

# Peoria Municipal Courts Expansion

10100 N. 83rd Avenue, Peoria, AZ 85345, USA



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## LEED Facts

for New Construction (v2.2)

Certifications awarded April 13, 2011

Gold	43
Sustainable sites	8/14
Water efficiency	3/5
Energy & atmosphere	10/17
Material & resources	8/13
Indoor environmental quality	11/15
Innovation in design	3/5

## PROJECT BACKGROUND

Completed in 2010, the City of Peoria, Arizona Municipal Court Expansion project included the renovation of the existing court facility and an approximate 18,000 square foot addition. The finished project provided better utilization of the space, modernized the existing space to current codes and addressed shortfalls in departmental space needs. The project goal was to complete the renovation sustainably and achieve LEED Silver Certification. The project team was able to surpass the sustainability goal without increasing the budget, while achieving LEED Gold.

**Owner Type** Local Government

**Space Use** Public Safety

**Project Size** 37,055 Sq Ft

**Project Cost** \$7,400,000



# SUSTAINABLE DESIGN CHALLENGES

The first Sustainability Action Plan in Peoria, Arizona was created in 2009 to achieve sustainability in city operations and future development. The Peoria Municipal Courts Expansion project started construction the same year. The city sought to reduce environmental impacts and increase public benefit of its government facilities and challenged the design team to save water, energy, money and reduce waste. The team surpassed the city guideline and achieved LEED Gold by using many standard credits and attained an innovation credit by implementing a strategy to reduce cooling tower discharge water to the sewer by 75% or 574,000 gallons/year.



## SUSTAINABLE STRATEGIES



**Sustainable Sites:** The adjacent parking garage was restriped to designate priority spaces for carpool and fuel efficient vehicles in an effort to reduce emissions from the employees commute to work. Additionally, the campus landscape design was revamped to provide additional on-site stormwater retention. Native plant species that required minimal irrigation were selected for new landscape materials.



**Water Efficiency:** High efficiency drip emitters were specified as part of the landscape irrigation system. On the interior, low flow faucets, toilets and urinals were chosen. The 1/8 gallon per flush urinals provide additional water use reduction over a standard one gallon per flush unit.



**Energy & Atmosphere:** Building systems were selected to maximize energy efficiency. The building is cooled by the recently upgraded campus central plant which is more efficient than using a stand-alone system. All of the electrical and mechanical systems in the building were tested and inspected by a third party expert to ensure equipment is operating at peak maximum efficiency. Light fixtures use 28 watt T5 lamps.



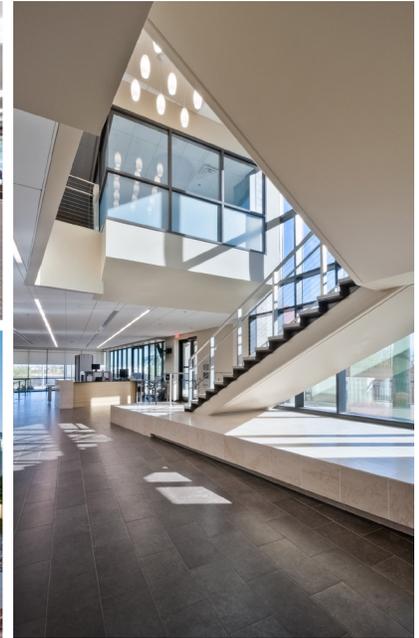
**Materials & Resources:** Recycled content building materials account for more than 20% of the raw material used in construction inclusive of structural elements. The wood used for doors and millwork was selected from sustainably managed forests, certified by the Forestry Stewardship Council. During the construction process, 85% of the construction waste was recycled or re-used.



**Indoor Environmental Quality:** Building materials such as paint, carpet and sealants were selected based on low VOC content, so the building would not have a significant off-gassing effect. To ensure that construction dust did not impact building users during or after the construction process, high efficiency (MERV 8) filters were used to clean the air.



**Innovation in Design and Regional Priority:** To make sure the healthy environment of the building is maintained throughout its life, the cleaning products and processes are handled through a Green Housekeeping Program. The program requires cleaning agents to be certified by Green Guard and staff to be trained on proper use and handling. The city's program was being tested in this facility with the intent to expand it to all city buildings.



## MEASURABLE RESULTS

50,477 gallons of water saved per year in part with low-flow plumbing fixtures and fittings. \$13,090 per year saved in energy costs achieved with an upgraded central plant, new HVAC units, economizer controls, demand ventilation and variable speed pumps. 146,148 kWh (509 MBtu) per year energy savings attributed to the building envelope modernization. 1,405 Tons (2,811,260 pounds) Construction waste diverted from landfills by diligently following a construction waste management plan.

## Project Team

<b>Owner</b>	City of Peoria, Arizona
<b>Architect</b>	Dick & Fritsche Design Group
<b>Civil Engineer</b>	Zell Companies
<b>Commissioning Agent</b>	TestMarcx
<b>Contractor</b>	Layton Construction
<b>Landscape Architect</b>	Logan Simpson Design
<b>LEED Consultant</b>	Dick & Fritsche Design Group
<b>Specifications</b>	GrEn A/E Consultants
<b>MEP Engineer</b>	Energy Systems Design
<b>Structural Engineer</b>	KPFF Consulting Engineers
<b>Interior Design</b>	Dick & Fritsche Design Group

### ABOUT LEED

The LEED® green building certification system is the national benchmark for the design, construction, and operations of high-performance green buildings. Visit the U.S. Green Building Council's Web site at [www.usgbc.org](http://www.usgbc.org)



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