



nick merrick/hedrich blessing

SLIDE SHOW DATA

The Conrad N. Hilton Foundation sits at the base of Ladyface Mountain, one of several in the Conejo Valley.

PROJECTS:

## Conrad N. Hilton Foundation Headquarters

**ZGF Architects**

Agoura Hills, California

*Home on the Range: In the foothills near Los Angeles, ZGF Architects creates a serene, environmentally sensitive new HQ for a nonprofit organization.*

*By Asad Syrkett*

**May 2013**

Agoura Hills, California, is an affluent bedroom community 30 miles northeast of central Los Angeles, characterized by green, lush valleys and broad canyons. But its building stock is less picturesque: along U.S. Route 101, which runs through the small city of about 20,000, drivers are more likely to see banal, red-clay-tile-roofed strip malls and gas stations than anything architecturally attractive or intriguing. So the new Conrad N. Hilton Foundation Headquarters, by the Los Angeles office of design firm ZGF Architects, is a surprise. The 22,240-square-foot, \$24 million building is a minimalist, rectangular volume clad in strips of auburn, burnt orange, and deep-yellow split-face sandstone in homage to the area's vivid landscapes and tile roofs. The 69-year-old nonprofit organization has made "improving the lives of disadvantaged and vulnerable people throughout the world" its mission. So it didn't just want a beautiful new office, but one that acts as a model of sustainable design and a teaching tool for other organizations across the U.S. and globally. The learning, though, starts at home. "Whenever we have a new hire, part of his or her orientation is a walk-through of the building," says Katherine Miller, facilities manager of the foundation.

SLIDE SHOW



DATA



### KEY PARAMETERS

**Location** Agoura Hills, California (Conejo Valley)

The finely detailed new headquarters, which is seeking LEED Platinum certification and is designed for net-zero energy consumption, is fertile ground for education. It is also the first of four two-story office buildings planned for the 67-acre site. A long, narrow shape allows daylight into and views out from most of its interior spaces, which include an airy entry, offices (lining the center's perimeter), three conference rooms, and central cubicle workspaces over two levels. Among its many green features—a solar thermal-heating system, water-cooled chilling, a planted roof—the building's crown jewel is its passive-downdraft HVAC system, which

**Gross area** 22,240 ft<sup>2</sup> (2,066 m<sup>2</sup>)

**Cost** \$24 million

**Annual purchased energy use** (based on simulation) -2.9 kBtu/ft<sup>2</sup> (-33 MJ/m<sup>2</sup>), 100% reduction from base case

**Annual carbon footprint** (predicted) -0.6 lbs. CO<sub>2</sub>/ft<sup>2</sup> (-3 kg CO<sub>2</sub>/m<sup>2</sup>)

**Program** Reception area, offices, meeting rooms, workrooms, kitchen, pantries

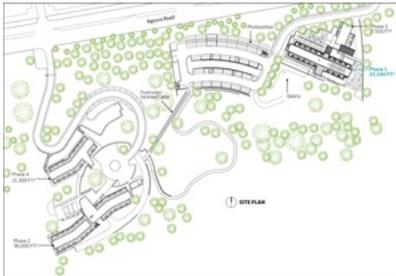
## TEAM & SOURCES

**Glass** Viracon

**Roofing** Sika Sarnafil (low-slope roofing); Flora Source (green roofing)

**Paint** Vista Paint

[View all team & sources](#)



rooms have ample daylight and views out to the Santa Monica Mountains beyond. Clerestory windows help daylight enter the space. On a recent visit, light poured into offices, despite a predawn fog outside that obscured most direct sunlight. "If you can get light up onto the ceiling, it bounces down into the space and you really don't need that much task lighting," says ZGF partner Ted Hyman. Miller concurs. "During the day, many offices don't use the overhead lighting at all," she says. The building's systems do have an aesthetic presence, though, however discreet. "Most chimneys in the building straddle two offices, so that no one person has a whole chimney in his or her space," says ZGF partner Braulio Baptista. And automated shades over windows along the building's facades, meant to cut solar-heat gain and glare, figure prominently in the overall look of the structure's fenestration.

The building's mechanical systems weren't the only puzzle for the design team. "Siting was tricky because, ideally, for PV panels, the building would have been on a north-south axis," says Corney. "The current orientation is south by southwest." Other aspects of the site also proved difficult for the team; native flora threatened by construction spurred Susan Van Atta, the project's landscape architect, to partner with a plant ecologist to conserve vulnerable plant species. "There are little multicolored flags on the site that indicate the location of each of the new seedlings we've sowed," says Van Atta.

While the foundation has made great strides toward energy self-sustainability on the site, people still have to drive to get to it, as with many places in Southern California. Solar-powered electric-vehicle charging stations are available in the parking lot, but the foundation does not yet subsidize employees' electric-car purchases. Instead, it has worked to incentivize carpooling.

Like any innovative design, the building has been challenging to commission. "We didn't foresee so much cold air coming in through louvers," says Corney. It's a problem the foundation mitigates by closing them in winter. And when asked about the building's progress toward net-zero energy consumption since opening, Corney is circumspect as to whether the 115.2-kilowatt photovoltaic array and 1,000-square-foot solar thermal system can offset all the building's energy use. "Energy verification ends, technically, in October of this year, but we will probably need until next winter before we can hand it over entirely," he says. He and the rest of the design team, are optimistic, though, and Miller echoes their positivity. "We're really in love with the building," she says. "It's working quite well for us."

**Keywords:** [Conrad N. Hilton Headquarters](#); [ZGF Architects](#); [Agoura Hills](#); [California](#)

provides ventilation and cooling for the 49 occupants. The system comprises 17 downdraft shafts or "chimneys" that punctuate the perimeter and are visible outside, peeking out over the roof plane at regular intervals. Air travels down these shafts, entering the floors of the second and ground levels. Cold water pumped into coils below each chimney's air-intake baffle cool the air, which then flows through vents into each office. The air rises naturally as it warms, escaping via louvers along the clerestory level in the building's double-height atrium. In colder months, air traveling into these shafts is warmed by heat pumps situated in the floor.

"We considered several alternative systems: chilled beams, conventional displacement systems, and natural ventilation," says Andrew Corney, vice president at environmental-design consultancy Built Ecology. The building's proximity to the freeway ruled out the latter option, and, because the foundation requested operable windows, chilled beams too were out of the question. "The passive-downdraft system takes advantage of Agoura Hills' moderate weather," explains Corney. The water-cooled chiller, in combination with an on-site cooling tower and pumps, provides colder air on the rare hot Southern California afternoon. "We had some 85-degree days here recently, but inside it was so cool and comfortable. The chiller didn't kick on until about 3 in the afternoon," says Miller. Corney agrees: "If you have a good natural-ventilation system, you really don't need to put much energy into it." Energy is harvested, however, for several of the building's other systems: 70 percent of its hot-water heating is provided by a 1,000-square-foot solar thermal array, and the water is stored in a 3,000-gallon tank in the mechanical room.

Like a Swiss watch, these systems are concealed behind carefully curated finishes. In the lobby, glass balustrades, alabaster-hued marble floor panels, and FSC-certified European ash veneer on the walls create a bright, open atmosphere. Offices and conference