



## The Green Architect

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### Sustainable Lessons from Older Buildings

When asked to speak on the subject of “Historical, Sustainable Los Angeles Architecture” at the Annual Municipal Green Building Conference and Expo I eagerly accepted. It provided me with the opportunity to teach others about sustainable design and expand my own knowledge.

After giving the topic some thought I realized that there were not any truly sustainable buildings in LA or any other city in the US. I explored the amazing collection of books at the downtown library and discovered Gloria Koenig’s *Iconic, Meaningful Buildings in Los Angeles*. It is a handsome book about thirteen of LA’s landmark buildings.

After reading it I decided to take a positive approach and highlight the green features of five different buildings. These features offer a springboard for our discussions and thoughts about sustainable architecture today.

For lack of space I will focus on three of the five buildings here: the Bradbury Building, Union Passenger Terminal and Pierre

Koenig’s Case Study House #22. Other ideas can be obtained by reading about the 21 California Missions among others.

The **Bradbury Building** is the oldest commercial building in downtown Los Angeles and one of its most distinctive. The building was completed in 1892, before air conditioning, and was designed by George Wyman, then 32-years old.

Though modest, the building’s exterior and dramatic interior work remarkably well together. The interior courtyard skylight provides a connection to the outside at all times of the day. The clerestory windows positioned just below the skylight assisted with air flow and allowed for the release of hot air on warmer days. Operable windows and transoms above all interior doors allowed for continuous air movement through the building.

A troublesome problem with the site actually helped the building reduce its resource demand. During excavation, a vigorous artesian spring was discovered under the building. The designer and owner decided to utilize the energy of this spring to supply steam for the building and also to run the hydraulic elevators. Ingenious!

Sustainable means many different things. For brother architects John and Donald Parkinson’s **Union Passenger Terminal** it meant building something that would last. Originally built in 1939 on a single concrete slab, over 1,000 vertical steel footings it was capable of withstanding a 9 or 10 point earthquake. Its durable finishes withstood 7,000 visitors a day during its early years and 26,000 travelers today without replacement.

Although novel at the time, a variety of acoustical panels were installed on the upper walls and ceilings of the larger rooms to reduce the notorious “echo” problem experienced in other rail stations. Brine soaked burlap provided cooled air. Light fixtures were manufactured locally including the 10 foot diameter, 3,000 pound chandeliers in the Waiting Room.

The planted courtyard was unusual for its time. Most civic buildings did not provide

outdoor space. All plants were indigenous and all the construction materials for this area originated in California.

The building's original lighting was quite sensitive to nocturnal life. The uniquely designed "lanterns" up-lit curved metal reflectors that provided softly dispersed illumination for the sidewalks.

**Case Study House #22**, also known as the Stahl House, is more recent and was completed in 1960. It was an answer to the challenge issued in 1945 by John Entenza, the editor of the popular "Arts and Architecture Magazine," who invited architects to "...provide the average American family with attractive and affordable housing that would improve everyday life."

He invited Pierre Koenig in 1956 to join the illustrious group of architects, who had already built case study houses including Eames, Saarinen and Neutra.

This Case Study #22 was actually prefabricated, then assembled on site in a single day in September, 1959. Cabinets and counter tops were prefabricated as well. To keep the costs down, the structure was simple: only 2 components were used -- the 12-inch I-beam and 4-inch H-column.

Eight-foot cantilevers over the inner courtyard on the west and south sides of the house provided shade. Solar panels were handmade and provided heat for the swimming pool and radiant heat for the floors.

Much like a naturally ventilated building today, the occupants actively participated in the building's daily operations. Operable glass walls could be adjusted to capture the wind. All rooms open onto the swimming pool or a recreation area fusing the inside and outside. Folding partitions between the rooms offered flexibility.

According to *Iconic's* author, who happens to be Pierre's wife, the house "reflected Pierre's life-long commitment to environmentally oriented architecture."

These examples, with all of their constraints

of the day, can truly inspire us to reach higher, and dream beyond the present, when considering more sustainable ways of designing and building.

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