



DURO-LAST® ROOFING SYSTEM ACCOMPANIES SOLAR PANELS ON USPS PROCESSING PLANT

ENERGY-SAVING COMPONENTS LOWER COSTS FOR UNITED STATES POSTAL SERVICE

The United States Postal Service (USPS) processing plant in West Oakland, California was looking for a way to save on energy costs for its 227,500 square foot facility. With costs continually on the rise, the USPS worked with Chevron Energy Solutions Co., PowerLight Corp., and Duro-Last® Roofing, Inc. to install an energy-efficient solar array and roofing system that cut its energy consumption and saved the USPS a great deal of money.

The USPS originally had specified a traditional built-up roofing system. Robert and Chris Hemphill, co-owners of Division 7 Reps, an independent manufacturer's representative for Duro-Last, came up with a logical alternative solution for the USPS.

Robert Hemphill recommended the Duro-Last roofing system to Al Karpinkas, senior project manager for the USPS facility. To compliment the solar panel installation, the Duro-Last system would contribute energy savings because of its high reflectivity and emissivity characteristics. The Duro-Last roofing system is also maintenance-free, compared with other systems that require extensive, on-going maintenance programs.

Tim Hickman of State Roofing Systems, Inc. in San Leandro, California, coordinated the re-roof project along with Division 7 Reps. According to Hickman, this project was a perfect opportunity for Duro-Last to work with other companies that offer energy saving components for buildings.

"Duro-Last was added as an alternate to the specified built-up system at the last minute," he said. "State Roofing Systems' bid turned out to be about a third less than the other bid that was submitted, and it was a better system. Additionally, the USPS was in a hurry to make a decision on the project before the federal government's fiscal year ended in the fall of 2005, so we were excited to get the bid in when we did."

Prior to the Duro-Last installation, the roof had a ballasted, un-reinforced membrane that was aged and leaking, along with two inches of polyiso insulation, all of which had to be torn off the structural concrete roof deck. The installation included covering half of the facility (113,750 square feet) with a two-inch layer of mechanically-attached insulation, a slip sheet, the 60-mil white Duro-Last roofing system, and solar panels installed by PowerLight. Chevron provided energy consulting services for the USPS project.

(Continued on reverse side)



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The mechanically-attached Duro-Last roofing system is delivered to job sites with fastening tabs already built into the single-ply membrane sheets, spaced either five or ten feet apart. This approach helps to greatly reduce typical installation time.

"We used a combination of prefabricated five-foot Duro-Last tabs around the perimeter of the roof and 10-foot tabs in the center, which all helped meet wind uplift requirements," recalled Hickman. "The five-foot wide, three-foot deep gutter required the fully-adhered Duro-Last membrane. We also installed walk pads around the solar arrays to help protect the roof membrane from foot traffic."

"We estimate that the roofing system and solar panels, along with heating and lighting improvements will help to lower our annual power usage."
 Al Karpinkas, Senior Project Manager
 United States Postal Service
 (West Oakland, California Facility)

The tear-off of the former roof and the Duro-Last roofing system installation took approximately two months to complete, with a 15-man crew from State Roofing.

"The USPS building is close to 60 feet high, so removing the existing rock was no small task," said Hickman. "With a five-foot high parapet wall, temporary ramps were designed to allow an ATV and trailer access to the debris chute.

"We were able to do the installation during the wet season (January-March) without any disruptions to the daily operation of the processing plant which was in full operation," noted Hickman. "There were no safety concerns from fumes, flames or kettles during the project either."

"The Duro-Last roofing system is working to our expectations," said Karpinkas. "We estimate that the roofing system and solar panels, along with heating and lighting improvements will help to lower our annual power usage. Plus, the Duro-Last system complies with California's Title 24, which we are required by law to meet."

According to Chevron, as reported in the Oakland *Tribune*, the project will lower the annual power usage by 11 million kilowatt hours. That's enough electricity to power approximately 955 homes in Southern California per year.*

"The USPS saved a significant amount of money on this job, enough that they anticipate being able to complete other projects and install the Duro-Last roofing system and more solar panels on the other half of the processing plant in 2007," noted Hickman. "For Duro-Last, coordinating this roofing job with Chevron and PowerLight could possibly open up more doors with companies that are trying to help facilities save energy, money, and the environment."

As solar applications continue to gain momentum in the commercial roofing industry, Duro-Last is an excellent option to help make facilities "solar-ready." Easily installed throughout the year in any climate, energy-efficient, leak-proof, durable, code compliant, and covered by the roofing industry's best warranties, Duro-Last is a crucial component for today's energy-saving facilities.

* Per DBK Corporation - Solar Division: www.dbksolar.com/ - based on the average 1,800-square foot home in Southern California which uses approximately 960 kWh of electricity per month.



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