



Photo: DGS' Chris Barraza is leading a team of adobe experts who are restoring a piece of California history in Watsonville. *By: Jeffrey Young*

REAL ESTATE

Mud, Sweat & Years:
Private-public partnership rebuilds historic adobe, one brick at a time.

Adobe buildings from the California era aren't usually the state buildings that DGS' Real Estate Services Division renovates. Office buildings, the state Capitol, warehouses, yes—but not 180-year-old ranchos made out of mud bricks . . .

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REAL ESTATE

Mud, Sweat & Years

Private-public partnership rebuilds historic adobe, one brick at a time.



Adobe buildings from the California era aren't usually the state buildings that DGS' Real Estate Services Division renovates. Office buildings, the state capitol, warehouses, yes—but not 150 year old ranchos made out of mud bricks.

However, up a dirt road off Highway 1 just north of Watsonville, a unique project has been developing for the past few years. There the Direct Construction Unit (DCU) of the DGS, headquartered at the Atascadero

State Hospital, has been collaborating with the Parks Service and the California Conservation Corps to seismically stabilize an original adobe. What makes the project particularly unique is that the local community—led by the local Friends of Santa Cruz State Parks—has pitched in to raise money, build bricks and support the state agencies.

The Rancho San Andres Castro Adobe was built by the family of the governor of California — Jose Castro of Monterey — about 10 years before the Bear Flag Rebellion broke out. One of the most interesting examples of architecture in the era, it had a second floor fandango room where big dances were held, and one of the only remaining intact rancho kitchens —cocinas — in the state.

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*Photo: Francisco "Pancho" Villa of the DGS Direct Construction Unit, works with California Conservation Corps member, Joseph "AJ" Johnson, to place handmade adobe bricks on a 150-year-old rancho.
By: Jeffrey Young*

Having stood for 150 years, the long narrow two-story building with a balcony on both sides was nearly destroyed by the 1989 Loma Prieta earthquake. One end wall collapsed, giant cracks appeared in the walls, and the roof fell in on the kitchen. Within days Santa Cruz County red-tagged the property and the family that was living in the house — the foremost historian of adobes in California, Edna Kimbro and her husband Joe — had to move. Faced with hundred of thousands of dollars in seismic retrofits, the couple eventually gave the historic property to the Parks Service in 2002.

However, as Kirk Lingenfelter, state park superintendent for the region explained, “we were hard pressed to get the money to shore up the building and make it safe, let alone renovate it.”



Photo: The Rancho San Andreas Castro Adobe, as it looked prior to DGS, the state Parks Service, the California Conservation Corps and Friends of Santa Cruz State Parks joining forces to repair the historic building. By: Melodie Milhoan

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Until he met some of the team at DGS' Direct Construction Unit in the region. This DCU provides restoration services to the Parks Service throughout central California, and has worked on many of the historic adobes in the Monterey area. On staff are some of the state's only experts on actually rebuilding historic adobes — not just studying them, but building with historically accurate bricks and mortar and recreating buildings with them. When the project was approved, the financing only covered the seismic repair work, and the plan was to stabilize the buildings with steel rods and cages, then cover the leaking roof with plastic and close up the site again until the next phase of the project — basic building renovation itself — could be financed. Turning it into a museum would be phase three.

That was until Russell Wright, a DCU supervisor, started talking with the onsite foreman, Chris Barraza, and some of the local members of the Friends of the Santa Cruz State Parks, a regional support group sponsored by the Parks Service. When the citizen's group found out that the state could only afford to do the seismic reengineering work, it offered to raise money to extend the



*Video: Watch DGS' Chris Barraza talk about repairing a 19th century adobe along the California central coast.
By: Jeffrey Young*

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renovation to include the roof and walls, and perhaps more importantly to supply the labor to make replacement adobe bricks to be used throughout the project. The only commercial source of adobe bricks is in Arizona, and given the distance they would have to travel, they were prohibitively expensive. However, by working locally with Parks Service specialists in adobe composition and the local geology, the Friends were able to make more than 2500 replacement bricks that were historically accurate and structurally sound enough to be used.

The group also raised enough money to more than double the project budget. By late last year, that meant the area manager of the DCU, Doug Casteel, was faced with a crucial decision. The traditional DGS approach precluded doing anything more than was originally part of the project scope, and it certainly did not include using building materials supplied by a group of volunteers. However, in the face of Wright's determination and persistence the longtime DGS manager was persuaded to go along with this expansion of the project. "In my thirty years experience with DGS and state service, I've never seen such cooperation between agencies and the private sector," Casteel explained. "And Russ Wright won't take no for an answer."

That wasn't the end of the collaboration. The DCU decided that while it could supply a basic crew of specialists, it needed a lot more labor. The answer was to offer the local chapter of the California Conservation Corps a chance to train its student workers on historical construction techniques.

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Today, the seismic work is done, the walls have been rebuilt, the kitchen is intact again, and the roof is about complete. According to Wright, “the project is about 185 percent of where we expected to be. Can’t ask for much better than that.”

The final phase is yet to be funded. That’s when the Parks Service will recreate the building as an historical living history exhibit and conduct tours. But for now, Rancho San Andres Castro Adobe is not only seismically stable, but has been renovated. Everyone involved has learned how far a little bit of teamwork can go.



Photo: The rehabilitation of the Castro Adobe has included seismic retrofitting to prevent significant damage from future quakes, like that which nearly destroyed the building following the 1989 Loma Prieta temblor. By: Jeffrey Young

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GREEN BUILDING

Green Building Under the Microscope at Richmond Lab



How can we all work together to make the state's buildings the best they can be?

At DGS we know that while we might have responsibility for most of the state's real estate, we can't green all our buildings on our own. In fact, the unique needs and requirements of some of the state's agencies means that we have to rely on their experts ... and luckily Leadership in Energy and Environmental Design (LEED®) certification, and state workers with a passion for sustainable building practices are becoming more and more common throughout California government.

Photo: Drowned in natural light, this rendering illustrates the lobby of one of the state's next green buildings—the Department of Public Health's Richmond Laboratory.

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Take the California Department of Public Health's (CDPH) Richmond Laboratory Campus (RLC).

Under the oversight of Senior Mechanical Engineer and Sustainability Manager Leon Alevantis and the full support of CDPH Director Dr. Mark Horton and Facilities Management Section Chief Gary Gascoigne, the RLC is well on its way to earning a distinguished U.S. Green Building Council's Leadership in Energy and Environmental Design Silver Certification.

Alevantis has long been one of the state's leading experts on indoor air quality and greening of nonindustrial buildings and coordinated the Green Action Team, a team of state agencies advising DGS on green building issues; during the design and construction of one of the state's first and largest set of "green buildings," the Capitol Area East End Complex (CAEEC), now home to the Department of Public Health and the Department of Health Care Services. He believes that the first phase of retro-commissioning work at the RLC along with Pacific Gas and Electric's (PG&E) Monitoring Based Persistence Commissioning (MBPCx) program will help the department cut its energy costs by 18 percent, saving the department approximately \$600,000 annually.

The 700,000-square-foot office and laboratory was built and occupied in three phases in 2001, 2003 and 2005 and helps support county health departments and labs on numerous issues such as indoor and outdoor air, water, lead, food and drug samples, environmental and occupational disease, genetic and infectious diseases and microbial contamination.

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The retro-commission work and its associated implementation of low-and mid-cost measures, funded through DGS, CDPH, and an agreement with PG&E, has allowed the department to correct airflows in the heating and air conditioning systems, fix sensors in ventilation and lighting systems, change equipment schedules and sequence of operations, reset duct static pressures, install a variable frequency drive on one of the chillers and re-calibrate instrumentation that is integral to the facility operating at peak performance.

In the coming months, DGS will be working with Alevantis to pursue an Energy Services Companies Performance Contract (ESCO), an agreement between the state and an energy company to guarantee energy savings that are expected from the system upgrades. The ESCO project would include implementation of high-cost energy efficiency measures such as reducing the laboratory exhaust and supply airflows after hours and investigating opportunities for more energy-efficient lighting systems. Funding of the ESCO recommendations would be through *DGS' Energy \$Mart program*.

Additionally, DGS' solar team is helping Alevantis to identify opportunities for installing solar photovoltaic panels at the lab through a third party power purchase agreement.

Under Executive Order S-20-04, the governor directed that state agencies reduce electric grid-based usage by 20 percent by 2015. The CDPH Richmond Lab is already most of the way there. For more information, visit the *DGS Green Building Web site*.

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TRAVEL PROGRAM

Mining for Savings at DGS



Saving your agency time and money is DGS' goal when it comes to planning your next major meeting or conference. In a *July 1 management memorandum*, DGS Director Will Bush instructed all departments to begin using their American Express accounts to pay for all state-conducted meetings, conferences, events, seminars, workshops, and other meetings that are held at lodging or event facilities.

By directing all meeting, conference and event expenses through American Express, DGS will be able to accurately track the total amount that is being spent for these activities, ultimately allowing DGS staff to negotiate better rates with vendors, saving cost to state agencies. The program also streamlines the process for paying vendors and simplifies the steps agencies have to take to secure conference and meeting space.

DGS has also established a new Statewide Travel and Meeting Management Program (STAMMP) to assist departments with their travel and planning needs. The new service is available to all state departments at no cost. DGS staff can help departments identify and secure meeting locations and lodging space at the most reasonable rates available.

For more information on the program, visit the *state travel Web site*.

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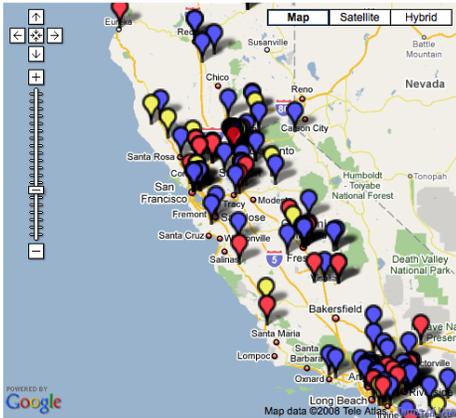
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GREEN BUILDING

State Green Buildings 'Googled'



Interested in where the state's newest green building is located? DGS recently created a *map of all existing state-owned facilities* as well as new state construction projects that have achieved, or are currently pursuing, Leadership in Energy and Environmental Design (LEED) certification from the U.S. Green Building Council.

In addition, the map identifies state-owned buildings that are undergoing, or are scheduled to undergo, energy-efficiency upgrades, a process also referred to as "retro-commissioning."

You can search the buildings database by city or county, by state agency (property owner), by LEED certification type (new construction or existing building), or by energy-efficiency project. If your agency or department's project is not listed, *let us know*.

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REAL ESTATE

Heating and Cooling for State Workers on Track



DGS is one step closer to improving heating and cooling for state workers in downtown Sacramento, and it recently celebrated the “topping out” and completion of the steelwork for the state’s new central plant there. The facility is on track to be operational next May, replacing the aging 40-year-old plant that provides the steamed air and chilled water that heats and cools 5.5 million square feet of office space throughout the city’s core.

In keeping with Gov. Schwarzenegger’s 2004 Executive Order that directed the “greening” of state buildings, the new central plant will be built to achieve the Leadership in Energy Efficiency and Environmental Design (LEED®) Gold certification from the U.S. Green Building Council.

The need for an upgraded plant was emphasized this summer on one of the hottest days when the existing central plant had a chiller break down after a well it was pumping water from ran dry. DGS quickly mobilized portable chillers to the site and was able to maintain comfortable temperatures across the 23 buildings serviced by the plant.

Photo: A construction worker looks on as the final piece of structural steel is put in place, “topping out” the state’s new central plant, which provides heating and cooling for downtown Sacramento office workers. By: Ken Hunt

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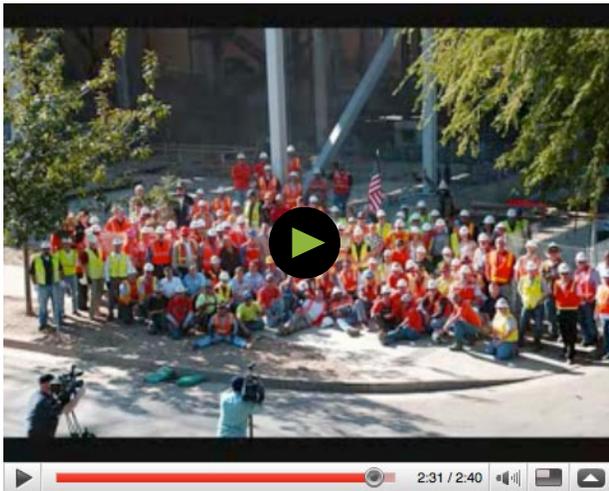
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The new central plant will incorporate the latest technological advances to help the state reduce its energy costs and greatly reduce the amount of water needed within the plant. The new facility will have cooling towers to release heat pulled from state buildings and will also feature a 140-foot-tall, 4.25 million gallon thermal energy storage tank to store reserves of necessary chilled water for the plant operations during off-peak energy demand times. The more technologically advanced new central plant will use only 1/10th of the water needed by the existing plant. Solar panels will also be installed on the new facility to power the energy needs of the office space within it.

Learn more about the central plant at the [DGS Newsroom](#).



Video: Watch video clips from the "topping out" ceremony. By: Elizabeth Gransee

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RENEWABLE ENERGY

State Plugs in to Solar



New innovative public-private partnership agreements developed by DGS will now allow more and more state facilities throughout California to use clean, renewable solar power to help meet their energy needs.

Through an open competitive bidding process, DGS has negotiated a series of “power purchase agreements” that currently provide more than four megawatts of *solar photovoltaic* electricity at eight sites including two state prisons; a state mental hospital; a Caltrans regional headquarters; and four California State University campuses. A second phase of solar power agreements for approximately 20 megawatts of power is on track with installation expected to be completed next year.

Photo: The solar field outside Chuckawalla Valley State Prison in Blythe generates 1 megawatt of electricity, enough meet 25 percent of the prison’s power needs. By: California Department of Corrections and Rehabilitation

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Through these public-private partnerships, solar service providers finance, build and operate the solar energy systems. State agencies then buy the solar-generated electricity at prices equal to or less than current retail rates, which can help reduce energy-related operating costs while also decreasing demand on our state's electricity grid.

Facilitating the installation of renewable power generated on-site at state facilities is just one way DGS is helping state agencies reach Gov. Schwarzenegger's environmental and energy goals.

To learn how your agency can develop a solar project, contact *Patrick McCoy* with the DGS Green Team at (916) 375-5988.

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