

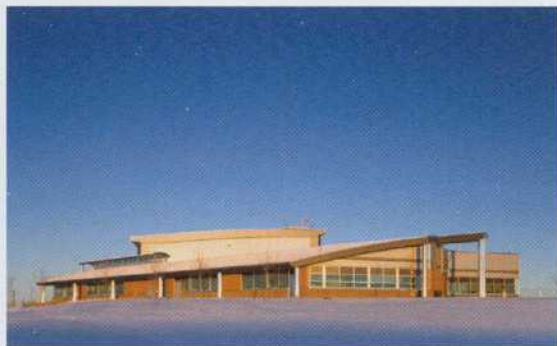
army aviation support facility

Buckley Air Force Base, Aurora, Colorado

Carol Coover-Clark, AIA | Brian Duggan | Coover-Clark & Associates, Inc. | Denver, Colorado
PHOTOGRAPHY BY RON JOHNSON



Aircraft blades and aerodynamics inspired the curved roof of the helicopter hangar, which is adjacent to the facility's office space.



Green is a color long associated with the military—green uniforms, green tanks, green tents, green helmets, green walls, green desks. But at the new Army Aviation Support Facility at Buckley Air Force Base in Aurora, Colorado, green isn't that familiar shade of olive drab. Rather, it's a new hue—green as in sustainable, garnering the building a LEED Silver Certification, one of the first of its type in the nation.

The 118,000-square-foot main hangar facility was designed for the Colorado Army National Guard by Coover-Clark & Associates, Inc. to house the guard's Black Hawk and Chinook helicopters, as well as provide space for maintenance, operations and training. The design team, led by firm principal Carol Coover-Clark and project designer Brian Duggan, was charged with creating a secure, comfortable, workable facility within a lean budget that also took in as many sustainable strategies as possible.

Partnering with CH2M Hill as production architects and engineers, the Coover-Clark design team visited several similar facilities in other states to learn what worked—and didn't work—at those sites.

The National Guard's Buckley Air Force Base site, says Duggan, sits on about 24 acres of rolling prairie land, with a distant view of mountains. "Their old facility was antiquated and inadequate," he says. "There were a lot of trailers. We decided to take a campus approach in designing the main hangar facility and a metal storage building."

One of the first hurdles in designing for the site, located on the front range of the Rockies, was to do an environmental survey of the locals, which include prairie dogs and a ground owl that makes its nest in prairie dog burrows. The buildings



Above: Clerestory windows and skylights provide plenty of daylighting inside the hangar. Left top: An exterior rendering shows the landscape plan that includes native plantings. Left above: The building's graceful form is brought into focus after a snowstorm.





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W H I T E O U T A D I T

Opposite page: The patterned concrete floor of the airy lobby celebrates the Colorado Army National Guard through inlaid logos, patterns and flight vectors, which continue into other rooms.

Left: The operations center has clear views of the helicopters.

Below: The floorplan was designed to accommodate large groups for training as well as provide smaller spaces for the permanent staff.

were placed so as not to disturb those habitats.

Placement of the main hangar facility was keyed to the helicopter ramp, and placement of the office facilities was juxtaposed to the hangar itself. Duggan designed the elevation with a curved roof, inspired by the forms of aircraft blades and uplift aerodynamics. "I was looking to reflect the function of the building," he explains.

Exterior materials include split-face CMU, anchoring the building into the prairiescape, and glazed CMU blocks in a terra cotta color to reflect existing buildings of the base. An aluminum composite material wraps the hangar portion of the building and the eaves, while the glazing was chosen to reflect the region's blue skies. Other areas of the exterior were decoratively clad in Trespa, a composite resin material commonly used as a weather barrier.

Split-face block, metal and glass were repeated as the interior materials. Highlighting the interior is stained concrete flooring, designed with inlaid patterns that celebrate the Colorado Army National Guard. "We used their logo, compass graphics and flight vectors," says Duggan. "We wanted the floor to tell a story, and for the users to notice it."

One of the main challenges in designing the facility, explains Duggan, was to make it workable for a regular staff of about 75, yet able to handle the 350 guardsmen who come in for training one weekend a month. "We had to handle the capacity, but we didn't want the full-time employees to be swimming in empty space." The challenge was met with modular classrooms that can be sectioned off or opened up as necessary, conference rooms of different sizes and flexible locker rooms.

The facility's "green factor" comes from a variety of strategies. The CMU was manufactured locally, eliminating the need to transport the material from a long distance away. Other materials have a recycled content. Mechanical and electrical systems were chosen for their high efficiency as well as their ability to handle the extremes of the local climate. The interior—including the hangar—is flooded with daylighting via windows and skylights, eliminating the need for much interior lighting on bright days. The windows



have a secondary benefit: great views for employees.

Outdoors, Coover-Clark & Associates used native plant materials and established a series of cobblestone-lined dry creek beds that channel rainwater from the building's roof to various planting areas.

Completed in 2006, the facility is a far cry from the Quonset huts, trailers and block barracks of old National Guard locales. "Our new world-class [facility] at Buckley is recognized by people within and outside of the industry as a facility that exceeds the standards with its clean, contemporary and rich appearance," says Mark A. Schoenrock, chief of contracting for the United States Property and Fiscal Office in Colorado. "Every day, our soldiers benefit from the customized and well-thought-out design." ■

Architecture, interior design and landscape architecture:

Coover-Clark & Associates, Inc., Denver, CO; (303) 783-0040 or www.coover-clark.com.

Production architecture and engineering: CH2M Hill, Englewood, CO; (303) 771-0900 or www.ch2m.com.