

LEED Silver at Ali'i Place

The Project

With a vision of achieving LEED certification for their building, along with the sustainability and recognition that accompany it, management of Ali'i Place asked Chelsea Group to provide structured, cost-effective support to work through the LEED Certification for Existing Buildings preparation and application process.

Ali'i Place is a large office complex in downtown Honolulu, Hawai'i. As the building approaches its 20th year of operations, the management and engineering staff continue to work to make it a sustainable and energy efficient commercial property. Achieving LEED certification marks a major milestone in the effort to keep Ali'i Place one of the premier business addresses in Honolulu.



Chelsea Group's Sustainability Management Program

Chelsea Group has worked hand in hand with the management team at Ali'i Place in their drive for efficient operations and maintenance since 2004. Focusing the effort in 2008, Ali'i Place embarked on the five phase method Chelsea Group has developed for achieving enhanced sustainability performance and third party recognition of success, such as USEPA ENERGY STAR[®] Label or US Green Buildings Council (USGBC) Leadership in Energy and Environmental Design for Existing Buildings (LEED-EB) certification.

At Ali'i Place, the Chelsea team and building management determined to focus on Assessment, Capital and Operating Planning, and Certification, with the goal of achieving the ENERGY STAR Label and LEED Certification for the building. Beyond the certification processes, the teams planned to move into Performance Improvement and On-Going Sustainability Management Phases.

Phase I: Assessment

In the Assessment Phase of the Ali'i Place Sustainability Management Program, together the teams created an action plan to document specific tasks and responsibilities for completion of each prerequisite and credit for LEED certification. Chelsea Group took on the roles of LEED Accredited Professional, as project team educator and facilitator, and LEED Project Administrator for USGBC in the registration of the project and the creation of the filings for LEED certification.

Immediate Results: A gap analysis began to reveal the projects and process the Chelsea and Ali'i teams would follow to achieve ENERGY STAR Label and LEED Certification.

Phase II: Capital and Operating Planning

As they moved into the Capital and Operating Planning Phase, the Chelsea team conducted a site observation to begin to define the scope and budget of an ongoing sustainability management program. This process also met the prerequisite for a walk-through energy audit for LEED, allowing Ali'i Place to earn more credits toward certification.

Phase III: Certification

Chelsea Group technical teams worked closely with property management and engineering to respond to the far reaching requirements and documentation needed for LEED Certification. The first step was to update and renew ENERGY STAR records.

In the pursuit of the ENERGY STAR Label, the team conducted an on-site energy and operational assessment to determine compliance with the US EPA Professional Engineer's Guide. In order to decrease energy use and improve occupant comfort, Ali'i Place has implemented an ongoing indoor air quality management program and a preventive maintenance program for its mechanical systems. These efforts have reduced the building's overall emissions, and led to an EPA ENERGY STAR rating of 97 (out of 100).

Immediate Results: The Chelsea team prepared and submitted the documentation, and Ali'i Place achieved EPA's ENERGY STAR Label.

Chelsea Group helped guide Alii Place management through the complex requirements of meeting and documenting other aspects of performance, such as recycling, green cleaning, and indoor air quality management.

Immediate Results: As each stage of the work was completed, Chelsea Group coordinated the documentation and applications for LEED credits and certification. In addition, throughout the project, Chelsea Group provided building management with written reports on the progress and decisions.

Phase IV: Performance Improvements



As the teams moved into the concurrent Performance Improvements Phase, Chelsea Group carried out a study of the building's chiller system. The ongoing project to evaluate and optimize the cooling system began with an economic analysis by Chelsea Group of the chiller system that was in place. Eventually, the results of this study would become part of the documentation for Ali'i Place to achieve a LEED prerequisite.

Immediate Results: Chelsea Group recommended that Ali'i Place optimize several of its existing control strategies and enforce maintenance policies on the existing chiller plant, while considering a long-term air conditioning project that would save operating costs and minimize capital outlay.

Chelsea Group also conducted an Indoor Air Quality (IAQ) audit to establish a baseline of existing IAQ conditions throughout the property, identify any IAQ issues, and provide recommendations to resolve any

issues or opportunities. The resulting report and the work that followed led to a LEED credit in IAQ Best Management Practices.

Immediate Results: Based on the IAQ audit, Chelsea Group recommended the resolution of several minor repairs and other concerns, none of which posed any immediate IAQ threat. The team also recommended annual IAQ audits to expand the baseline information and maintain continuing oversight of IAQ issues.

At the same time, Ali'i Place was also working to reduce water use throughout the facility, with conversions to high-performance plumbing fixtures, such as automatic-flow faucets, and other renovations.

Immediate Results: Efforts to reduce water consumption have reduced restroom water use in the building by 40%, and exterior and landscape water use has been reduced by 45%, for a total water savings of over 2,500,000 gallons per year.

Phase V: On-Going Sustainability Management

Chelsea Group and Ali'i Place management continue to work together to maintain this sustainable, energy-efficient facility and to prepare for LEED recertification, which occurs in five years. The goals of the on-going program include:

- Establish an efficient process to maintain LEED related documentation efforts, making recertification as simple as possible
- Keep the Ali'i Place team up to speed on the evolution of LEED-EB so they can make informed choices about maintenance and recertification
- Teach the staff how to do basic maintenance to minimize consulting fees both during the current certification period and for recertification

Final Results

On July 29, 2010, Ali'i Place achieved LEED Silver Certification, earning all of the 48 credits attempted. This marks the first high rise building in the state of Hawai'i to achieve this prestigious recognition. In addition, Ali'i Place received an Energy Star rating of 97, ranking it nationally in the top 3% of buildings in its asset class.

Major sustainability projects at Ali'i Place have an estimated annual energy consumption savings of 1.1 million kWh, and an annual cost savings of over \$200,000. In addition, potential utility rebates for these projects add up to about \$110,000. These projects include replacement and retrofit of existing plumbing fixtures, upgrades to lighting and the HVAC system, improving the recycling program, implementation of a green cleaning program, and instituting the use of green building materials for tenant improvements.

These improvements:

- Reduced restroom water usage by 40% and landscape irrigation by 45%, saving over 2,500,000 gallons per year

- Reduced electricity consumption by 16%, eliminating greenhouse gas emissions of approximately 1,000 tons
- Reduced building waste by 30%, keeping over 8,000 cubic feet out of landfills annually
- Improved the indoor air quality for tenants, with the goal of improving tenant health and business productivity
- Reduced building operating costs by 4%, saving tenants over \$200,000 annually

Spreading the message of sustainable practices has been another aim of Ali'i Place. Building management has developed and implemented an educational program on the environmental and human health benefits of green building practices and how building occupants or the public can improve green performance. This program is available through several media to the public and to specialized organizations.