

Workplaces

view | Dynamic Glass

Marine Corps Air Station Miramar, CA



98% customer
satisfaction

27% HVAC savings

62% lighting savings

Marine Corps Air Station, Miramar, CA

The U.S. Department of Defense sees emerging energy technologies as vital to the nation's security. When studies showed how much View Dynamic Glass could reduce energy usage at a demonstration site, the DoD gave the project the thumbs-up.

Objectives The Marine Corps Air Station Miramar (MCAS), just north of San Diego, is home to the 3rd Marine Aircraft Wing, the aviation unit of the 1st Marine Expeditionary Force.

It's also home to Building 6311, a designated Department of Defense (DoD) demonstration project. The DoD implemented projects on military installations to demonstrate emerging energy technologies. The goals are to test, evaluate and scale innovative technologies to improve the department's energy security and reduce its facility energy costs. Demonstrations successfully deployed generate the cost and performance data needed to validate promising technologies, allowing them to be fielded and commercialized more rapidly.

Nicknamed "City Hall," Building 6311 houses the base's leaders and administrative staff, and is the nerve center of base operations. Adequate control over solar heat and glare is essential. The demonstration project was a retrofit of the facade with energy-efficient glass.

"Energy management is critical to mission assurance for MCAS Miramar, which is what we're all about," says Col. John Farnam, base commander. "At the end of the day, it increases national security."

Team

General contractor:
Hugo Alonso, Inc.

Glazier:
Custom Engineered
Openings

Electrical:
Brindley Electrical Services

Glazing system

Project type:
Retrofit

System type:
Blast; storefront; punched
opening; operable

Make and model:
US Aluminum BT601 Blast
Storefront, Boyd Series 2200
Blast Fixed Frame,
Boyd Series 2300 Blast
Project-Out Frame

IGU makeup

Overall thickness:
1"

Outboard lite:
6mm tempered clear with EC
on surface #2

Spacer:
½" black warm edge spacer

Inboard lite:
3mm AN clear/.030
PVB/3mm AN clear



Solution The DoD replaced 1935 square feet of low-performing, clear glass with View Dynamic Glass. View worked with MCAS to develop an initial energy and benefits model. It showed that View Dynamic Glass enables a 23 percent reduction in HVAC peak-cooling load, a predicted 18 percent decrease in gas use and a 9 percent decrease in total energy use annually.

"These dynamic windows will essentially make it thermally efficient and glare-free throughout the building," says Mick Wasco, MCAS Miramar energy manager.

Outcome Completed in August 2013, the installation has contributed to the base's goal of improved energy efficiency and greater occupant comfort. Dynamic Glass has also reduced noise, glare and heat while providing unobstructed views.

Payoffs

- Provides better energy management, critical to mission assurance
- Improves use of office spaces by reducing heat, glare and noise
- Demonstrates innovative energy technologies, leading to larger scale roll-out at multiple DoD locations