Update on Sustainable Rating Systems.

Stephen Ibendahl, ASLA, RLA
Sustainability Planner, Southwestern Illinois RC&D
Stephen.Ibendahl@swircd.org
Investing in the Nature of Southwestern Illinois

Events / Treks

Livable Communities

Conservation
How many sustainable rating systems have been created since 2008?
How many sustainable rating systems have been created since 2008?

One every 54 minutes....
LEED Neighborhood Development (ND)
Sustainable Sites Initiative
Envision
Greenroads
GreenLITES
I-LAST
STARS
Green Infrastructure / Site Development

- Sustainable Sites Initiative
- Envision

Transportation

- Greenroads
- GreenLITES
- I-LAST
- STARS

Community Development

- LEED ND
LEED Neighborhood Development

**Partners:**
- U.S. Green Building Council
- Congress for the New Urbanism
- Natural Resource Defense Council

2009
LEED Neighborhood Development

- Third Party Verification
- 100 Point Rating System
  (Plus 10 for Innovation and Regional Priority)
  - Smart Location and Linkage (27 pts)
  - Neighborhood Pattern and Design (44 pts)
  - Green Infrastructure and Buildings (29 pts)
  - Innovation (6 pts)
  - Regional Priority (4 pts)

Focus:

- Preferred Locations: 10pts
- Walkability: 12pts
- Reduced Auto Dependence: 7pts

Total 29pts (30%)
Sustainable Sites Initiative

**Partners:**
- American Society of Landscape Architects
- Lady Bird Johnson Wildflower Center
- United States Botanic Garden

**2009**
Sustainable Sites Initiative

- Third Party Verification
- 250 Point Rating System
  - Site Selection
  - Planning
  - Site Design – Water
  - Site Design – Soil and Vegetation
  - Site Design – Material Selection
  - Site Design – Human Health & Well Being
  - Construction
  - Operations and Maintenance

Focus:

Site Design – Soils and Vegetation: 51pts (20%)

All Site Design Categories: 163pts (65%)

Investing in the *Nature* of Southwestern Illinois
Envision

envision™

Institute for Sustainable Infrastructure

Partners:
  • American Society of Civil Engineers
  • American Council of Engineering Companies
  • American Public Works Association

2011
Envision

- **Third Party Verification**

- **Categories**
  - Pathway
  - Project Strategy and Management
  - Community: Long and Short Term Effects
  - Land Use & Restoration
  - Landscapes
  - Ecology and Biodiversity
  - Water Resource & Environment
  - Energy & Carbon
  - Resource Management Including Waste
  - Assess and Mobility

**Focus:**

Weighted Distribution:
- Low – Landscapes 7.0%
- High – Pathway 12.6%

Highest Sub-Category: “Avoid traps that create high, long-term cost for the community.”
Greenroads

- Greenroads Foundation

- Partners:
  - University of Washington
  - CH2M Hill

- Version 1.5, 2011
Greenroads

- Third Party Verification
- 118 Point Rating System
  - Environment and Water
  - Access and Equity
  - Construction Activities
  - Materials and Resource
  - Pavement Technology
  - Custom

Focus:

- Context Sensitive Design / Emission Reduction: 10pts (8%)
- Pavement and Pavement Re-use: 25pts (21%)
GreenLITES

- New York Department of Transportation
- LITES
  (Leadership In Transportation and Environmental Sustainability)

- 2008
GreenLITES

- Self Certification
- Categories
  - Sustainable Sites
  - Water Quality
  - Materials and Resources
  - Energy and Atmosphere
  - Innovation

Focus:
Fairly even distribution among categories.

Investing in the *Nature* of Southwestern Illinois
I-LAST

- Illinois Department of Transportation
- I-LAST
  (Livable And Sustainable Transportation)
- 2010
Self Certification

Categories
- Planning
- Design
- Environment
- Water Quality
- Transportation
- Lighting
- Materials

Focus:
Fairly even distribution among categories.
STARS

*(Sustainable Transportation Access Rating System)*

**Partners**
- North American Sustainable Transportation Council
- Portland Bureau of Transportation

**2011/2012**
Focus:

Emphasis on Life Cycle vs Design and Construction

Integrated process determines final goals and metrics.

Categories

- Integrated Process
- Access
- Climate and Energy
- Ecological Functions
- Cost Effective Analysis
- Innovations
STARS

Investing in the *Nature* of Southwestern Illinois

Source: STARS Program Manual
Weaknesses of Ratings

- “Weighting” of Certain Categories
  - Project Type
  - Regional Differences
  - Local Priorities
  - Type of Project

- Value of Third Party Certification

- Applicability Across Project Types
  - Urban Streetscape versus Suburban Highway
  - Park project versus Commercial Campus
Weaknesses – Regional Differences

Water Conservation versus Stormwater Quality / Quantity

Sustainable Sites

- Conservation: Credit 3.2 Reduce Portable Water (2-5 pnts), Credit 3.8 Water Maintenance (1-4 pnts)
- Stormwater: Credits 3.5-3.8 (9-22 pnts)
Weaknesses – Types of Projects

- Urban Streetscape versus Suburban/Rural Road

- Greenroads
  - Habitat Restoration (3 pnts)
  - Ecological Connectivity (1-3 pnts)
Weaknesses – Quality vs Function

- Walkability
- I-LAST
  - New Sidewalk (2 pnts)
    - Doesn’t Measure Quality of Pedestrian Experience
  - Sidewalk Widening (1 pnt)
  - Parkway Separation (1 pnt)

- LEED ND
  - Walkable Street (up to 12 pnts)
    - No blank façade more than 50’ or 40% of façade length.
Weaknesses - Third Party Certification

- Comparison to LEED for Commercial Buildings:
  - Competitive Differentiator
  - Attract Tenants
    - Lease-up rates for green buildings typically range from average to 20 percent above average
  - Increase Rental Rates
  - Cost Effective
    - An upfront investment of 2% in green building design, on average, results in life cycle savings of 20% of the total construction costs – more than ten times the initial investment. Additionally, building sale prices for energy efficient buildings are as much as 10% higher per square foot than conventional buildings.

Source USGBC

- What is the Value of Planning/Green Infrastructure Certification?
Strengths of Ratings

- Toolkit of Ideas/Best Practices
- Cost Savings (Life Cycle Costs)
- Accountability
- Future Funding
What System to Use?

- Community Planning
  - LEED ND

- Site Development / Parks / Greenways
  - Sustainable Sites Initiative

- Roadways
  - Greenroads

- Good Toolkits
  - I-LAST
  - GreenLITES

- Still Being Developed
  - Envision – Green Infrastructure
  - STARS – Transportation Planning
Sustainable Sites – Pilot Projects

- 25% Open space - Park
- 20% Institutional/Educational
- 15% Commercial
- 13% Residential
- 8% Transportation corridor/ Streetscape
- 8% Open space - Garden/Arboretum
- 6% Government Complex
- 4% Mixed-use
- 1% Industrial

Investing in the Nature of Southwestern Illinois