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U.S. Marine Corps
Quality of Life Bachelor Enlisted Quarters (BEQ) & Dining Facility, Package 4
Twentynine Palms, California

ARCHITECT:
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Principal-in-Charge

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STRUCTURAL ENGINEER:
Walter P. Moore

GENERAL CONTRACTORS:
Straub, Inc./Martin Harris Construction, A Joint Venture

MASONRY CONTRACTORS:
Marnell Masonry, Inc.
A1 Masonry and Sandblasting

BLOCK PRODUCER:
ORCO Block & Hardscape

OWNER:
U.S. Navy, Central IPT NAVFAC SW

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Levi Ellyson, 501 Studios

ARCHITECT’S COMMENTARY:
This $136M complex of three, four-story, 292,300 square-foot buildings (576 two-person rooms) opened in 2014 as a marked departure from traditional Marine barracks offering aesthetics and amenities associated with upscale apartment communities. Living units are organized into buildings configured in combinations of modules that are flipped and rotated to capitalize on solar efficiency/breezes and produce stepped rooflines (two-four stories). Open stairwells/walkways between building pods create a perception of separation, negating need for institution-style long corridors.

Each building has a large central pod with a two-story hotel-style entrance and “great room” loft, plus a free-standing, two-story, 9,825 square-foot community building with theater, kitchen, gaming, laundry, and an officers-only loft lounge area. A 445-seat dining facility flooded with daylight and oriented on the site to avoid glare, features upscale finishes, multiple food and action stations, grill area, and coffee/juice bars. The highly functional and flexible design supports the mission of providing a new food service methodology. Referencing surrounding mountains and desert, the facility’s clerestory roofs and ceiling angles match bachelor enlisted quarters rooflines. Freestanding steel shade structures and awnings provide shade for outdoor dining and activities.

Also included are: a 540 space parking garage, a 420 foot Ninja Warrior-style obstacle course and a centrally focused 500 seat, open-air arena/amphitheater with a large rubberized sports surface, iconic canopy shading, projection tower and perimeter seating walls to accommodate another 200+ Marines.

LEED® Gold Certified and nearly Net Zero Energy, the complex was designed to be 30% more energy-efficient than CA Title 24 baseline and to offset 22% of electricity demand with attic super-insulation, advance metering capabilities and 5,856 photovoltaic panels generating 1.5 megawatts/year.

Why Masonry? Castlerock block, an older, infrequently used concrete masonry product, was chosen to establish a unique exterior. The concrete masonry units are intermittently recessed to create depth, shadow and texture, a dramatic touch in this stark desert environment. Throughout, integrally colored concrete and stained, patterned concrete flooring add sophistication.
Architect’s Commentary: The new Truckee Meadows Fire Protection District Station No. 35 serves the far western edges of Washoe County and Reno, Nevada. In an effort to consolidate two existing emergency facilities, Fire Station No. 35 offers a central point of response for the growing community. The Mogul Fire Station No. 35 is sited to take advantage of existing landscaping that remains from a vintage ranch, with the station set between existing cedar trees, apple trees and Sierra granite outcroppings.

Why Masonry? Formally, the 8,045 square-foot facility responds to the surrounding high desert context with materials that are resilient and accentuate the warm color palette and texture of the typically dry surroundings. The masonry construction of the facility provides durability and anchors a critical resource in an area prone to wildfires. Identifiable with the robust needs of an emergency facility, concrete unit masonry was an obvious material choice for its structural integrity and sense of permanence, while also allowing for an expeditious and effective construction timeline. Portions of the concrete masonry units are clad in corrugated metal and secondary materials such as reclaimed wood are integrated as rain screen elements at public gathering spaces. The combination of materials recalls previous long-standing ranch structures that once characterized the Washoe Valley.

Functionally, four firefighters per shift are housed within a facility that offers a variety of activity and relaxation zones and benefit from the apparatus bay as a privacy screen along the busy Interstate. Such zones include an exercise and training room, dayroom, kitchen with access to an exterior covered patio, and an exterior seating area within an existing fruit orchard. Providing opportunities for these staff members to decompress and rejuvenate is important to the overall resiliency of the crew. Collectively, the architectural solutions seek to reinforce these efforts. While the facility did not seek to achieve LEED® Certification, a variety of environmentally responsible techniques were employed to both the building and the project site, with the average energy consumption significantly less than other similar buildings on a per-square-foot assessment.
SAGE CREEK HIGH SCHOOL
CARLSBAD, CALIFORNIA

ARCHITECT:
Roesling Nakamura Terada Architects, Inc.
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Ralph Roesling, FAIA
Principal-in-Charge

STRUCTURAL ENGINEER:
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GENERAL CONTRACTOR:
Balfour Beatty Construction

MASONRY CONTRACTOR:
New Dimension Masonry, Inc.

BLOCK PRODUCER:
ORCO Block & Hardscape

OWNER:
Carlsbad Unified School District

©PHOTOGRAPHY:
Jeff Durkin, Breadtruck Films, large photo and the middle column small inset photo
Kevin Walsh, Kevin Walsh Photography, three small inset photos in the left column

ARCHITECT’S COMMENTARY: With an emphasis on environmental learning, Sage Creek High School is recognized and certified by the Collaborative for High Performance School (CHPS). At the edge of a nature preserve, this new campus is terraced into the hillside. The eastern portions of the 56-acre site remain undisturbed, creating a seamless transition to the adjacent native landscape. Placing an emphasis on water quality education, there is a campus bioswale, re-aligned to maintain the original site drainage. Other learning elements include native plant material, harvesting rainwater for irrigation, repurposing existing site boulders from site grading, maximizing natural light and utilizing thermal chimneys for ventilation in the classrooms.

To minimize impact on the natural topography, the campus is organized into four-terraces of varying elevations with compact two and three-story footprints. The buildings are organized to front a central circulation spine, the “Promenade.” Student access to the various floor levels of each building originates from the Promenade, allowing for clear and easy circulation throughout the campus. The public spaces such as the Library, Cafeteria and Gymnasium engage the Promenade as the campus social center.

The school program has a site hierarchy with the academic classrooms at the highest level and expansive views that inspire students’ future growth and advancement. The architectural forms suggest a floating airplane wing-like roof and folded profiles to create visual inertia, intended to promote academic success and to optimize student potential.

WHY MASONRY? Concrete masonry was used for its durability, thermal mass characteristics and its minimal maintenance requirements. The colors and patterning of the masonry units were selected to mimic the colors of the soil and rocks surrounding the site, with the intent of blending the buildings into the environment. The color patterned block was brought to the inside spaces making a strong connection from inside to outside.
Department of Motor Vehicles
Field Office Replacement
Fresno, California

Architect:
S.I.M. Architects
7591 N. Ingram Avenue, Suite 101
Fresno, CA 93711
John H. Smith, AIA
Principal-in-Charge

Structural Engineer:
Advanced Structural Design, Inc.

General Contractor:
Durham Construction

Masonry Contractor:
Stoney Masonry, Inc.

Block Producers:
Basalite Concrete Products, LLC
Trenwyth Industries, Inc. (an Oldcastle Company)

Owner:
State of California, Department of General Services

©Photography:
Paul Mullins, Mullins Studio

Architect’s Commentary: With the Central Valley being one of the most productive agricultural areas in the world, an agrarian theme was selected as the design influence of the new Department of Motor Vehicles facility. The tall, round metal silo at the entry was a direct interpretation of granaries dotting the San Joaquin Valley. The “art wall” at the front entry patio is a representation of the farmlands from high above. The stainless steel ribbon meandering through is a depiction of the San Joaquin River.

The interiors continue with the agriculture feel, with the teller overhead light and sign structure resembling the rolling irrigation systems used on valley farms. The Terrazzo flooring patterns are interpretations of row crops and the urban fabric colliding. Much to the credit of the State of California’s stance on sustainability and responsible design, this project will not only be LEED® certified Gold, but it will also be a Zero-Net-Energy facility, meaning it will produce as much energy as it uses.

Why Masonry? Concrete masonry units (CMUs) were chosen for this project for several reasons. The performance and ease of maintenance was one of the most critical. The raw, heavy material gives the building a substantial look that will only get better over time. In addition to the standard concrete masonry products typically used on a project like this, special laminated block and ground face block were used to create the “valley floor” art piece at the front patio.

The fact that most of the materials that make up the CMU were locally mined helps with LEED® requirements. Another big advantage that CMU exterior walls provided was the reduction in construction time. While the steel structure was still being fabricated in the shop, the concrete masonry walls were being constructed. By the time the steel was ready for installation, the CMU walls were almost complete.
ARCHITECT’S COMMENTARY: The 11,950 square-foot Fine Arts Complex is the first building in the new Humanities quadrant of the CSUB campus. It contains both indoor and outdoor studios for ceramics, sculpture, drawing and painting, as well as digital arts and printing. The schematic design started during the Winter of 2008 and the construction was completed during the Summer of 2014. The project is designed to LEED® Silver equivalent. All LEED® Silver requirements were met except for commissioning, per CSU basis of design for this building.

The studios are organized around a central courtyard. The ceramics, sculpture and printing studio open to a large covered rear service yard to the south. When combined with the service and court yards the usable space is doubled. All studios have extensive northern daylight provided by full height glazing at the front studios and clerestory glazing at the rear studios. Generous shading is provided to the circulation spaces by way of covered walkways.

WHY MASONRY? The project utilizes concrete masonry units (CMUs) for a majority of the structural walls. The concrete masonry system was chosen for its thermal properties, durability, ease of construction, and aesthetic properties. Being located in Bakersfield, known for its arid climate, it was important that we used a building material that contained thermal mass to help alleviate the highs and lows of the climate and help to maintain a uniform environment. The resilient finish will stand up to the demands of the art students who will utilize a hands-on approach with their projects. The finish on the concrete masonry is a honed face with large aggregate that accentuates the colors of the fiber-cement panels that are used as architectural accents. The contrast between the concrete masonry units, fiber-cement panels, composite metal panels, and glazing components create a striking façade.
24 Hour Fitness  
Redwood City, California

ARCHITECT:  
Think Architecture, Inc.  
5151 S. 900 East, Suite 200  
Salt Lake City, UT 84117

Kenney Nichols, AIA  
Principal

Mo Myers, AIA  
Principal and Design Architect

STRUCTURAL ENGINEER:  
Goodnight Structural Engineering

GENERAL CONTRACTOR:  
Cumming Construction, Inc.

MASONRY CONTRACTOR:  
Shannon Masonry Construction, Inc.

BLOCK PRODUCER:  
Calstone Company, Inc.

OWNER:  
SunCap Property Group

ARCHITECT’S COMMENTARY:  
Several milestone decisions during project development lead to the decision that concrete masonry was the best solution for the exterior walls of the building.

Why Masonry? During the city entitlement process the city planning commission and design review board required a varied palette of materials, finishes and colors on the building exterior. The variety of surface finishes and colors available in concrete masonry made this material a natural choice to meet these requirements.

It was also required that the building be situated on the site at minimum setback distance from the street with the parking behind the building. For a 24 Hour Fitness club with a single controlled entrance, that meant the entrance must be oriented to the parking and the rear of the building would face the street. The ability to easily achieve a four-sided finish appearance with the cost savings of load bearing walls providing the finish reinforced the decision to use concrete masonry for the exterior walls.

Concrete masonry also provided the ideal substrate for the stone and stucco finishes applied to achieve the required diversity. The rectangular shape of the building and the flat wall planes were broken up by the stucco and stone entry feature and by the pattern, finish and color of the masonry changing either side of this feature. The end result was a cost effective building shell that was readily approved by the city staff and planning commission.
Architect’s Commentary:
The City of Huntington Beach Public Works, Water Utilities Operations & Maintenance Yard is the main operating center for the city-owned water and wastewater enterprise. This project provided construction of two new buildings, remodel and expansion of one existing building, and site improvements. The masterplanning process allowed the design team to study present and future staffing and operations needs and provide recommendations for enhancing operating efficiencies and effectiveness.

Why Masonry?
The project is located less than two miles from the Pacific Ocean in Southern California, so the buildings were designed to take advantage of the mild climate, ocean breezes and sunshine. Building orientation, natural ventilation and daylighting were incorporated into the design. The use of concrete masonry as the main building envelope material allows thermal mass of the structures to minimize the use of mechanical systems for heating and cooling.

Concrete masonry is also the perfect material for durability as many of the buildings are used for storage and workshops. Masonry will withstand abuse and last for generations. The interiors of the buildings were designed to minimize the purchase of manufactured materials by exposing the acoustical decking, staining the concrete floors, and having exposed masonry interior walls.

This is the main facility for the City’s water department so water conservation was very important, and a water harvesting system was incorporated into the project landscape that combines a recirculating decorative water feature with a sub-surface rainwater harvesting collection system.

Masonry as the primary material, and scale of the buildings, successfully integrate the project into the context of the neighborhood. The material palette addresses the demanding budget and goals of sustainability, long-term durability, and municipal character required for the project.

Huntington Beach Water Utilities Yard garnered an APWA Project of the Year in 2011.
Architect's Commentary:
The El Capitan High School Physical Education Building is located on the northwest side of the campus and was built to replace a dilapidated 55 year-old locker room. The facility is an 18,405 square-foot concrete masonry building designed for physical education and campus sports.

The project design revolved around the concept that every student should be provided with an equal opportunity and the ability to realize both their academic and physical goals. “Mens sana in corpore sano,” meaning: “A sound mind and a sound body.” This building is dedicated to the nurturing and growth of the scholar and the athlete.

Why Masonry?
A design goal was to have a robust building made entirely of concrete masonry because it can withstand high impact and exuberant activity. Concrete masonry also has design, energy and life cycle benefits. The building features masonry patterning and texture, to accentuate the architectural fenestration, building volume interconnectivity. Concrete masonry also provides a large thermal mass, which provides passive cooling during daytime hours, reducing energy costs. Concrete masonry is a long term, low maintenance solution.

The project contains: Girl’s/Boy’s Locker Rooms, Showers, Wrestling/Aerobics Room, Fitness/Weight Room, Team Rooms, Training Room and Coaches’ Offices. Energy efficient elements were incorporated into the design including: natural day lighting, thermal mass, Title 24 compliant HVAC and sensor controlled lighting. The site upgrades include: Basketball courts, multiple Shade Structures for outdoor fitness, new Sand Volley Ball Court and Landscaping. A testament to student success in the new Physical Education Building is that in its first year in use, the El Capitan Vaquero’s Football Team won CIF and made it to the Division III State Championship game.
Architect: Donald Goertz, Architect
1525 Nautilus Street
La Jolla, CA 92037
Donald Goertz, AIA, CSI
Principal-in-Charge

Design Consultant:
Mary Coakley Munk
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La Jolla, CA 92037

Structural Engineer:
Donald Goertz, Architect

General Contractor:
Beacham Construction, Inc.

Masonry Contractor:
T. E. Nevares Concrete, Inc.

Block Producer:
RCP Block & Brick, Inc.

Owner:
City of San Diego
©Photography:
Donald Goertz, AIA, CSI

Architect’s Commentary: Having completed the innovative APWA Award winning Kellogg Park South Comfort Station (KPCS) in 2005, FOLJS were pleased to have the opportunity to design and oversee construction of the Kellogg Park North Comfort Station (KPNCS). Over the past 15 years, we have focused on developing Project Goals for Effective Restroom Design in public parks and open spaces that fulfill the needs of ALL its diverse users.

Why Masonry? Kellogg Park North Comfort Station (KPNCS) in La Jolla Shores, completed October 2014, exemplifies the incorporation of concrete masonry used to achieve excellence in architectural design and sustainability.

Built on one of the most beautiful and densely populated beaches in Southern California, KPNCS serves approximately 3 million visitors each year. Concrete masonry units were clearly the optimum medium for this project, because it is cost effective, yet provides the durability required to withstand our harsh coastal environment and heavy usage without sacrificing aesthetics.

Regalstone load-bearing concrete masonry units were the ideal material for meeting these project goals in terms of design priorities and major considerations, as listed below:

Design Priorities and Major Considerations:
• Sustainability
• Ease of Maintenance
• Cost Effective
• Maximum Function in Minimum Space
• Energy Efficient
• Aesthetics
• Safety
• Accessibility (ADA, Family, Gender Diversity)
• Availability
• Prevention of Vandalism and Vagrancy
• Environmental Impact
• Changing Societal Needs

KPNCS Design Features:
• 990 square foot modular concrete building using Regalstone Block
• 10 stalls (2 ADA/Family)
• 2 ADA/Family indoor shower stalls (facilitating right and left transfer)
• 2 outdoor alcoves with lavs, soap dispensers, and hand dryers
• 6 outdoor showers (2 ADA allowing for right and left transfer)

• 6 foot showers
• Plumbing chase
• Storage area
• Trellis roof providing natural light and ventilation
• Fiberglass reinforced plastic doors
• Titanium shower panels
• Concrete foundation, floors, and plaza with embedded abalone shell and crushed recycled glass
West Century Federal Building
Santa Maria, California

Architect:
Fraser Seiple Architects
971 Osos Street
San Luis Obispo, CA 93401

Bruce Fraser, AIA
Principal-in-Charge and Designer

Donald Love
Project Manager

Structural Engineer:
Lampman & Associates

General Contractor:
Chamblin Landes Construction Co., Inc.

Masonry Contractor:
Santa Maria Masonry

Block Producer:
Air Vol Block, Inc.

Owner:
Walter Brothers Construction Company

©Photography:
Studio 101 West Photography

The West Century Building is oriented and configured to place its public interface close to the street and its office areas to the north, where they benefit from extensive daylighting. Secure site and building areas are held to the rear of the site, with non-fenestrated secure walls away from immediate public views, but prominent in more remote views revealing the project’s massing and color composition. The project was developed under specific City design guidelines and extensive public review, as well as the architect’s in-house practice of giving public buildings a positive civic imagery that combines permanence and approachability.

Why Masonry? It was apparent from early in project development that concrete unit masonry was the material best suited to the combined requirements of the project’s largest walls, including fire separation, abuse resistance, security, maintainability and thermal performance. 8x8x16 precision units were used, in a deep, custom pigment at exposed-to-view locations. Pigmented masonry units were also used for the columns supporting entry canopies, where a pattern of 8x8x16 and 8x4x16 blocks adds visual texture.

Concrete masonry occupancy separation walls extend continuously through the roof plane where parapets are required and masonry is used throughout the detainee processing portions of the building, finished with epoxy coatings. These and other single-material applications greatly reduce the number of components and trades that would otherwise be required to meet the code and performance requirements of the detention environment. The thermal mass in concrete masonry walls further assisted with Title 24 compliance and reduced HVAC loads.

Architect’s Commentary: The 13,500 square foot West Century Federal Building was designed to accommodate its primary tenant, a 10,600 square foot Immigration and Customs Enforcement (ICE) facility for the U.S. Department of Homeland Security. The remaining 2,900 square feet will be occupied by a related tenant. The building’s owner and developer, Don Walter, regularly produces this kind of build-to-suit facility for federal, state and local governmental agencies. His design and construction team works under programmatic goals that include exceptional durability and sustainability, and a contextually appropriate, non-institutional exterior presentation.

Multiple ICE functions are located in the facility, including administrative offices, agent support, detainee processing, and temporary holding. This combination of uses generates a complex set of code constraints and security thresholds, which played a large role in the selection of construction materials and assemblies.
Concrete Masonry Units (CMUs) are dimensionally and aesthetically pleasing for ANY of your existing or future designs. CMUs can be integrally pigmented and textured to meet a wide range of client and project demands. CMUs are design flexible, versatile, noncombustible, durable, economical and locally produced.

Funding for the production and publication of the CMU Profiles in Architecture is provided by:

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- Providing technical information on concrete masonry for design professionals.
- Protecting and advancing the interests of the concrete masonry industry.
- Developing new and existing markets for concrete masonry products.
- Coordinating Members’ efforts in solving common challenges within the masonry industry.

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