

Seattle Central Library



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Green Buildings & LEED Project

History – 1st Central Library

- 1890 - library adopted as a branch of Seattle government
- 1901- temporary home of the library is burned down
- 1903 - first central library.
 - designed by P.J. Weber (Chicago)
 - The city purchases the land for \$100,000 and guarantees \$50,000 per year in maintenance.
 - \$220,000 cost paid for by Andrew Carnegie.
 - 50,000 ft².
 - pop. 144, 397
- 1946 - 18,000 ft² addition
 - \$400,000



History – 2nd Central Library



- 1960 – second central library
 - Lloyd W. Johnson Co. and the Morrison-Knudsen Co. Inc.
 - \$4.5 Million
 - 206,000 ft²
 - Pop. 557, 087
 - Modern Int'l Design
 - Drive-thru
 - Popular Library with smoking area
 - AC
 - Escalators
- 1979 – \$2.3 Million upgrade
 - Furnishings and materials

History – 3rd Central Library

- Dutch architect Rem Koolhaas & Seattle-based LMN Architects
- \$169 Million
- 363,000 ft²
- Pop. 572, 600
- 1998 Seattle voters approved \$196 Million “Libraries for All” bond measure
 - Doubled total square footage of city libraries
 - Funded building of a new central library



Sustainable Site



LEED Credits for:

- Built on the same site as the previous two Central Libraries
- Situated on bus transit routes
- Ample bicycle parking
- Light Pollution reduction
- Heat Island reduction:
 - Energy Star Roof
 - Plants provide shade

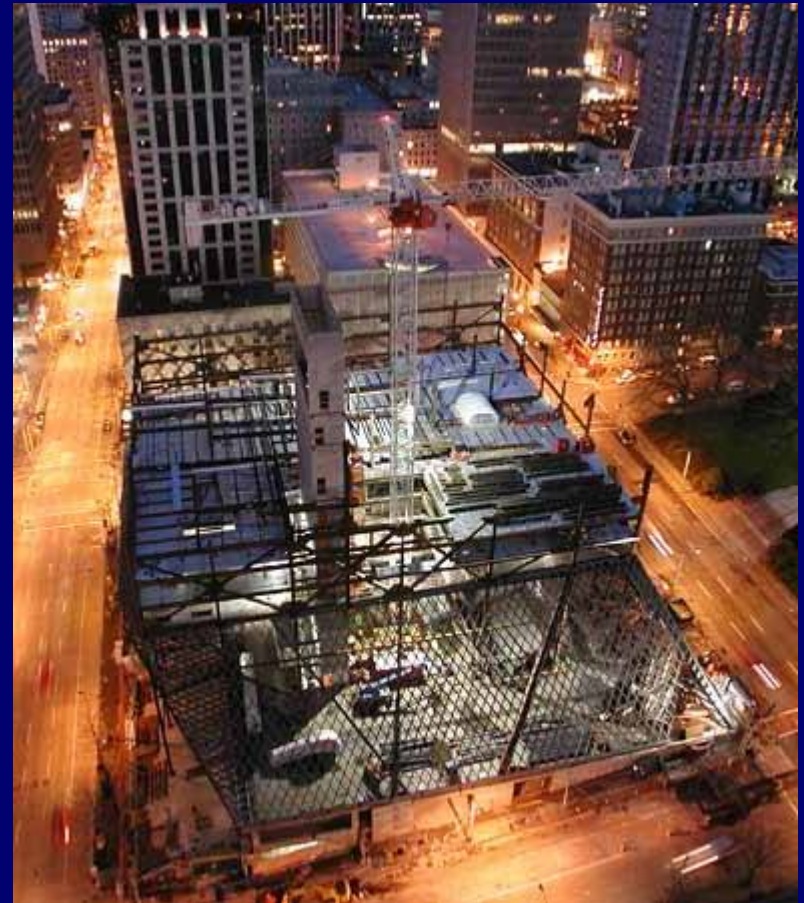
Sustainable Site

No Credits for:

- Two parking stalls to recharge electric vehicles
- Stormwater Control
 - Rainwater Collection System
 - 40,000 gallon that irrigates landscape

Improvement:

- Parking reserved for carpools or alternatively fueled vehicles (7-14 of 143 spaces)



Water Efficiency



LEED Credits for:

- Water efficient landscaping
 - All irrigation from non-potable source (rainwater collection)
 - At least 25% of plants chosen for their low maintenance and drought tolerance
- Potable water reduced by at least 20% in the building
 - Spring loaded sinks
 - Waterless urinals

Water Efficiency



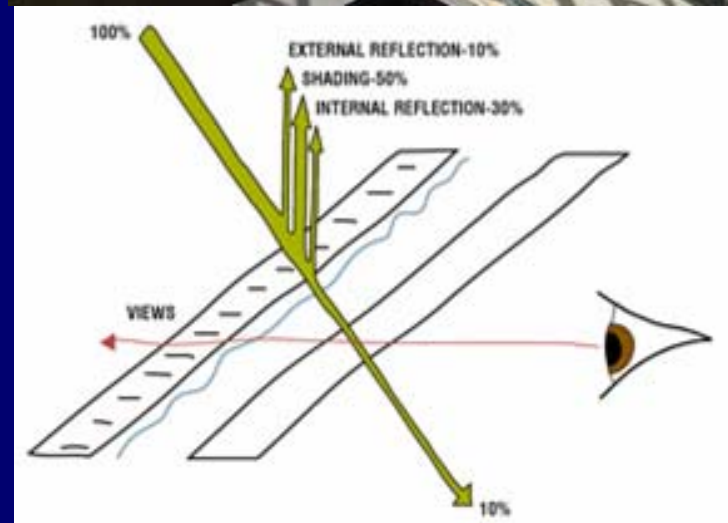
Improvement:

- Only two trees “salvaged” from construction were replanted

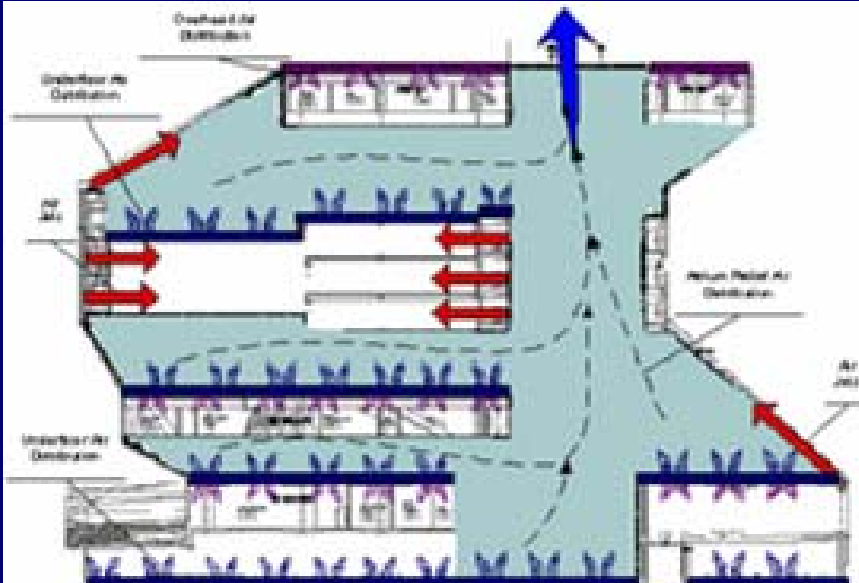
Energy & Atmosphere

LEED Credits for:

- Optimized Energy Performance:
 - Building operates at efficiency 40% above baseline standards
 - 10% above Seattle sustainable building guidelines
- Triple glazed glass with aluminum mesh
 - Air between layers provides insulation
 - Two inner layers contain krypton increasing thermal performance
 - Low-emissivity coating
- Energy Star Roof (light color)



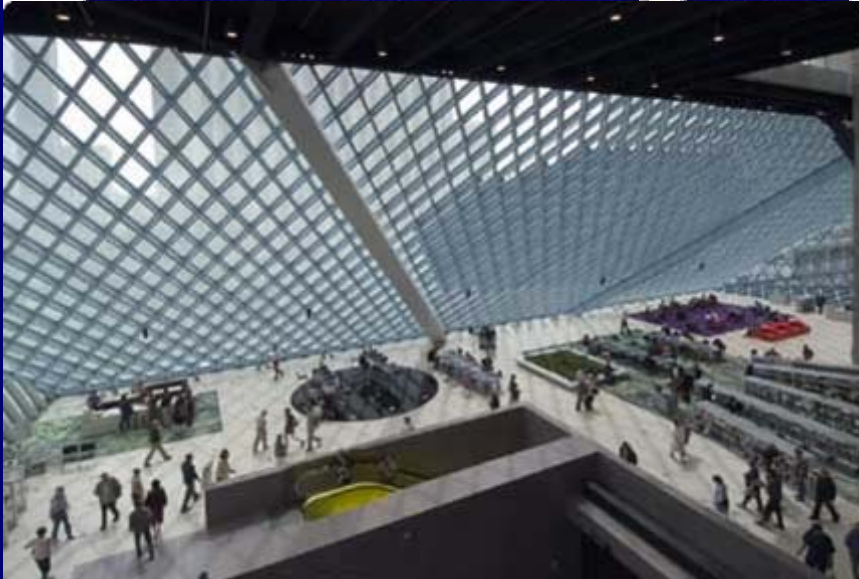
Energy & Atmosphere



- Displacement Ventilation air distribution
- All controls monitored by computer to maximize efficiency

Improvement:

- Renewable energy credit (PV cells)



Materials & Resources

LEED Credit for:

- Collecting and storing recyclables
- Diverting more than 75% of construction wastes from landfill
- Contains over 35% recycled materials
- At least 20% locally produced materials, at least 10% of which are locally harvested



Materials & Resources



Improvements:

- Reuse more of the previous library materials if you are going to build on the same site
 - 5% reuse= \$8.5 Million
- Alternate sites that could benefit from a new library

Indoor Environment Quality

LEED Credits for:

- Indoor Air Quality during construction and before occupancy
- Low-emissions carpeting
- Indoor comfort controls
- Views for 90% of the spaces



Indoor Environment Quality



No Credit for:

- Worthwood composite scrap flooring

Improvements:

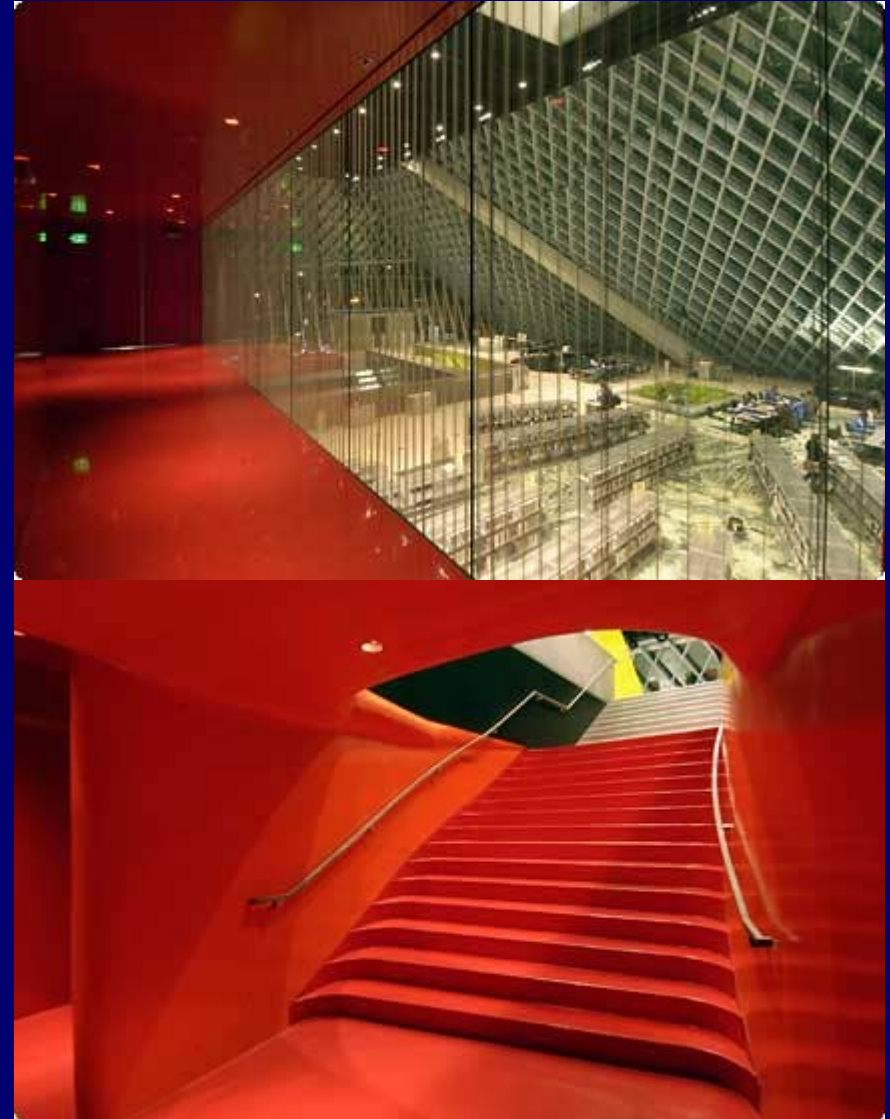
- Daylight in 75% of spaces
- Low-emitting paints, sealants and composite wood



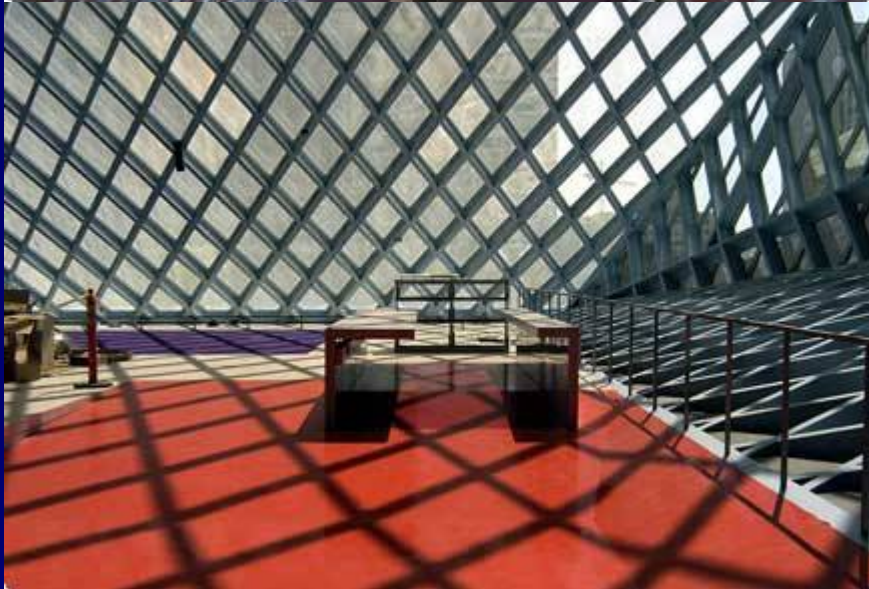
Innovation & Design Process

LEED Credits for:

- Sustainability Education:
www.spl.org
- Exceeding MRc4 credit by 25%
- Water Treatment System
- LEED Accredited Professional



Additional Features



- 11 floor building with five distinct platforms designed to resemble a stack of books
- Books Spiral
- Teen center (Starbucks)
- Children's Library
- ESL/ Adult Lit. Library
- Auditorium (Microsoft)

Additional features

- Automated Check-in
- Self Check-out
- Art Exhibition Space
- Meeting Rooms
- Staff & Admin. Offices
- Technology Center

TIME building of the year
2004

“I liked it. It felt spacious
and open. I would
definitely go back”

- anonymous interview



References

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