



Profiles in Architecture

Spring 2022

Why Masonry?

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Cal Poly San Luis Obispo, Vista Grande Dining Pavilion
DLG Group
Photography: Alex Nye

ARCHITECT:
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MASONRY CONTRACTOR:

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BLOCK PRODUCER:

Angelus Block Company, Inc.

OWNER:

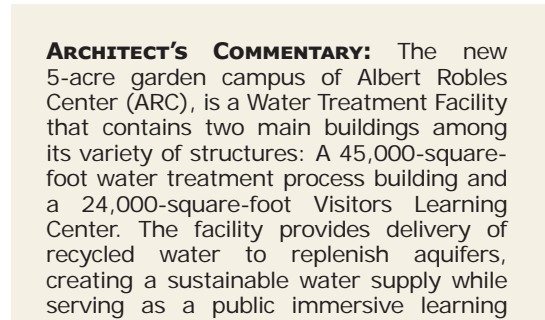
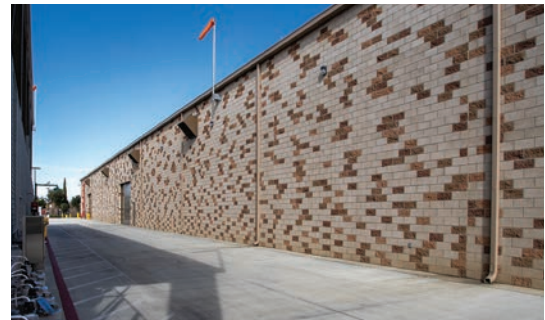
Water Replenishment District of
Southern California

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WRD Albert Robles Center for Water Recycling and Environment Learning

Pico Rivera, California

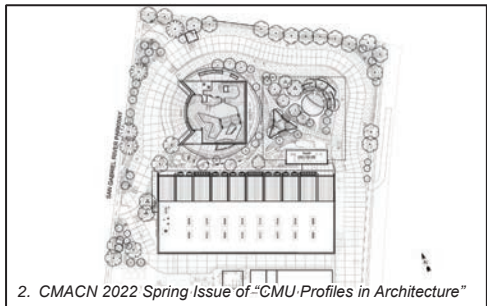


ARCHITECT'S COMMENTARY: The new 5-acre garden campus of Albert Robles Center (ARC), is a Water Treatment Facility that contains two main buildings among its variety of structures: A 45,000-square-foot water treatment process building and a 24,000-square-foot Visitors Learning Center. The facility provides delivery of recycled water to replenish aquifers, creating a sustainable water supply while serving as a public immersive learning environment and providing a tribute to the San Gabriel River's presence and purpose in the region.

A key feature is exterior ramps that wrap around the visitor's center up to the roof garden that extends the landscape skyward. The ramp includes a bridge extension that intertwines the two buildings together. These raised exterior spaces offer connectivity and increase proximity between offices, conference spaces, laboratories, and the outdoors. Sequences of indoor and outdoor spaces demonstrate water and plant ecology, water recycling, and the treatment process, providing an experience for public education.

WHY MASONRY? An architectural language consisting of the ramps, vertical metal fins, sun shades, and standing seam panels anchored by concrete masonry unit (CMU) walls was developed as an established design concept. Roof top solar panels supply power for the facility. The use of large planes of patterned CMU walls help to anchor all these disparate architectural features. Two different block textures, shot blast and split face, were used in a running bond pattern. The three separate tones of split face block were placed in a randomized pattern onto the dominant gray shot blast background providing texture and interest.

Water features abound, including an allegorical model of the San Gabriel River that runs between the buildings and across the site, contribute and demonstrate sustainable design. The CMU walls contribute the canyonlike character where the "river" runs between the buildings. All of the innumerable features together contribute to the facility ultimately attaining LEED® Platinum Certification by USGBC.



Cal Poly San Luis Obispo, Vista Grande Dining Pavilion

San Luis Obispo, California



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BLOCK PRODUCER:
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©PHOTOGRAPHY:
Alex Nye



ARCHITECT'S COMMENTARY: California Polytechnic State University, San Luis Obispo's new campus dining facility replaces the 1970's era Vista Grande Dining Facility. The facility serves the student housing residents as well as other students on campus and those attending events at the performing arts center across the street. The student-centered dining pavilion is part of the 'home away from home' environment Cal Poly is creating to enhance the student experience on campus.



This 35,000-square-foot, 3-story building is a mid-century modern style solution that includes multiple food venue styles as well as 7,000-square-feet of new office space on the third floor of the building. The dining areas feature six separate and distinct platforms that provide varied course offerings. Interior seating accommodates 350 diners while the exterior seating - ground level plus elevated patios - provides another 150-200 seats. There is a private dining room for 30 that opens to the exterior. There is also a 1,500-square-foot market featuring grab-and-go food fare and Jamba Juice.

WHY MASONRY? The Vista Grande Dining Pavilion is nestled into the hillside on the eastern side of the campus where the student housing is located. Concrete masonry units (CMUs) and brick veneer were used to compliment the permanence and architectural styles of the existing buildings surrounding the dining pavilion. Retaining walls and planters utilize CMUs for a strong durable base to the building from street level and as it steps up the hillside. LEED® Gold certified in July of 2020 and opening in September of 2020 during the peak of the pandemic, it was critical to provide a building for students where they felt safe and clean while embodying strategies of health and wellness. Recognized for its sustainable and resource-efficient design, the facility uses sustainable materials, natural daylighting throughout, a 9-foot by 14-foot living green wall in the interior at the staircase, and connects to the campus solar farm providing 35% energy savings. The building is supporting Cal Poly's goal of becoming a net zero campus by 2050.



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BLOCK PRODUCER:
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OWNER:
CHP Facilities Chico, LLC

©PHOTOGRAPHY:
Tyler Chartier Photography

CHP Chico Area Office No. 241

Chico, California



ARCHITECT'S COMMENTARY: The new California Highway Patrol (CHP) Chico Area Office replaces the undersized and outdated local CHP office with a new state-of-the-art Essential Services Building that will serve the growing and adapting needs of the CHP for 50-plus years into the future. The new Area Office focuses on meeting CHP's identified Critical Success Factors and the rigorous Facility Design Program requirements. The project seeks to create a new facility that is functional, secure for both staff and public, reliable, easy to access, and responsive to CHP's requirements with reasonable security while also remaining welcoming to the public.

The project consists of three main structures: Building A, an administrative area office; Building B, an automobile service center; and Building C, a recycle, waste, and storage building. The 5.9-acre site includes visitor parking, truck and bus inspection area, secure staff parking, vehicle fueling station, and a truss-style 120-foot communication tower with an array of antennas.

WHY MASONRY? Concrete masonry units (CMUs) were selected as the primary building material for this project because of their design aesthetic and inherent durability, low maintenance, and security properties. The exterior building walls are comprised of a combination of colors, sizes, and textures to create a handsome finely detailed wall composition. Low CMU walls in chevron shapes in front of the main building serve as vehicle stand-offs for added security.

This project is the first CHP replacement facility to achieve LEED® GOLD certification. The CMU used on the project, combined with the high fly ash content grout, contributed to two important LEED® credits earned by the project: Recycled Content and Regional Materials. Dimmable LED lighting coupled with daylighting zones and sky lit circulation areas reduce the building's electrical demand. Low emitting materials are used throughout the facility to provide enhanced indoor environmental quality and user comfort. The building design also includes a high efficiency HVAC system, reduced domestic water usage, drought-tolerant adaptive plant materials, and a low water usage irrigation system, which all combine to dramatically reduce the building's carbon footprint and impact on the natural surroundings.



Viola Inc Masonry Building

Ventura, California



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MASONRY CONTRACTOR:
Skidmore Masonry, Inc.

BLOCK PRODUCER:
Angelus Block Company, Inc.

OWNER:
Viola Inc Constructors

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Mark Corcoran, Upmarket Media®



ARCHITECT'S COMMENTARY: Viola Inc marked its 75-year anniversary with a new Viola Inc Masonry Building. Concrete masonry units (CMUs) were determined the best option to create a statement at the corner of Olivas Park Drive and Bunsen Avenue, an important developing area in the city of Ventura California, to mark this grand celebration.

The design of the building has a 72-foot radius wall, 37 feet high, that sweeps along the corner of the site and defines the entry to the building with a front plaza that opens onto the sidewalks to welcome visitors to the building and neighborhood. The CMU texture, color, and finishes in contrast with the glazing create a rhythm of shadows that can only be achieved with CMU. The wainscot along the base of the building is created by a custom burnished 10-inch block with an offset 8-inch core and a chamfered corner detail at the top that was burnished on site. The window openings are framed with block turned 90-degrees to inset the window storefronts and allow a minimum 12-inch inset for the glazing to cast a shadow and express the masonry material. The second floor bridges across the parking lot with a 32.33-foot-long and 50.66-foot-wide bridge, completely spanning with block lintels and wood joists, without the use of steel beams or columns. Multiple new block molds had to be created to accomplish many of the details, corners, and structural requirements throughout the project.

WHY MASONRY? CMU allowed the design team to work with a versatile material and a construction method that met the client's needs. The performance of the building was a critical aspect for the client as a landlord. The strength, versatility, and longevity of the CMU walls were perfect for this mixed use building that will house light industrial, food beverage, and office tenants. Likewise, the energy performance of CMU walls and the use of thermally broken window frames allows for a high energy rating and a comfortable environment inside with a significant reduction in energy use for conditioned air and lighting. It was fitting that CMU allowed for a permanence that reflected Viola Inc on its 75-year anniversary.



El Centro Aquatic Center

El Centro, California



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BLOCK PRODUCER:
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CONSTRUCTION MANAGER:
 Erickson-Hall Construction Co.

OWNER:
 El Centro Aquatic Center

©PHOTOGRAPHY:
 Mike Torrey Photography

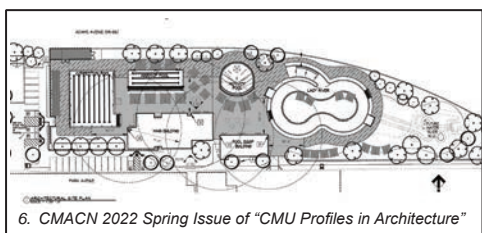
ARCHITECT'S COMMENTARY: The City of El Centro requested a new aquatic facility that would include the addition of two new buildings. On a very constrained site, a 5,107-square-foot aquatic building was designed and built to include a party room, two restrooms with shower areas, lockers, and a snack bar. A 2,000-square-foot utility building to house the mechanical, electrical, and plumbing equipment was included.

Halls are oriented for sight lines throughout the building, and glass

barriers are placed between staff and public areas to safeguard staff while simultaneously welcoming the public with colorful materials that are reminiscent of water. In addition to the two new buildings, the El Centro Aquatic Center also includes a 2,039-square-foot warm-up pool, 1,605-square-foot activity pool, a lazy river, a children's pool, and an eight-lane competition pool, making this destination a pleasurable spot for patrons of all ages.

WHY MASONRY? The City of El Centro is a desert community, so concrete masonry units (CMUs), a sustainable material, was chosen for its resilience, durability, and low maintenance costs. The CMUs' combed faces specified cast subtle shadows in the desert sun and add texture. Likewise, the use of combed CMUs discourages graffiti as the texture doesn't easily accept paint or marker. The main paint color was selected to match the colors of the boulders in the mountains west of the city and to make maintenance cleanup easy, while the accent paint and tiles were selected to match the different shades of water.

In 2021, the El Centro Aquatic Center was recognized by California Parks and Recreation Society (CPRS) for Excellence in Design.



Bighorn Clubhouse

Palm Desert, California



ARCHITECT'S COMMENTARY: With sustainability in mind, Bighorn Golf set out to create the most innovative, imaginative golf club in the world. The design and construction teams responded to that challenge with bold thinking and their own high expectations.

The Clubhouse aimed to embrace sustainability in a variety of ways. Stringent regulations for water use, mechanical efficiency, system commissioning and highest quality building materials and practices ensured performance and operational value commensurate with 21st century building practices. By design, the clubhouse utilizes natural light and ventilation with the ability to open entirely on the many days the desert climate allows it to. Advanced technology allows for the optimized use of lighting and mechanical systems based on available natural light and exterior temperature. Rainwater is fed back to the surrounding landscape, making this clubhouse a living, breathing, part of the environment.

WHY MASONRY? To achieve optimal environmental benefits, the Clubhouse incorporated 95,000 concrete masonry units (CMUs) in natural gray medium weight precision block. The use of CMUs is conducive to the desert climate due to the high thermal mass which reduces the considerable temperature swings. High thermal mass increases comfort and lowers energy requirements for heating and cooling. The high thermal mass optimizes energy performance and indoor environmental comfort.

The choice of concrete masonry units for the Bighorn clubhouse unlocked a variety of solutions to some of the most challenging aspects of the project. The club is anchored by two opposing arc forms, each with a radius in excess of 300 feet. The use of 12-inch CMUs allowed this backbone of the structure to be easily curved and were a natural fit for this structure.

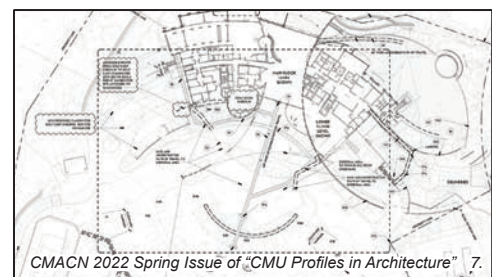
Due to the many associations of CMU sustainability and beyond, this clubhouse will remain able to serve the needs of its future users as seamlessly as it does today's patrons.



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Managing Partner

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OWNER:
Bighorn Properties
PHOTOGRAPHY:
Mark Davidson Photography





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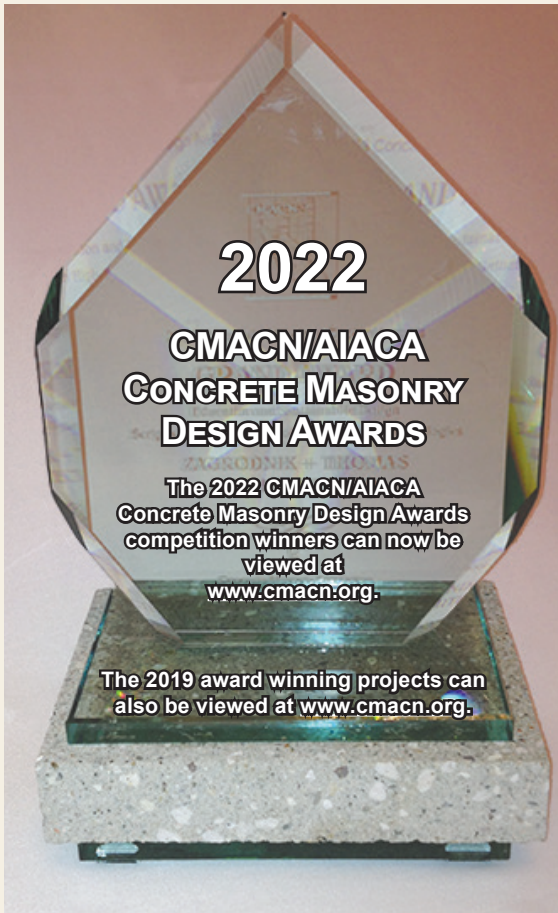
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- Developing new and existing markets for concrete masonry products.
- Coordinating Members' efforts in solving common challenges within the masonry industry.

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