

SHOWCASE PROJECT: CITY OF DENVER: ALLIANCE CENTER

SOLUTION OVERVIEW

The Alliance Center is a nonprofit multi-tenant office building historically housing over 35 tenants in a converted century-old warehouse. In June 2014, the Center completed a major renovation to upgrade its failing mechanical systems, mobilize tenant behavior and achieve greater cooperation in reducing unnecessary resource consumption. Previous building improvements resulted in the Center achieving two LEED certifications (Existing Buildings Gold and Commercial Interiors Silver) and an EPA ENERGY STAR rating of 85. As of February 2017, The Alliance Center has become the first building in Colorado to achieve a Platinum certification (for Existing Buildings Operations & Maintenance) under the new LEED version; the facility has also raised its EPA ENERGY STAR rating to 94.

As owners of the Center, the Alliance for Sustainable Colorado's key goals for the project were creating a replicable framework for use in transforming other existing buildings and helping to shift the commercial real estate market toward significantly higher resource efficiency.

Located in the heart of Denver's historic Lower Downtown (LoDo), the Center was built in 1908 and utilized as a warehouse until the mid-1900s when Denver's Union Station was a primary economic driver for the area. The building experienced the ups and downs shared by many historic urban centers in the 1970s and 1980s when the City's population and economic activity spread out to the suburbs.

1990 was an important year in the building's revitalization as the Center again became used as a warehouse, this time for the Tattered Cover, a popular, local bookstore. The first official offices for the Wynkoop Brewing Company, founded by former Denver Mayor and now Colorado Governor John Hickenlooper, were also housed in the Center during the late 1990s.

Other than housing the future Mayor and Governor, the building's public presence began in earnest in 2004 when the non-profit The Alliance for Sustainable Colorado purchased the building with the intention of creating a multi-tenant nonprofit center focused on community sustainability. The idea was to support Colorado's sustainability community through high quality and affordable office space and services as well as to serve as an educational outreach center promoting sustainability and the reuse of historic buildings.

Through it all, the building's historic brick and Douglas fir wood beam construction has been retained. The Center's recent renovation restored many of these historic features to their former glory and unveiled elements that had been hidden behind dropped ceilings and walls for many years.

The Center has been fortunate to count the City of Denver as an important partner and supporter

through the years. The Alliance has been an active supporter of Denver's Office of Sustainability (formerly Greenprint Denver), long-standing member of its Advisory Council, and the grateful recipient of many City awards, including the 2007 Mayor's Design Award.

For the Center's most recent transformation project, the Alliance tapped into the collective wisdom of the Denver's Office of Sustainability and its wider network in determining the eventual design goals and project vision. The Better Buildings Challenge afforded a valuable opportunity to utilize the visibility of The Alliance Center to showcase the City of Denver's sustainability resources and initiatives; it is the collective plan and intention that the project will showcase what is possible to other commercial building owners and also connect them to the resources to achieve high performance.

SECTOR TYPE

Local Government

LOCATION

Denver, Colorado

PROJECT SIZE

41,000 Square Feet

SOLUTIONS

In addition to addressing the failing mechanical system, the Alliance chose to implement solutions that improve occupant productivity and address the Center's primary pre-renovation energy uses of plug and elevator loads (33%), heating (32%) and lighting (18%). Recognizing tenant behavior is the key driver of the Center's energy performance, significant occupant engagement programming is also being undertaken.

The Alliance Center's aging mechanical systems afforded an opportunity to upgrade a wide variety of building amenities and systems. Specific improvements made during the renovation project include:

- Replaced the RTU and duct work throughout the building. The new system was also commissioned for optimum performance
- Upgraded all interior lighting to LEDs. The architect's design maximizes daylight and allows for lower lighting intensity throughout the building and instead offers task lighting, where necessary. These upgrades, combined with the use of occupancy sensors throughout are estimated to result in 30 percent savings after the renovation
- Renovated the 20 plus year old elevator and replaced it with a new gearless unit
- Implemented an integrated controls system that combines mechanical, AV, room reservation and lighting. This has allowed the facilities team greater flexibility and visibility in managing the various building systems
- Installed submetering for all electrical systems

- Installed a new white roof to reduce solar heat gain
- Reworked leases to incorporate "green leasing" language. Examples include having tenants agree to sourcing ENERGY STAR equipment, using smart power strips and utilizing power management settings on their machines.

The controls and submetering systems were also integrated into building dashboard educational displays so The Alliance Center can engage tenants in energy competitions.

OTHER BENEFITS

While energy savings are important and part of the organization's core mission, the end goal of the renovation project was to optimize building floor plate usage and minimize kBtu/capita instead of kBtu/sq ft by focusing on occupant productivity and satisfaction. This goal to reduce overall energy usage while nearly doubling the building's occupancy was successful, as kBtu/capita improved 49% from 2011.

In addition to the solutions already mentioned, the Center intended to achieve this goal through significant tenant engagement combined with an innovative space design that makes better use of the building's limited square footage. It is anticipated that a broader measure of building efficiency is possible and needed, one that focuses on how buildings impact and support people.

Annual Energy Use

(Source EUI)

Baseline(2011)



Actual(2015)



Energy Savings

17%

Annual Energy Cost

Baseline(2011)



Actual(2015)



Cost Savings

\$2,000



Meeting room in the Alliance Center



Hallway in the Alliance Center



Common space in the Alliance Center



Work space in the Alliance Center



Exterior view of the Alliance Center