



Chicago

How to Obtain Your LEED Certification

LEED Certification for
Landscape Professionals

Welcome!

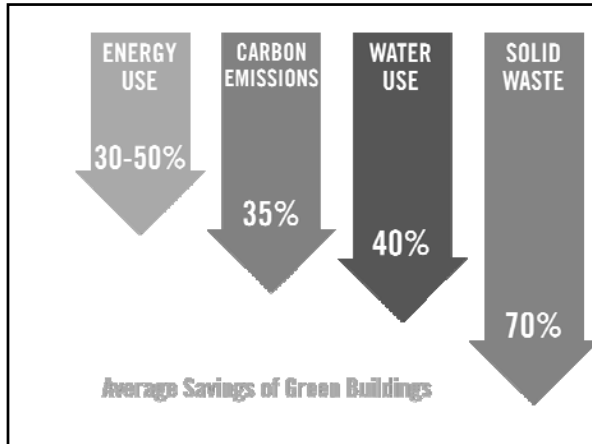
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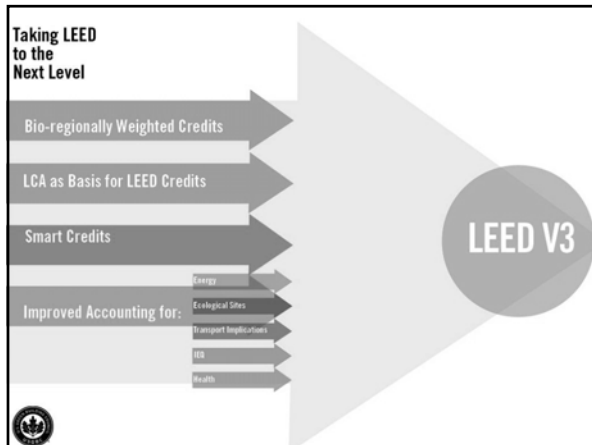
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What's so Great about LEED?

U.S. Building
Impacts:







What is the LEED System?

LEADERSHIP in ENERGY and ENVIRONMENTAL DESIGN

A leading-edge system for certifying DESIGN, CONSTRUCTION, & OPERATIONS of the greenest buildings in the world

Buildings meet criteria to earn points. Certification requires a certain number of points.

LEED Credits are grouped into categories:

1. Site Planning
2. Water Management
3. Energy Management
4. Material Use
5. Indoor Environmental Quality
6. Innovation & Design Process

Green Facts

John W. Langston High School
 Construction & Langston Brown
 Community Center
 Arlington, Virginia

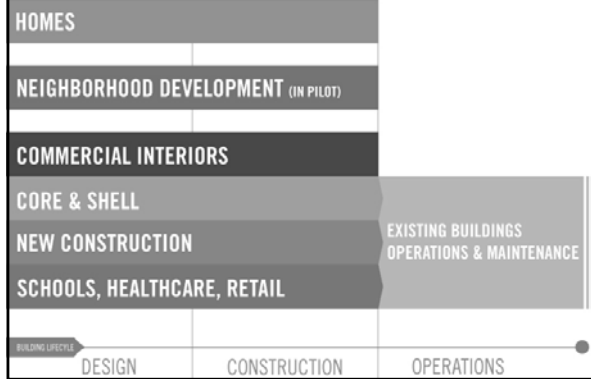
LEED V3 Rating	50
Silver	30
Gold	20
Platinum	10
Energy & Atmosphere	4
Materials & Resources	4
Indoor Environmental Quality	3
Innovation & Design	2

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USGBC has four levels of LEED:



LEED address the complete lifecycle of buildings:



LEED 2009

- New system released January 1, 2009
- Changes some credits and the point systems
- AP Exam changes August 2009

LEED Certification Process- Preliminary

- Form team
- Evaluate project for LEED potential
 - Prerequisites
 - Scorecard- yes no maybe
 - Additional costs

LEED Certification Process- Registration

- USGBC Website
- \$
- LEED version
- Credit Interpretation Requests

LEED Certification Process- Design

- Owner's Project Requirements (OPR)
- Basis Of Design (BOD)
- Design Documents and Commissioning Agent review
- USGBC Website
- \$\$\$
- Checklist and Team-member assignments
- Templates
- Construction Documents and Agent Review
- Design Credit Submittal

LEED Certification Process- Construction

- Construction and documentation
- Construction submittals
- Preliminary review and recommendation
- Random audit
- Points awarded
- Appeal

Getting Hired for LEED Jobs

- USGBC AP Database
- USGBC Chicago Chapter Networking Events
- Suggest it to clients
- Chicago municipal projects
- Future LEED Products
 - Sustainable Sites Initiative
 - LEED for Homes
 - LEED for Neighborhood Development

Becoming a LEED AP

- LEED Accredited Professional
- The exam covers all credits and the certification process
- Tests available: LEED EB, LEED NC, LEED I
- All tests = same accreditation = LEED AP
- People are accredited, buildings are certified.
- Of 60,000 LEED APs in the US, only 1000 are in the landscape industry
- Illinois is #3 in number of APs, after CA and TX and has 40 Landscape APs

Why get Accredited?

- Highly Recognized
- Desirable for owners and sister professions
- Requires learning green building technologies and other professions' perspectives
- Signals green knowledge and priorities
- APs and their companies are in the USGBC database
- Something to do in the winter!

Landscape Design Specific Credits

- Sustainable Sites
- Water Efficiency
- Materials
- Energy
- Indoor Environmental Quality
- Innovation Points

SSP1: Construction Activity Pollution Prevention

Create an erosion control and sedimentation plan (2003 EPA Construction General Permit, NPDES, or local codes, whichever is more stringent.

This is already required by law for all sites over 1 acre, so not a big change. The permit is a list of Best Management Practices (BMPs) for preventing erosion and sedimentation and requirements for their use.

<http://cfpub.epa.gov/npdes/stormwater/cgp.cfm>

**Sustainable Sites 5.1
Protect or Restore Habitat**

- If Greenfield: limit all site disturbances to within given distances of planned structures, including landscaping, staging, clearing.
- If previously developed site: restore or protect 50% of the site area excl. the building footprint or 20% of the site incl. building footprint, whichever is greater. Restore= plant with natives or cultivars of natives. Can include greenroof if development density credit is achieved but greenroof must use native plants and provide habitat.

**Sustainable Sites C5.2
Maximize Open Space**

- Reduce development footprint (building, roads, parking etc) so vegetated openspace is at least 25% greater than zoning req. If there is no zoning req, =building footprint, if zoning doesn't have a req, 20% of site.

Turf counts, if you eared development density credit, pedestrian hardscape (plazas, sidewalks) and roof gardens count but must be at least 25% vegetated. SSc5.1 space counts. Wetlands count if they're not steep.

**Sustainable Sites c6.1, 6.2
Storm Water Quantity and Quality**

- 6.1-
 - If site is less than 50% paved: either limit runoff to predevelopment rates and quantities or protect receiving streams.
 - If site is more than 50% paved: achieve a 25% reduction in estimated runoff quantity for a 24h 100 yr storm.
- 6.2- Capture and treat 90% of rainfall well enough to remove 80% TSS (Total Suspended Solids)

**Sustainable Sites C7.1
Heat Island Effect- Non-roof**

- At least 50% of hardscape must
 - Be shaded by trees or vined trellises within 5 years of occupancy
 - Be shaded by solar panels or shade structures with a solar reflectance index (SRI) of at least 20
 - Have an SRI of at least 29
 - Be made of open grid paving system that is at least 50% pervious
- OR at least 50% of parking must be covered by greenroof, solar panels or a material with SRI of at least 29.

**Sustainable Sites C8:
Light Pollution Reduction**

- Exterior Lighting Portion: Follow ASHRAE/IESNA Standard 90.1-2007 exterior lighting section for your lighting zone (rural to urban).
It outlines lighting density requirements and light angles, including uplighting and building or landscape lighting and extent beyond property boundary light can extend.

**Water Efficiency c1.1, 1.2
Water Efficient Landscaping**

- Reduce potable or natural surface or well water used for irrigation by 50% (2 pts), 100%(4 pts).
Calculate based on mid-summer, plant species, plant density, micro-climate and irrigation method efficiency.
Find local Evapotranspiration rate using free downloadable Rain Bird software. Rate each factor as low medium or high and use assigned point values for resource guide equation.
Find other sources of water or use drought resistant plants.
Water limits don't apply while plants are being established or in special cases, up to 10% of regular watering time.

Other Relevant Credits

- SS c3: Brownfield redevelopment
- SS c4.2: bike racks
- SS c4.4: Parking capacity
- WE c2: innovative wastewater tech (waste treatment wetland)
- EA p1: Fundamental Commissioning
- MR c2: Construction waste management
- MR c3: Materials reuse
- MR c4: Recycled content
- MR c5: Regional materials
- EQ p2: Environmental tobacco smoke
- ID- Innovation in design, regional credits

Resources

- USGBC.org and GBCI.org
- Resource Guide (\$)
- USGBC Local Chapters (\$)
- USGBC National Membership (\$)
- Land8Lounge
- CIRs (Credit Interpretation Requests)
- Examples

LEED for Homes

- LEED for Homes Providers and Green Raters
- USGBC training for green homes designers and consultants
- Builder orientations, involved in design stage
- IDRs and CIRS
-

**LEED for Homes
Landscape Credits**

- Erosion Control
- No invasive plants
- Basic Landscape Design
- Limit conventional Turf
- Drought-tolerant plants
- 20% irrigation reduction
- Heat Island
- Permeable lot
- Permanent erosion control measures
- Roof runoff management
- Pest control measures
- Rainwater harvesting
- Grey water reuse
- Efficient irrigation
- Basic operations training

LEED for Neighborhood Development

- Imperiled species and ecological communities
- Wetland and water body conservation
- Steep slope protection
- Restoration, conservation, and management of habitat or wetlands
- Walkable streets
- Local food production
- Tree lined streets
- Water efficient landscaping
- Minimize site disturbance
- Stormwater management
- Heat island reduction
- Solar orientation
- Light pollution reduction
- Universal accessibility

Landscape and the Future of LEED

- LEED 2009!!!
- Sustainable Sites Initiative
- Steering Committees
- LEED Homes and LEED Neighborhood Development
- Municipal requirements

Questions
