

Sacramento County Animal Care Facility LEED Certification

As one of the fastest growing economic sectors, green building has a tremendous impact on the quality of our lives and the health and vitality of the natural environment. By sharing the steps that the Sacramento County Animal Shelter took towards creating a more efficient, environmentally sound and healthy building, we hope to create a catalyst for innovation. For more information about LEED and the U.S. Green Building Council, please visit www.usgbc.org.

LEED Elements

What is LEED?

The Leadership in Energy and Environmental Design (LEED) rating is the recognized standard for certifying and measuring building sustainability and is a way to demonstrate how “green” your building is. LEED certification works on a green rating system, developed by the U.S. Green Building Council, a Washington D.C. based non-profit coalition of building industry leaders.

Why is LEED Certification Important?

Because it provides proof to the community that the County is serious about protecting the environment. The certification also allowed the County to take advantage of a number state and local government incentives for using green design.

The new shelter is the first County building that has been constructed to meet the LEED standards, which will help ensure that the facility will be efficient, aesthetically pleasing and of significant interest to visitors and other shelters around the Country.

Elements of LEED Certification incorporated into the facility design and construction:

Before Construction:

- *Site Selection* – The site selected had no sensitive environmental elements.

During Construction:

- *Construction Activity Pollution Prevention* – Soil erosion and airborne dust was controlled via an Erosion and Sedimentation Control plan.
- *Construction IAQ Management* – The contractors flushed out the building to remove dust and harmful particles for two weeks after construction.
- *Construction Waste Management* – More than 75 percent of waste material from construction of the shelter was diverted from the landfill and redirected back to the manufacturing process.

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- *Fundamental Commissioning* – The shelter underwent a “commissioning” process to ensure that all of the shelter’s systems were reviewed by a third party energy commissioner to ensure that all HVAC systems maximize their potential. The shelter also underwent enhanced commissioning, a quality-assurance process that verifies that a completed building’s systems were installed and are performing as required above and beyond State mandates.
- *Green Power* – Green power certificates are being purchased that support local and renewable energy projects.
- *Maximized Open Space* – Over 20 percent of the site is dedicated to native plantings and pedestrian areas.
- *Minimum Energy Performance* – The shelter’s energy performance was analyzed by a custom computer model.
- *Protect and Restore Habitat* – Native or adapted plants were used in the plantings to conserve water and provide habitat construction.
- *Recycled Content* – Over 10 percent of materials used for the project contain pre and post consumer recycled content.
- *Regional Materials* – Over 10 percent of materials used were extracted and manufactured within 500 miles of the site.

For Department of Animal Care and Regulation staff:

- *Bicycle Storage and Changing Rooms* – Bicycle racks and employee showers were added to promote alternative commuting opportunities.
- *Controllability of Systems, Lighting and Thermal Comfort* – Workers can easily adjust the lighting and thermal controls when needed or desired.
- *Low-Emitting and Fuel-Efficient Vehicles* – Preferred parking spaces close to the building entrance are reserved for low-emitting and zero emission vehicles.
- *Parking Capacity* – Parking lot size was reduced and carpool spots for staff are provided.

Ongoing Benefits

Indoors

- *Fundamental Refrigerant Management* – No chlorofluorocarbon (CFC) are generated at the shelter and enhanced refrigeration management was done to ensure that air conditioning refrigerants minimize both ozone depletion and global warming impact.
- *Increased Ventilation* – The building uses high performance filters, low velocity air systems that monitor air-flow quietly and incorporates carbon dioxide sensors throughout the building.
- *Indoor Chemical & Pollutant Source Control* – Isolated exhaust systems for contaminants were installed, walk-off grates were installed to keep pollutants outside, and high-efficiency filters were put in.

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- *Indoor Water Use Reduction* – Dual-flush toilets, low-flow urinals and low-flow faucets were installed.
- *Low-Emitting Materials* – Paints, sealants, and adhesives contain little or no Volatile Organic Compounds (VOC), all wood used is urea-formaldehyde free and the carpet selected has low emissions.
- *Minimum IAQ Performance* – Ventilation systems were designed to meet or exceed the outdoor air ventilation rates set by the science of the American Society of Heating, Refrigeration and Air Conditioning Engineers.
- *Optimized Energy Performance* – The shelter used 21 percent less energy than California’s minimum energy code (Title 24).
- *Storage and Collection of Recyclables* – A comprehensive materials recycling program was implemented.
- *Thermal Comfort* – The specially designed HVAC system creates an indoor environment suitable to a majority of its occupants, both human and animal.

Outdoors

- *Environmental Tobacco Smoke Control* – Smoking is prohibited.
- *Heat Island Effect* – Light-colored and reflective surface materials were selected for the roof and site hardscape to reduce the heat island effect of the facility.
- *Stormwater Design – Quality Control* – Stormwater runoff is treated on-site.
- *Water Efficient Landscape* – Efficient subsurface drip irrigation systems were installed, drought tolerant plants were installed, and mulch was added to the planters to reduce irrigation needs and help the plants retain moisture in the summer.

For further information about these certification elements, please visit the Department of Animal Care and Regulations “About the New Shelter” website to view a full list.

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