

**Repp Design + Construction**, a full service design + build firm focusing on residential and commercial buildings appropriate for the desert climate, was founded in 1995 by Page Repp Jr. during his second year at the University of Arizona, College of Architecture. The unique model of a single company acting as both architect and general contractor gives us the unprecedented advantage of providing a high level of craft for our clients, while maintaining strict control over construction costs. By 2008 the company had grown to 10 people, in excess of \$2M in annual revenue, while shoehorned into a 1300 square foot building, half of which was dedicated to a fabrication space and tool storage.

We started searching for an existing building with a sound structure and at least as desirable aesthetic that we could refurbish. An adaptive reuse project contained several distinct economical and sustainable advantages. First, we were intrigued by the challenge of transforming a tired and nondescript building into a great workspace. Second, the lower construction costs, shorter construction time and reduced permit fees; combined with the environmental advantages of revitalizing a structure from the existing building stock, greatly outweighed the option of ground-up, new construction.



In September of 2008 we discovered a 4,500 square foot masonry building that was originally built as a Kinney Shoe's in 1981. A closer look revealed 16' high ceilings and a wide-open interior space ideal for our creative and team-based approach to projects. The site provided adequate space for parking, services and the ability to expand the building to provide additional storage for our construction related materials and equipment. We mitigated the 66' long by 10' high glass wall facing directly west by creating a screened courtyard. This screen of vertical tube steel floats above a concrete wall and is angled to maximize protection against the harsh western sun while still maintaining transparency. Lush desert plants fill the courtyard and overhead solar panels shade the space while creating electricity for our computers and tools. A carefully curated procession takes visitors from the parking area filled with trees and into the shaded desert courtyard. With the help of a grant from Tucson Water, more than 7,000 gallons of rainwater is collected into three cisterns and a network of underground pipes directs overflow into several depressed landscape areas to maximize infiltration. We anticipate that all of our landscape will be irrigated by harvested water. The studio is designed to be filled with natural daylight and an open space layout allows for team collaboration. Interior finishes with limited off gassing were selected to improve the overall interior healthiness of the space.

Additionally, we increased the useful lifecycle of the buildings materials and components by maintaining the existing structural walls, floor and roof structure. The acoustical tile ceiling system, fluorescent light fixtures, wire, conduit, and plumbing fixtures were removed and recycled. Existing impervious surfaces such as concrete and asphalt not required for vehicular nor pedestrian circulation were removed and recycled to maximize natural areas, rainwater infiltration and to reduce the heat island

effect. Overall, we were able to divert more than 95% of construction waste from the landfill. We're anticipating a LEED Silver certification or higher.

As the market continued to decline during the Fall of 2008 we pushed forward on the development of the building, considering the risks of debt service four times as large as our previous building, during a recession with no end in sight. Working closely with our loan officer and underwriter we determined that although we were part of a 'red flagged industry,' our unique design + build business model and specialized product made us somewhat isolated to the problems that confronted many others in our industry.

With financing in place, we followed the same advice we had given many clients: the best time to undertake a design and construction project is during a recession. You enjoy the benefits of lower interest rates, reduced construction costs, and shorter construction time.

Short on time and funding, we devised an aggressive plan to fast-track the project by keeping the design of the building only a few steps ahead of construction. Additionally, we were committed to creating a sustainable workplace that would meet or exceed LEED standards for certification of a sustainable structure. In lieu of completing comprehensive construction drawings that included fully detailed interiors, we opted to keep the construction documents lean by permitting the site, the structure, and major systems as required by the City of Tucson. As construction progressed, we continued to resolve design details and select interior fixtures and finishes. This fast-track methodology proved difficult at times, as we found ourselves resolving design issues under tight time constraints, but in the end the project benefited from an expedited delivery time.



On April 5th, 2010 we moved into our new office. Our choice of an adaptive reuse project combined with LEED certification was the best method for our office expansion. We created a space that meets our needs and positions us to serve our clients as the economy recovers. With our sustainability systems in full effect, we're starting to reap the benefits of lower electric and water bills, not to mention the improved working conditions that the new space provides. This building embodies our future, hopefully bright and sustainable.

Rick McLain AIA LEED AP is a licensed architect and has been working with Repp Design + Construction since 2002 and became a partner in 2008. He holds a Bachelor of Architecture from the University of Arizona and a Master of Science from the Department of Architecture at MIT. He can be reached at (520) 791.7035 or via email at rick@repp-inc.com

