. For example, in the 2023 Associated Schools of Construction (ASC) Region 6 and 7 Competition, teams recorded 11 top three finishes across 12 categories, demonstrating the breadth and depth of knowledge mentored to our students.

The department's engagement with our local communities is inspiring, with faculty and students using their skills and learning to improve them. The renovations at Camp Natoma for campers and counselors and the projects at City Farm SLO — including Allison Wild's garden project that created accessible gardening areas and the Garden for All project that created an educational space — demonstrate the power of Learn by Doing and how the CM Department is helping our neighbors.

And the success and vitality of the department will continue. New faculty bring in diverse backgrounds and interests ranging from interdisciplinary collaboration and the incorporation of artificial intelligence (AI) to digital modeling, bridging engineering and construction, and linking pathways for students from community colleges to Cal Poly.

Lastly, compliments to the CM faculty and staff for supporting and guiding the students through a diverse array of competitions and building challenges. It's a wonderful time to be part of the College of Architecture and Environmental Design and the CM Department. Help us continue the tradition of Learn by Doing and sponsor a student, support a hands-on activity or strengthen our commitment to excellence.

Cheers,



KEVIN DONG | PE, SE | INTERIM DEAN
COLLEGE OF ARCHITECTURE AND ENVIRONMENTAL DESIGN

Professor Kevin Dong is the CAED's newly appointed interim dean.

"The department's engagement with our local communities is inspiring, with faculty and students using their skills and learning to improve them."

Celebrating Your Success

... AND ENSURING IT FOR CURRENT AND FUTURE STUDENTS

IT'S A WONDERFUL FEELING — celebrating years of academic and personal achievement as you claim your degree and the dream job that awaits. Your Learn by Doing education is paying off.

What could be more satisfying than realizing your professional hopes and dreams? For many Cal Poly alumni, giving back is the next step.

Your monetary gift to the Cal Poly construction management (CM) program will help provide the latest equipment, support hands-on labs and offset the cost of student travel to job sites. It will ensure that current and future students continue to learn and grow from the best CM program in the nation.

Donate now to the Construction Management Fund for Excellence by scanning the QR code or go to bit.ly/45MFCaw?r=qr. To make a more personalized gift, please contact CM Department Head Jeong Woo at jwoo21@calpoly.edu or 805-756-5493. Thanks for your support!

◀ 2023 CM graduate Matteo Cuccaro

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Celebrating A Milestone

Cal Poly President Jeffrey D. Armstrong captures a celebratory moment with a multidisciplinary team of students who collaborated on Cal Poly's 5G expansion project. Attending the 5G ribbon-cutting ceremony with Armstrong in May 2023 at the E & J Gallo Winery and Family Building are (from left): Miyu Nishii (Business, '23), civil engineering senior Andrew Rasas, Evan Cheung (Construction Management, '23), CM senior Enrique Duran and business senior Akash Vuyyuru.