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California Health Care Facility—Stockton

New 1.2 million square-foot, single-story, campus-style facility encompasses more than 35 separate buildings and has a demanding two-year, start-to-finish design-build schedule.

Architect
HDR Architecture, Inc.

Owner
California Department of Corrections and Rehabilitation

Location
Stockton, California

Construction Cost
\$514 million

Completion
Estimated 2013

- Project Highlights**
- 1,722 bed medical and mental health care facility
 - OSHPD Compliant
 - BIM/Revit Modeled
 - LEED Silver

Crosby Group Helps Design-Builder Win \$514M Health Care Facility Project

Structural engineering firms trying to help their design-build team win the contract for the new \$514 million California Health Care Facility in Stockton had their work cut out for them. They had to submit a structural design that would conform to the state’s design standards, respond to all the requirements of the RFP, and help their team meet a very tight deadline for project completion while staying within budget. As part of the Clark/McCarthy/HDR team, Crosby Group set about investigating and developing various structural engineering solutions that would meet those goals.

Getting a Jump on a Tight Schedule

Located on 400 acres in Stockton, the California Health Care Facility (CHCF) is a health care facility for patient-inmates within the California state prison system. The single-story, campus-style facility, which will house 1,722 patient-inmates and comprise more than 35 separate buildings, must be designed and constructed in two years. “From a structural engineering point of view, this isn’t a complex project like a high-rise,” says Michael Meredith, Project Director, California Department of Corrections and Rehabilitation (CDCR). “The main challenge here is the schedule. Even if we had a 30-month timeline for

completion instead of 24 months, it would still be ambitious. The challenge for the structural engineers was to find a creative way to help their design-build team meet a tight, court-mandated schedule with a completion date that’s not going to move.”

Early on, Crosby Group studied a multitude of different structural systems, looking for a unique solution that not only met the stringent requirements of OSHPD, but would be quick to build and economical. Borrowing the best concepts from pre-engineered metal building systems known for speed-of-construction and efficiency, they devised a way to erect structural steel on a highly modular grid while creating a high-pitched roof system to enhance the healing environment. The steel frames were designed to double as temporary erection bracing for the precast wall panel systems, and interiors slabs were thickened so that the interior had the maximum flexibility for layout while the core was still in design.

“The solution Crosby presented during the competition was critical to helping the Clark/McCarthy team win the contract,” says Meredith. “By finding a way to get structural steel started very early, they increased the probability their team could meet our tight project schedule.”



Vetting All the Team Members

Although the CDCR selected the Clark/McCarthy team as a whole, they nevertheless carefully vetted each team member, including the structural engineers. "In a design-build project, we're not taking the lowest bid," says Meredith. "The design-builder becomes the builder as well as the architect and engineer of record, so we're very concerned about the competency of their team in all areas. For that reason, we go out of our way to evaluate all the critical consultants."

Meredith says CDCR was impressed with Crosby Group as a whole and with its individual engineers, including Principal Colin Blaney. "Colin struck us as a good teammate and a very good structural engineer," he says. "He represents Crosby well because he's the type of person who thrives in a collaborative design-build environment. He does an expert job of balancing the demands of budget, schedule, team members, and engineering considerations."

According to Meredith, the most valuable structural engineering firms are those like Crosby Group whose solutions "fit within the fabric of a team that's both designing and building a structure. Crosby has a lot of design-build experience so they have a clear appreciation and understanding of what the client's expectations are for a design-builder and how to meet them."

Balancing Safety and Cost

Structural engineers have the constant challenge of designing a building that's structurally sound, without making it stronger than necessary and thereby unnecessarily increasing the cost. Meredith says Crosby Group strikes the right balance in that regard. "They are very competent engineers who come up with a 'right-sized design,' which means a design that makes us confident we have a solid and stable structure, but aren't paying for more materials and supports than we realistically need. Taking that practical approach and navigating through structural concerns really speaks to Crosby's technical competency and is one of their strong suits."

SUCCESS STORY



To see more images, go to: http://www.crosbygroup.com/projects_health_chcf1.html

In addition to right-sized design, Meredith says Crosby Group is also the right-sized firm for projects like CHCF. "Crosby is big enough to handle projects like ours, but small enough that you still get easy access to principals like Pat Crosby and Colin, who really bring a lot to a project," he says. "Overall, we're very satisfied with Crosby Group, because the firm as a whole consistently delivers the results we need."



Crosby Group is an award-winning innovator in structural engineering and advanced seismic solutions—we go beyond convention to offer creative alternatives to design challenges. Our comprehensive design services include new/renovation design, seismic evaluation/retrofit, constructability/peer review, BIM modeling and LEED partnering for public and private clients. We have collaborated on over \$3 billion worth of design-build construction work, making us a leader in this project delivery method. Established in 1992, Crosby Group has experience in education, mission-critical, healthcare, justice, industrial, commercial, laboratory, and correctional sectors. We have worked on projects across the United States, and in the Middle East, Asia, Eastern Europe and Mexico.

Headquarters

999 Baker Way
Suite 410
San Mateo, CA 94404
Telephone: 650-367-8100
Fax: 650-598-0277

SACRAMENTO | DURANGO | WASHINGTON D.C.

www.crosbygroup.com