

Building Green: The University of Denver Ricketson Law School Building



Image source: *Colorado Building Green*,
USGBC Colorado Chapter
(<http://www.usgbc.org/chapters/colorado/docs/pdf/CBG-Nov-Dec2005.pdf>)

Outline

- A. Project summary
- B. Green features and not-so-green features by LEED category
- C. LEED and its applicability to campus development



Project Summary

- University of Denver (DU) law school. Located on DU's main campus in south Denver
- Known as the Ricketson Law Building
- First LEED rated building in Colorado to receive gold (total of 39 points)
- 210,000 SF, including classrooms and library
- Completed in August 2003
- Designers: H + L Architecture; DU University Architect



Green Features and LEED Rating

1) Sustainable Sites: Green Features

Alternative transportation

- Close to public transit, including bus and light rail
- Alternative fuel refueling stations (electric car charging stations)
- Bicycle storage and changing rooms

Site Selection

- Development in an urban area with existing infrastructure

Landscape and exterior design

- Light-colored high-albedo materials used to reduce heat island effect



Green Features and LEED Rating

1) Sustainable Sites: Not-so-green Features

Heat Island effect: Roof

- Copper roof rather than green or white roof
- Why? University prefers copper for longevity. And it's recycled/recyclable

Site Criteria

- Not urban or brownfield redevelopment
- Why? Limited site selection on a college campus



Green Features and LEED Rating

2) Water Efficiency: Green Features

Water reuse

- Groundwater is recycled for landscape irrigation (reducing water usage by 50%)

Water use reduction

- Fixtures, including waterless urinals and infrared light faucets, reduce water usage by 39%
- Native plants in landscaping require less water



Green Features and LEED Rating

2) Water Efficiency: Not-so-green Features

Water recycling

- The only water reuse on site is for landscape irrigation.
No greywater reuse within the building



Green Features and LEED Rating

3) Energy and Atmosphere: Green Features

Energy performance

- “Low-e” window glass installed throughout the building, decreasing heat loss through window
- Brick is primary material: reduces heating and cooling costs
- Light harvesting: four-story central atrium, large exterior windows, transom windows on exterior offices to transfer light to interior corridors
- Lighting systems: sensors to tell lights when to turn off; the lights in the library will automatically dim when there is enough natural light

Green power

- 2-year contract to purchase power generated from renewable sources including solar, wind, and geothermal.
- Long-term plans to buy a wind farm



Green Features and LEED Rating

3) Energy and Atmosphere: Not-so-green Features

Renewable Energy

- No renewable energy on site. PV panels were considered but not used.
- Why? The University decided to invest in improving central heating and cooling systems for all buildings



Green Features and LEED Rating

4) Materials and Resources: Green Features

Construction waste management

- Recycled and/or salvaged 50% of construction, demolition, and land clearing waste
- This includes recycling asphalt that was part of the former parking lot covering the site

Recycled materials

- 80% of materials are recycled. Nearly 100% are recyclable.
- Student lockers are made of compressed straw and recycled materials are incorporated in the roof, carpet, and ceilings

Locally Produced materials

- At least 20% of materials made locally and all the brick is harvested in Colorado



Green Features and LEED Rating

4) Materials and Resources: Not-so-green features

Building reuse

- Ricketson was built from scratch: no reused of building shell
- Why? There were no available empty buildings on campus for reuse

Certified wood

- No certified wood in building



Green Features and LEED Rating

5) Indoor Environmental Quality: Green Features

Construction IAQ Management Plan

- Ducts and permeable materials protected against contamination during construction
- Construction schedule included time for off-gassing

Low-emitting materials

- All adhesive, sealants, coating, carpeting, and wood emit no to low VOCs

Ventilation

- Operable windows



Green Features and LEED Rating

5) Indoor Environmental Quality: Not-so-green Features

Paints

- Paints on doorframes only contain VOCs
- Why? Doorframes are high-wear areas that require lots of repainting. The University chose more durable, VOC paint



Green Features and LEED Rating

6) Innovation and Design Process: Green Features

- Longevity: the goal to build something that will last at least 300 years
- Helped changed exterior light standards on campus
- Education program
- Low-emitting furniture
- LEED accredited professional



LEED and Campuses

What are some of the problems in applying LEED to campuses like DU?

- Limited site choices
- Shared energy resources among all buildings
- Some goals (like longevity) may conflict with LEED standards



Sources

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