

THE AESTHETICS OF GREEN ARCHITECTURE

Case Studies From Central Texas

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Beauty/Aesthetics vs. Function/Performance

Remember that the most beautiful things in the world are the most useless; peacocks and lilies for example. John Ruskin

When you have only two pennies left in the world, buy bread with one and a lily with the other. Chinese proverb

When I am working on a problem, I never think about beauty, but when I have finished, if the solution is not beautiful, I know it is wrong. R. Buckminster Fuller

Definitions of Green Building and/or Sustainable Design

AIA COTE

Top Ten Green Projects

USGBC

LEED for New Construction

AUSTIN ENERGY

Green Building

Commercial Rating

AIA COTE

Measures of Sustainable Design

- 1. Sustainable Design Intent & Innovation***
- 2. Regional/Community Design & Connectivity***
- 3. Land Use & Site Ecology***
- 4. Bioclimatic Design***
- 5. Light & Air***
- 6. Water Cycle***
- 7. Energy Flows & Energy Future***
- 8. Materials & Construction***
- 9. Long Life, Loose Fit***
- 10. Collective Wisdom & Feedback Loops***

USGBC LEED-NC

Sustainable Sites

- Prerequisite 1 Erosion & Sedimentation Control
- Credit 1 Site Selection
- Credit 2 Development Density
- Credit 3 Brownfield Redevelopment
- Credit 4 Alternative Transportation
- Credit 5 Reduced Site Disturbance
- Credit 6 Stormwater Management
- Credit 7 Heat Island Effect
- Credit 8 Light Pollution Reduction

Water Efficiency

- Credit 1 Water Efficient Landscaping
- Credit 2 Innovative Wastewater Technologies
- Credit 3 Water Use Reduction

Energy & Atmosphere

- Prerequisite 1 Fundamental Building Systems Commissioning
- Prerequisite 2 Minimum Energy Performance
- Prerequisite 3 CFC Reduction in HVAC&R Equipment
- Credit 1 Optimize Energy Performance
- Credit 2 Renewable Energy
- Credit 3 Additional Commissioning
- Credit 4 Ozone Depletion
- Credit 5 Measurement & Verification
- Credit 6 Green Power

Materials & Resources

- Prerequisite 1 Storage & Collection of Recyclables
- Credit 1 Building Reuse
- Credit 2 Construction Waste Management
- Credit 3 Resource Reuse
- Credit 4 Recycled Content
- Credit 5 Local/Regional Materials
- Credit 6 Rapidly Renewable Materials
- Credit 7 Certified Wood

Indoor Environmental Quality

- Prerequisite 1 Minimum IAQ Performance
- Prerequisite 2 Environmental Tobacco Smoke (ETS) Control
- Credit 1 Carbon Dioxide (CO₂) Monitoring
- Credit 2 Ventilation Effectiveness
- Credit 3 Construction IAQ Management Plan
- Credit 4 Low-Emitting Materials
- Credit 5 Indoor Chemical & Pollutant Source Control
- Credit 6 Controllability of Systems
- Credit 7 Thermal Comfort
- Credit 8 Daylight & Views

Innovation & Design Process

- Credit 1 Innovation in Design
- Credit 2 LEED Accredited Professional

Austin Energy Commercial Green Rating



- 1. Basic Requirements***
- 2. Design Team***
- 3. Site Selection & Development***
- 4. Energy***
- 5. Water***
- 6. Indoor Environmental Quality***
- 7. Materials & Resources***
- 8. Innovation***

CASE STUDIES

I never saw an ugly thing in my life: for let the form of an object be what it may – light, shade, and perspective will always make it beautiful.

***John Constable
19th century English romantic painter***

DAYLIGHTING

AIA COTE : Light and Air

LEED: Daylight and Views

AEGBP: IEQ - Daylighting

Daylighting

Beauty

- *DAYLIGHTING is a significant determinant of architectural form.*

Function

DAYLIGHTING reduces electric energy use and improves indoor environmental quality.

AUSTIN RESOURCE CENTER FOR THE HOMELESS (ARCH)

LZT Architects

*AIA COTE Top Ten Green Project
2005*





AUSTIN FEDERAL CREDIT UNION

Clark Mente
AEGBP 2 Star



AUSTIN CITY HALL

*Antoine Predock
Architects*

*Cotera+Reed
Architects*

USGBC LEED Gold





**DANIEL RUIZ
PUBLIC LIBRARY**
Lars Stanley Architects
AEGBP 2 Star



ESCARPMENT EMS STATION

Alan Barr
USGBC LEED Silver



WARREN SKAAREN ENVIRONMENTAL LEARNING CENTER AT WEST CAVE PRESERVE

Jackson & McElhaney Architects

AIA COTE Top Ten Green Project 2006



ZARAGOSA PARK RECREATION CENTER

Jackson & McElhaney, Architects
Emily Little, Architects

AEGBP 2 Star



CASE STUDIES

SUN AND SHADE

AIA COTE

Bioclimatic Design

LEED

Optimize Energy Performance

Thermal Comfort

AEGBP

Energy Efficiency

Sun and Shade

Beauty

- *Balancing SUN AND SHADE gives seasonal and orientation specific relief (dimensionality) to a facade.*

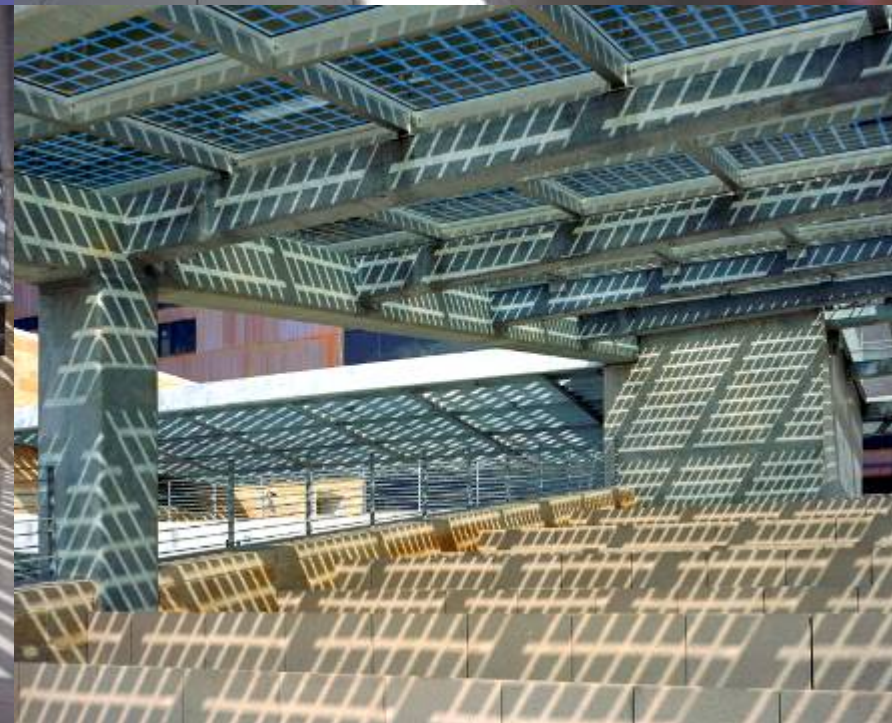
Function

Balancing SUN AND SHADE reduces energy use and improves thermal comfort.

AUSTIN CITY HALL

*Antoine Predock
Architects*

USGBC LEED Gold





**AUSTIN LYRIC
OPERA**
Lake Flato Architects
AEGBP 3 Star





**LCRA
TRAINING
CENTER**
AEGBP 3 Star





**DANIEL RUIZ
PUBLIC LIBRARY**
Lars Stanley Architects
AEGBP 2 Star



WARREN SKAAREN ENVIRONMENTAL LEARNING CENTER AT WEST CAVE PRESERVE

Jackson & McElhaney Architects
AIA COTE Top Ten Green Project
2006



CASE STUDIES

MATERIALITY

AIA COTE

Materials and Construction

LEED

Materials and Resources

AEGBP

Materials and Resources

Materiality

Beauty

- ***MATERIALITY choices give a regional context and character.***

Function

MATERIALITY choices result in healthy, resource efficient, durable products.

AUSTIN CITY HALL

*Antoine Predock
Architects*

USGBC LEED Gold



**DANIEL RUIZ
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Lars Stanley Architects
AEGBP 2 Star



WARREN SKAAREN ENVIRONMENTAL LEARNING CENTER AT WEST CAVE PRESERVE

Jackson & McElhaney Architects

AIA COTE Top Ten Green Project 2006



CASE STUDIES

NATURE AND LANDSCAPE

AIA COTE

Land Use and Site Ecology

Water Cycle

LEED

Stormwater Management

Water Efficient Landscaping

AEGBP

Outdoor Environmental Quality

Stormwater Management

Nature and Landscape

Beauty

Connections to NATURE AND LANDSCAPE define a sense of place.

Function

Connections to NATURE AND LANDSCAPE provide tactile learning opportunities about site, community, and region.

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Project 2005*



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