



LEED Gold

Humboldt State University Behavioral and Social Sciences Building

ARCATA, CALIFORNIA

Services

MEP Engineering
Sustainable Design
Building Technologies
Energy Services
Commissioning
Fire/Life Safety
Lighting

FAST FACTS

Architect

Yost Grube Hall Architecture

General Contractor

Swinerton Management & Consulting

Completion

July 2006

Building Size

88,000 sf

Project Cost

\$23.3 million

Awards

Overall Sustainable Design,
Higher Education Energy
Partnership Best Practice
Award: University of
California/California State
University, 2005

Contact

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Humboldt State University's design for its new Behavioral & Social Sciences building began as a design-build competition. The YGH/Swinerton/Interface entry not only met all the criteria, but included environmental responsibility as a key element in its design. The design team's focus on earning LEED Gold certification led to a LEED-oriented design at the start of the project, including LEED-experienced and accredited designers. Cost-cutting features incorporated in Interface's design were:

- » **Less complexity.** Interface utilized natural ventilation assisted by a mechanical cooling system. Because of the building layout, the corridors did not need to be fire-rated, which allowed them to be naturally ventilated.
- » **Energy modeling.** Interface performed studies and worked with the architect to orient the building to take advantage of the prevailing winds from the N/NW for ventilation.
- » **Isolated use of air conditioning.** The only places that need air conditioning as a result of the ingenious design are the interior labs and the anthropology gallery, resulting in lower utility costs.
- » **Protected equipment.** Because of the potential damage from the coastal environment on mechanical equipment, Interface placed it indoors in a mechanical room on the ground floor, whereas conventional design typically places it on the roof. This not only protected the equipment, making it easier to maintain, but when it does need maintenance it is much easier to access. In addition, this approach minimized the amount of equipment required on the roof.

- » **Water usage.** High-efficiency water closets, urinals, faucets and showerheads, along with rainwater recovery for flushing toilets, will reduce building water use more than 40 percent versus a typical code-compliant building.
- » **Lighting scheme optimizing conservation.** Energy-efficient T5-HO (high-output) lamps and direct/indirect fixtures were used. Where natural lighting is available, an automatic daylight control system conserves lamp usage. Multi-level switching in classrooms, seminar rooms, labs, lecture rooms and similar spaces enables occupants to have several light-level scenarios without the expense of dimming ballasts and controls. Local occupancy sensors with daylight sensors control lighting in offices. In addition, the daylighting controls will be commissioned to ensure proper adjustments and operation.

Humboldt State expects that their LEED Gold certification will be a dramatic statement of the commitment of the University to sustainable design principles and actions, and will thereby have considerable and immediate positive public relations benefits, both locally and statewide.



The Behavioral and Social Science Building expects energy savings exceeding 25 percent versus California's stringent new energy code. The facility will also capture 100 percent of on-site rainwater, using two 20,000-gallon storage tanks and a water treatment system.

