



LEED-ing by Example

Tate Snyder Kimsey’s design studio in Henderson signals the arrival of environmentally-responsible design to Nevada’s building sector

By Dan Overbey, LEED AP

PROJECT BACKGROUND

Situated on a unique sloped site in suburban Henderson, Nevada, this 11,500-sq. ft. office building houses the corporate headquarters of Tate Snyder Kimsey (TSK). Originally constructed in 1994 and expanded in 1997, the project was actually conceived far in advance of any LEED rating system. Rather, the development of the design studio coincided with the maturation of TSK’s ideas regarding appropriate design solutions for the U.S. desert southwest biome.

In particular, the project fosters the unification of the interior spaces of a building with the surrounding landscape, implementation of passive building elements designed to temper the extreme temperatures of the Mojave Desert, extensive use of daylighting and views, widespread application of low-maintenance indigenous flora and the employment of building components sympathetic to the natural terrain of the site. As a result, when the LEED for Existing Buildings Rating System (LEED-EB), Version 2.0, was released, the firm found LEED certification within its grasp and additional design modifications were executed. In 2006 the project became the first LEED certified building in the state of Nevada.

DESIGNING FOR THE DESERT SOUTHWEST

The challenge for the design team was to maintain the views of the valley to the south while minimizing solar heat gains through any glazed surface. The overall form and orientation of the structure was developed through a reconciliation of the site’s sloping terrain, views from the site and feasible daylighting strategies.



Photos courtesy of Kevin Kemner.

A roof overhang coupled with the building’s distinctive metal louvers and massive vertical fins mitigate and balance interior illumination from the south. Moreover, such a sidelighting strategy makes good use of the region’s predominant clear sky/low humidity conditions. As a result, the building’s two-story open studio workspace requires no artificial lighting during the day (except for later business hours during the winter). Overall, more



mass to maintain a comfortable interior environment, the design team opted for a lightweight building envelope that would be capable of expelling interior heat loads during brief nocturnal cool-down opportunities.

In addition, the firm has established successful recycling and carpooling regimens that continue to this day. A low environmental impact cleaning policy and pest management policy have also been implemented.

The TSK design studio has proven to be an invaluable asset to the firm and serves as an example of functional, environmentally-responsible design to its clientele.

PROJECT INFORMATION

Location:	Henderson, Nevada
Completion Date:	April 1994 (Phase I) / July 1997 (Phase II)
Size:	11,500-sq. ft.
Cost:	\$1,250,000
Cost / sq. ft.:	\$109
Delivery Method:	Negotiated Bid
Lead Designer:	Windom Kimsey, FAIA
Scope of Work:	Programming, architectural design, interior design, construction phase services

than 75% of the building's frequently occupied spaces receive adequate daylight.

The studio attempts to blur the distinction between indoor and outdoor space by integrating itself with the natural features of its site. The surrounding low-maintenance indigenous landscape was designed as an extension of the building's interior. Low walls serve as both benches and demarcations between occupied space and the raw desert. The views to the south result from the site's sloping topography.

Conscious of the strain that the Las Vegas Valley has recently placed upon the region's potable (drinkable) water resources, the design studio offers a few practical solutions. Strides in water use reduction established by the specified native flora were advanced by the building's innovative wastewater strategy, which hinges on the employment of waterless urinals. It is estimated that the aggregate effect of these water-efficient features have reduced the firm's potable water use by over 50% and its overall water use by over 20%.

The project's colorful expression draws on regional inspirations; while the building's material palette was greatly influenced by the region's prevailing climate conditions. Rather than utilize high-thermal

ABOUT LEED-EB

Source: U.S. Green Building Council

The LEED® for Existing Buildings Rating System (LEED-EB) has been designed by leading experts in the building industry to promote buildings that are economically profitable, environmentally responsible and healthy, productive places to live and work. The flexibility of LEED-EB allows you to create operations, maintenance and upgrade strategies focused on the environmental performance goals of your building or organization. Certification and re-certification drive long-term cost savings for buildings and ensure you're getting the most out of your investment over time.

An initial sampling of LEED-EB certified buildings finds an average return on investment of 2.6 years and annual net savings over \$170,000.

Based on recent analysis, the aggregate total return of publicly held companies affiliated with the USGBC outperformed the Dow Jones Industrial Average by over 18% from 2000 to 2004. This may indicate well-managed, progressive companies are looking to build and operate green as an opportunity to differentiate themselves as leaders in the marketplace. <<