



**Sustainability is a
Zero sum game.**



New York State
Department of Transportation

GreenLITES Recognizing Leadership
in Transportation
Environmental Sustainability



Northeast & Mid-Atlantic States
In-Place Recycling Conference

August 24-26, 2010

NYSDOT GreenLITES
Certification Program

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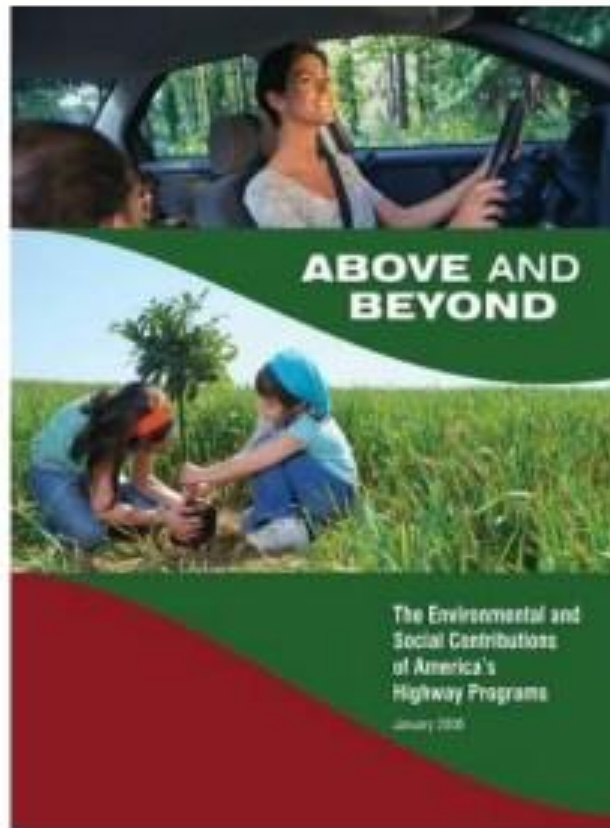
<https://www.nysdot.gov/programs/greenlites>

A Sustainable Society



- Manages resources in a way that fulfills the community/social, economic and environmental needs of the present without compromising the needs and opportunities of future generations.

AASHTO John Horsley, Executive Director



“Today, more than ever before, transportation agencies are going ‘Above & Beyond’ Toward Sustainable Transportation.”



NYSDOT's Goals

- To design, operate and maintain our transportation system in support of a sustainable society.
- Not to deplete, and if possible, enhance resources for future generations.
- Support a vibrant economy.
- Enhance quality of life for everyone.



What is **GreenLITES**



Program used to:

- Measure our sustainability performance,
 - Recognize and promote sustainability best practices and
 - Identify areas where we need to improve our sustainability practices.
- **GreenLITES Design Modeled after:**
 - Building industry LEED program.
 - University of Washington Greenroads initiative.
 - **A self certification program.**
 - **A way to demonstrate to public officials and the public how NYSDOT is advancing sustainable practices.**
 - **Includes Design, Operations & Local Projects**

Program Guiding Principles

- Not prescriptive
- Intent is to have all staff consider and contribute to sustainability
- Regional decision as to what to include
- Understand cost will be a competing priority
- Keep it simple



Certification Categories: Design

- **Five categories:**
 - Sustainable Sites
 - Water Quality
 - Materials and Resources
 - Energy and Atmosphere
 - Innovation/Unlisted



Design and Construction Example

GreenLITES Project Environmental Sustainability Rating System Scorecard v 2.0.1				POINTS	
				Available	Scored
CATEGORY	ID	DESCRIPTION			
Materials & Resour Materials & Resources (M)	M-1 <i>Reuse of Materials</i>	M-1d	Specify rubblizing or crack and seating of Portland Cement Concrete pavement.	2	
		M-1e	Reuse of previous pavement as subbase during full-depth reconstruction projects.	2	
		M-1f	Arranging for the reuse of excess excavated material, asphalt pavement millings, or demolished concrete by another municipality or	2	
		M-1g	Specify the processing of demolished concrete to reclaim scrap metals and to create a usable aggregate material.	2	
	M-2 <i>Recycled Content</i>	M-2e	Specify asphalt pavement mixes containing Recycled Asphalt Pavement (RAP).	2	
		M-2f	Specify PCC pavement mixes containing Recycled Concrete Aggregate (RCA).	2	
		M-2h	Use of porous pavement systems in light duty situations (e.g. sidewalks, truck turnarounds, rest stops, parking lots, police turnarounds).	2	

e.g., Highway-stream Crossings



AASHTO: Environmental Aspects Paving

Key In-Place Recycling Process Activities:

- Identify highway sections to pave;
- Develop pavement design;
- Develop, let, & award paving contract;
- Purchase materials & supplies;
- Mobilize equipment & personnel;
- Pave highway & maintain equipment;
- Perform quality control/assurance;
- Correct deficiencies; &
- Measure & document costs & benefits.



AASHTO: Environmental Aspects Paving

- **Reuse & conservation** of pavement materials & reduced waste;
- **Reduced transport** of pavement materials & associated construction vehicle traffic impacts(air & noise) on neighbors & highway system;
- **Lower emissions** of volatiles with use of non-volatile materials; &
- **Avoid/minimize environmental impacts** of batch plants, quarries, & stockpiles.





Key Environmental Considerations While Measuring & Documenting Costs & Benefits

- What are the cost of the environmental measures of in-place pavement recycling in comparison with other paving methods?
- What are the environmental benefits of in-place pavement recycling as compared to other paving methods?

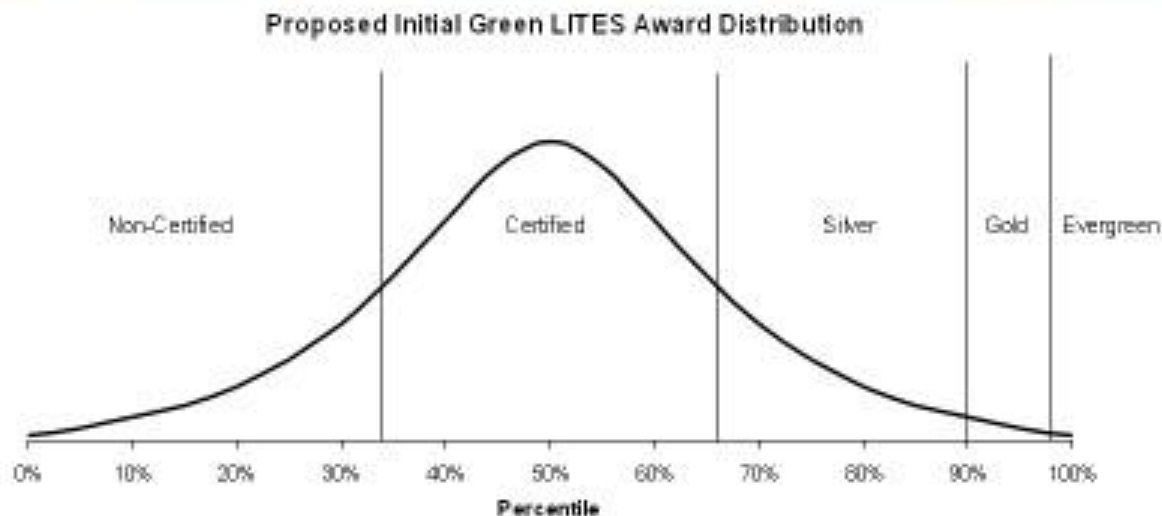
GreenLITES: Four Certification Levels

- Certification level based on total points received.
- The highest certification goes to designs which clearly advance the state of sustainable transportation solutions.

Level:	Non-Certified	Certified	Silver	Gold	Evergreen
Symbol:	No Symbol				
Points:	0 - 14	15 - 29	30 - 44	45 - 59	60 & up

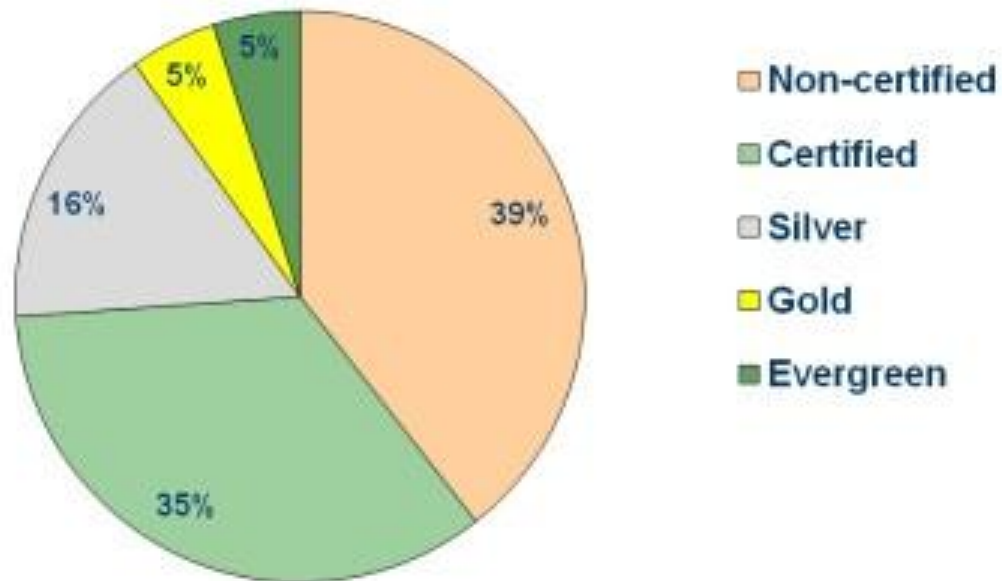
Scoring Methodology

- All "D" let projects are scored. Includes element-specific (plan sheet or proposal only) and maintenance projects.
- A modified rating system is used for element-specific and maintenance projects.
- Standby, where-and-when, or job order contracts are exempt.



Current Statistics

Project Certification by Percent



Total Projects Evaluated to Date: 250

Implementation Basics

- Applies to all “D” let projects
- Consider “green” items at scoping
- Mid-point check
- **GreenLITES** “scorecard” at PS&E
- Add certification level to cover sheet
- Certified and above projects get certificate

Recognition



- All Certified, Silver, and Gold projects receive certificates.

Evergreen Recognition



- Regions with Evergreen projects get a plaque to list all their Evergreen projects. Presented yearly by the Commissioner.

Program Management

- A review team:
 - Verifies all Gold & Evergreen projects.
 - Verifies and approves all unlisted and innovative items.
 - Updates program as appropriate.
- Engineering Division maintains a database and prepares reports.
- Program goals are reviewed by the Commissioner and Chief Engineer.

Academic Advisory Team

- **Purpose**
 - To obtain academic perspective on GreenLITES
 - To have external Evergreen project review
 - Build better relationships between engineering schools and NYSDOT
- **Responsibilities**
 - Program review
 - Evergreen project review
- **Benefits**
 - Professors bring emerging practices to classroom
 - Potential student paper research topics
 - Venue for NYSDOT to recruit interns and employees

Local Projects Certification

- Other New York State government agencies and authorities, local municipalities, and non-governmental organizations (NGOs) may use **GreenLITES** to certify their federally funded transportation projects.
- Use is voluntary
- Offers others the opportunity to:
 - ❖ Distinguish their transportation projects based on the extent to which they incorporate sustainable design choices.
 - ❖ Show their commitment to improving transportation infrastructure in ways that minimize environmental impacts.
 - ❖ Show they have taken intentional steps they are advancing sustainable practices.



GreenLITES Operations



- Use Maintenance & Operations Plan (MOP) to rate Operations
- Categories in MOP
 - Bridges, Pavement, Drainage, Signal & Lighting, Snow & Ice, Facilities, ITS, Roadside Environment, Guiderail, Signs, Fleet Admin, Walls & Rock Slopes, Multimodal & Other
- Each category now has GreenLITES lines
- Over 95 “green” items added



GreenLITES Operations



- Based on Work Performed by Fiscal Year
- Scores Derived by * of Weighted Factor and Work Performed Max
- Provides Platform to Evaluate and Share Best Practices



Operations Certifications

- **Certifications are available for:**
 - 1) Residencies
 - 2) Regional Bridge Maintenance Groups
 - 3) Regional Traffic and Safety Groups

- **Special GreenLITES awards are available for:**
 - 1) Main Office Operations Program Areas
 - 2) Regional Operations Program Areas

Operations Sustainable Practice Examples

- Promote sustainability through careful roadside work practices and enhancements.



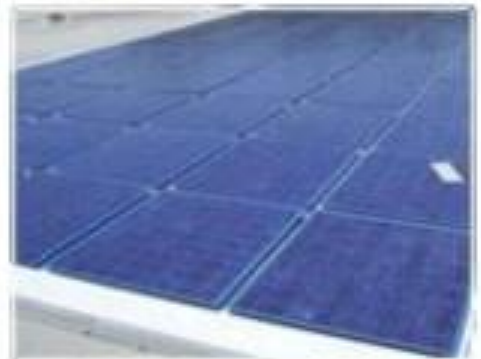
Install Living Snow fence



Stream Bank Restoration

Operations Sustainable Practice Examples

- Make highways, fleet and facility buildings cleaner and operate with greater energy efficiency.
 - Install LED traffic signals
 - Use CNG vehicles
 - Use solar panels on roofs



Draft Regional Assessment Tool

Economy	Current State / Metric?	Desired State
Access to jobs and labor		
Transportation Preservation (Maintenance backlog)		
Transit passenger miles		
Environment		
Petroleum consumption reduction		
Air Quality - CO2 emissions		
Water Quality		
Habitat Quality		
Social Equity (Includes Livability & Safety)		
Fatality and injury reductions per VMT		
Improved mobility for all including the disadvantaged and disabled		
Generational Equity		
Access to affordable transportation		

Sustainability – Triple Bottom Line



GreenLITES Coordination

- Our goal is to integrate and align GreenLITES practices into our Planning, Design/Construction and Operations programs.



AASHTO Commitment



The **Center for Environmental Excellence & AASHTO** are ready to assist you in making the roads and transportation network and the environment “better than before” through in-place pavement recycling.

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Center for
Environmental
Excellence

On Behalf of the Center for Environmental Excellence: Thank You!

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www.environment.transportation.org

And on behalf of NYSDOT: Thank You!

The complete **GreenLITES** document is located on our web site at:

<https://www.nysdot.gov/programs/greenlites>

Questions?



Sustainability / GreenLITES



Change Awareness

Change Attitudes

Change Policy

Change Practice

Change Results