Palm Beach Zoo
The Melvin J. and Claire Levine Animal Care Complex
Home of the Nation's First LEED Certified Zoo Animal Hospital

On Earth Day 2009, the Palm Beach Zoo opened its first green building, the Melvin J. and Claire Levine Animal Care Complex (ACC). This 10,000 square foot, state-of-the-art facility accommodates the Center for Conservation Medicine and the Salvatore M. Zeitlin Animal Hospital, the nation's first LEED certified zoo animal hospital. This unique complex will advance our animal care standards to the level of America's leading zoological parks. In addition, the building was designed to meet the stringent environmental guidelines of the U.S. Green Building Council Leadership in Energy and Environmental Design (LEED) Green Building Rating System™ which is the nationally accepted benchmark for the design, construction, and operation of high performance green buildings. The complex achieved Gold level certification on December 14th, 2009, the second highest level of LEED certification.

LEED promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health: site planning, water management, energy management, material use, indoor air quality and innovation, and design process. LEED design offers environmental benefits, economic, community, health and safety benefits, reduces the impact on natural resources consumption, enhances occupant comfort and health, and minimizes strain on local infrastructure.

ACC Green Facts

Building Construction - We reduced pollution from the construction activities by controlling soil erosion, waterway sedimentation and airborne dust generation.

Restored Site Area - The project site was previously developed, therefore 50% of the site area was restored with native plants to provide habitat and promote biodiversity.

Open Space - The project site has over 20% of the total area dedicated to open space.

Construction Waste Management - We anticipate that we will have recycled at least 75% of all construction waste.

Regional Materials - We anticipate that we will have purchased 10% regionally (within 500 miles) extracted, processed and manufactured materials. This process would effectively reduce energy consumption from the transportation of materials to the project site.

Water Efficiency - On the exterior of the building we selected drought tolerant plants and implemented an efficient irrigation system which will reduce the need for potable water by 50%. The interior of the building has water-efficient fixtures that reduce water use by 33.8% compared to a typical base design.

Storm Water Quality Control - The site promotes quality control for storm water management by reducing impervious cover, promoting infiltration, and capturing and treating the storm water run-off from 90% of the average annual rainfall.

Reduction of Heat Island Effect - We utilized paving and roofing materials with a high solar reflectance which reduces the thermal gradient differences between developed and undeveloped areas, to minimize the impact on microclimate and human and wildlife habitat.

Light Pollution Reduction - The interior lighting is automatically controlled to turn off during non-business hours and provide a manual override. The exterior lighting was designed to minimize light trespass, reduce sky glow and to improve nighttime visibility through glare reduction, thereby reducing the impact on nocturnal environments.

Renewable Energy System – There are 80 photovoltaic solar panels installed on the roof of the Animal Care Complex that convert sunlight directly into electricity. They cover nearly 2,000 square feet of roof space and provide 18,228 kilowatt-hours of emissions-free power annually. During peak usage the solar panels offset 13% of the building's energy use. The solar panels were funded by a major grant from the Florida Power and Light Foundation.

Green Power - The Palm Beach Zoo has contracted with Renewable Choice Energy, a green power contractor, to offset at least 35% of the building's electric energy consumption for a minimum of 2 years.

Fundamental Refrigerant Management - The refrigerant systems were selected specifically to not use any CFC - based refrigerants, thereby reducing ozone depletion.

Optimized Energy Performance - The ACC has an efficient building envelope, HVAC, lighting and other systems to maximize energy performance. The design is calculated to be over 15% more efficient than a typical base building, thereby reducing the environmental and economic impacts associated with excessive energy use.

Alternative Transportation - We offer preferred parking for low-emitting and fuel efficient vehicles as well as bicycle storage and showering facilities for bike riders.

Recyclables - There are designated storage areas in the building to accommodate the recycling of paper, corrugated cardboard, glass, plastics, and metals.

Recycled Content - During the construction process, we projected that the building products purchased would include at least 10% recycled content material.

Certified Wood - We anticipate that we will have used a minimum of 50% wood-based materials and products which are certified through the Forest Stewardship Council (FSC). This process encourages the long-term health and integrity of forest ecosystems which are responsibly maintained.

Low Emitting Materials: Adhesives, Sealants, Paints and Coatings - We purchased products with reduced levels of volatile organic compounds (VOCs).

Low Emitting Materials: Carpet Systems - We installed carpet systems that meet the testing and product requirements of the Carpet and Rug Institute Green Label Plus Program.

Low Emitting Materials: Composite Wood and Agrifiber - The interior composite wood products such as plywood, particle board, and medium density fiberboard do not contain any added urea-formaldehyde resins.

Controllability of Systems: Lighting & Thermal - There is a high level of individual lighting control for a minimum of 90% of the building occupants and a high level of individual thermal control for at least 50% of the building occupants. These features promote productivity, comfort and the wellbeing of zoo staff occupying the building.

Integrated Pest Management – The complex has an adopted Low Environmental Impact Pest Management Policy as outlined in the LEED for Existing Buildings Reference Guide which includes safer alternatives to chemical pesticides. This approach includes integrated methods, site inspections, pest population monitoring and an occupant communication strategy.

Innovation in Design, Educational Program - In the building's lobby, there is a slide show which allows guests to learn what LEED is and the process used to earn LEED certification. It not only shows general criteria about LEED but also provides specifics on how the Melvin J. and Claire Levine Animal Care Complex met the requirements.