Sustainable Design

Sustainable design is a goal for the State of California and the Administrative Office of the Courts. Strategies that support this goal will reduce environmental impacts and long term operating costs, while providing qualitative enhancements to the workplace. The East Contra Costa County Courthouse building and site have been developed as a high performance project that embraces the principals of sustainable design. A LEED® silver rating is required at a minimum. The team has made a preliminary assessment of the LEED points available on the project (see attached scorecard). In order to ensure the certification at the silver rating, an additional 10 points should be targeted in the MAYBE column.

Site

The proposed landscape design for the courthouse includes bioretention on site to slow the release of stormwater from paved and roof areas, and provide preliminary treatment prior to release to the storm drain system. Landscape plantings planned for use include native grasses and appropriate trees and shrubs so that water use for irrigation can be reduced by half. Trees will shade parking, plazas and walkways, and an energy-star compliant roofing coupled with a green roof over the jury assembly pavilion will be used to reduce temperatures around the building as well as contribution to the urban heat island effect.

Energy

Design strategies are being developed that will reduce energy use. Preliminary energy modeling indicates that energy savings of approximately 30% can be achieved. Savings result from use of an efficient HVAC system, efficient lighting, an improved building envelope and high efficiency fans and motors throughout. Rooftop areas will be developed to be "PV ready" to accommodate solar PV if and when future funding supports their use.

Water

Water conservation strategies include use of water efficient plumbing fixtures, and use of native landscape plantings that reduce irrigation requirements.

Materials

Materials have been selected that will meet functional and budget requirements while also promoting use of recycled content and low environmental impact over the lifecycle. All wood will be FSC certified and casework will be made with wheatboard cores. The design is being developed with convenient locations for collection of recyclables in office areas and pantries, and waste materials from construction will also be recycled.

Indoor Environment

The courthouse is being developed as a quality workplace with good indoor air quality, ample daylighting, and views. All of the courtrooms will have access to daylight, through a combination of exterior windows and skylights. Interior offices will be equipped with transom and sidelights to bring light further into the building for the open office areas. In addition, workstation groupings are provided with direct access to daylighting on the first floor by eliminating enclosed spaces in the center of the building on the north. Strategies to promote good indoor air quality may include the use of displacement ventilation in courtrooms, use of low-VOC materials, and construction practices that will protect the building from contamination during the construction process.

LEED® - NC v2.2



Project # 007-116

Date: 6.3.2007

Level Pursuing: Silver



Υ	M	N	Sustainab	le Sites	Notes:
Υ			Prerequisite 1	Construction Activity Pollution Prevention	
Х			Credit 1	Site Selection	
	Х		Credit 2	Development Density & Community Connectivity	Likely with planned future developments
		Х	Credit 3	Brownfield Redevelopment	
Х			Credit 4.1	Alternative Transportation: Public Transportation Access	
Х			Credit 4.2	Alternative Transportation: Bicycle Storage & Changing Rooms	
Х			Credit 4.3	Alternative Transportation: Low-Emitting & Fuel Efficient Vehicles	
	Х		Credit 4.4	Alternative Transportation: Parking Capacity	Yes, if owner willing to designate stall
		Х	Credit 5.1	Site Development: Protect or Restore Habitat	
Х			Credit 5.2	Site Development: Maximize Open Space	
	Х		Credit 6.1	Stormwater Design: Quantity Control	
		Х	Credit 6.2	Stormwater Design: Quality Control	
	Х		Credit 7.1	Heat Island Effect: Non-Roof	
Χ			Credit 7.2	Heat Island Effect: Roof	
	Х		Credit 8	Light Pollution Reduction	Depends on security lighting
6	5	3	14 Possible		

Υ	M	N	Water Effi	ciency	Notes:
Х			Credit 1.1	Water Efficient Landscaping: Reduce by 50%	
		Х	Credit 1.2	Water Efficient Landscaping: No Potable Water Use or No Irrigation	
		Х	Credit 2	Innovative Wastewater Technologies	
Х			Credit 3.1	Water Use Reduction: 20% Reduction	
Х			Credit 3.2	Water Use Reduction: 30% Reduction	
3	0	2	5 Possible		

Υ	М	N	Energy and	Atmosphere	Notes:
Υ			Prerequisite 1	Fundamental Commissioning of the Building Energy Systems	
Υ			Prerequisite 2	Minimum Energy Performance	
Υ			Prerequisite 3	Fundamental Refrigerant Management	
Х			Credit 1.1	Optimize Energy Performance, 10.5% new, 3.5% existing	
Χ			Credit 1.2	Optimize Energy Performance, 14% new, 7% existing	
Х			Credit 1.3	Optimize Energy Performance, 17.51% New 10.5% Existing	
	Χ		Credit 1.4	Optimize Energy Performance, 21% New 14% Existing	
	Χ		Credit 1.5	Optimize Energy Performance, 24.51% New 17.5% Existing	
		Х	Credit 1.6	Optimize Energy Performance, 28% New 21% Existing	
		Χ	Credit 1.7	Optimize Energy Performance, 31.5% New 24.5% Existing	
		Х	Credit 1.8	Optimize Energy Performance, 35% New 28% Existing	
		Χ	Credit 1.9	Optimize Energy Performance, 38.5% New 31.5% Existing	
		Х	Credit 1.10	Optimize Energy Performance, 42% New 35% Existing	
		Χ	Credit 2.1	On-Site Renewable Energy: 2.5%	
		Х	Credit 2.2	On-Site Renewable Energy: 7.5%	
		Х	Credit 2.3	On-Site Renewable Energy: 12.5%	
	Χ		Credit 3	Enhanced Commissioning	
Х			Credit 4	Enhanced Refrigerant Management	
	Χ		Credit 5	Measurement & Verification	
	Χ		Credit 6	Green Power: 35%	Possible point for Silver threshold
4	5	8	17 Possible		

Υ	M	N	Materials a	nd Resources	Notes:
Υ			Prerequisite 1	Storage & Collection of Recyclables	
		Х	Credit 1.1	Building Reuse: Maintain 75% of Existing Walls, Floors & Roof	
		Х	Credit 1.2	Building Reuse: Maintain 95% of Existing Walls, Floors & Roof	
		Х	Credit 1.3	Building Reuse: Maintain 50% of Interior Non-Structural Elements	
Х			Credit 2.1	Construction Waste Management: Divert 50% From Disposal	
	Х		Credit 2.2	Construction Waste Management: Divert 75% From Disposal	
		Х	Credit 3.1	Materials Reuse: 5%	
		Х	Credit 3.2	Materials Reuse: 10%	
	Х		Credit 4.1	Recycled Content: 10% (post-consumer + 1/2 pre-consumer)	
		Х	Credit 4.2	Recycled Content: 20% (post-consumer + 1/2 pre-consumer)	
	Х		Credit 5.1	Regional Materials: 10% Extracted, Processed & Manufactured Locally	
		Х	Credit 5.2	Regional Materials: 20% Extracted, Processed & Manufactured Locally	
	Х		Credit 6	Rapidly Renewable Materials	
	Х		Credit 7	Certified Wood	
1	5	7	13 Possible		

Υ	M	N	Indoor Env	vironmental Quality	Notes:
Υ			Prerequisite 1	Minimum IAQ Performance	
Υ			Prerequisite 2	Environmental Tobacco Smoke (ETS) Control	
Х			Credit 1	Outside Air Delivery Monitoring	
		Х	Credit 2	Increased Ventilation	
Х			Credit 3.1	Construction IAQ Management Plan: During Construction	
	Х		Credit 3.2	Construction IAQ Management Plan: Before Occupancy	
	Χ		Credit 4.1	Low-Emitting Materials: Adhesives & Sealants	
	Х		Credit 4.2	Low-Emitting Materials: Paints & Coatings	
	Х		Credit 4.3	Low-Emitting Materials: Carpet Systems	
	Х		Credit 4.4	Low-Emitting Materials: Composite Wood & Agrifiber Products	
		Х	Credit 5	Indoor Chemical & Pollutant Source Control	No b/c of copiers in open areas
Х			Credit 6.1	Controllability of Systems: Lighting	
		Х	Credit 6.2	Controllability of Systems: Thermal Comfort	
	Х		Credit 7.1	Thermal Comfort: Design	
	Х		Credit 7.2	Thermal Comfort: Verification	
	Х		Credit 8.1	Daylight and Views: Daylight 75% of spaces	
		Х	Credit 8.2	Daylight and Views: Views for 90% of Spaces	
3	8	4	15 Possible		

Υ	M	N	Innovatio	n & Design Process	Notes:
Х			Credit 1.1	Innovation in Design, As approved by USGBC	
Х			Credit 1.2	Innovation in Design, As approved by USGBC	
Х			Credit 1.3	Innovation in Design, As approved by USGBC	
Х			Credit 1.4	Innovation in Design, As approved by USGBC	
Х			Credit 2	LEED® Accredited Professional	
5	0	0	5 Possible		

0 - 25	Insufficient
26 - 32	Certified
33 - 38	Silver
39 - 51	Gold
52 - 69	Platinum

Project Points	Maybe			
22	23			
Insufficient				