A State-level Perspective on The Future of Sustainability Decision Making

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NYSDOT’s Sustainability Vision

Exemplify How Transportation Supports a Sustainable Society
Sustainability is Overarching

Environmental Initiative
- GreenLITES
- Land Use Planning
- Smart Growth
- Ecosystem Based Management
- Context Sensitive Solutions
- Bike/Pedestrian
- Livability
- Safety

Climate Change
- Energy Efficiency
- Scenic Byways
- Reuse/Recycle
- Green/Blue Highways
- Asset Management
- Travel Demand Management
- Preservation Strategy
- Economic Development
- Complete Streets

Economy
- Transit-oriented Development

Social
- Livability
- Safety
- Safe Routes to School
- Complete Streets

“Triple Bottom Line”
Our system is built and it's aging

Shift in investments to preserve existing infrastructure
Sustainable investments in transportation leverage funding across our system to minimize costs over the life of the investments that support:

**Economic Competitiveness**

**Social Equity**

**Environmental Stewardship**
To be truly integrated into an agency’s culture, sustainability needs to be factored into all three decision levels.
Framework for Decision-making

Comprehensive Program Team (CPT)

Capital Program Delivery Committee (CPDC)

Statewide Pavement Team
Statewide Structures Team
Statewide Safety Team
Statewide Sustainability Team

11 Regional Pavement Teams
11 Regional Structures Teams
11 Regional Safety Teams
11 Regional Sustainability Teams

Sustainability Asset Teams

Asset Management Framework
Opportunity to Link Sustainability to Investment Decisions

Forward Four – Guiding Principles

- Preservation First
- System Not Projects
- Maximize Return on Investment
- Make It Sustainable

Hierarchy of Priorities

<table>
<thead>
<tr>
<th>Level</th>
<th>Priority</th>
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<tbody>
<tr>
<td>1</td>
<td>Demand Response</td>
</tr>
<tr>
<td>2</td>
<td>Preservation</td>
</tr>
<tr>
<td>3</td>
<td>Enhance Safety</td>
</tr>
<tr>
<td>4</td>
<td>System Renewal</td>
</tr>
<tr>
<td>5</td>
<td>Modernization</td>
</tr>
</tbody>
</table>

- Safety of the system is the key component
- Corrective and preventative maintenance
- Systematic improvements and spot locations
- System critical bridge replacements/major rehabilitations
- System expansion, added capacity (e.g., HOV), major widening
- Addition of lanes, rest areas, new or other facilities

First capital program guidance to specifically incorporate sustainability concepts
Investment Perspectives for Sustainability Considerations

**Program Perspective**
- Maximize public benefits
- Affordable over the long term
- Preserve system assets
- Combination of *all* assets establishes system that supports future quality of life and the economy of the State
- Programs developed within the context of the system as a whole

**Project Perspective**
- **GreenLITES** Project Design Scorecard
- Smart Growth Infrastructure Policy
- Complete Streets
- Draft Climate Action Plan
- State Energy Plan
NYSDOT’s **GreenLITES** Program

**WHY?**
- Regional Sustainability Assessment Table
- Pilot Tool

**WHAT?**
- Regional Infrastructure Sustainability Elements (RISE)
- GreenLITES Project Solicitation Tool
- GreenLITES Operations

**HOW?**
- GreenLITES Project Design
A Guidebook for Sustainability Performance Measurement for Transportation Agencies

(published Fall 2011)

Table 1. Recommended transportation sustainability goals.

<table>
<thead>
<tr>
<th>Sustainability Goal</th>
<th>Definition</th>
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<tbody>
<tr>
<td>1. Safety</td>
<td>Provide a safe transportation system for users and the general public.</td>
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<tr>
<td>2. Basic accessibility</td>
<td>Provide a transportation system that offers accessibility that allows people to meet at least their basic needs.</td>
</tr>
<tr>
<td>3. Equity/equal mobility</td>
<td>Provide options that allow affordable and equitable transportation opportunities for all sections of society.</td>
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<tr>
<td>4. System efficiency</td>
<td>Ensure that the transportation system’s functionality and efficiency is enhanced.</td>
</tr>
<tr>
<td>5. Security</td>
<td>Ensure that the transportation system is secure from, ready for, and resistant to all hazards.</td>
</tr>
<tr>
<td>6. Prosperity</td>
<td>Ensure the transportation system’s development and operation support economic development and prosperity.</td>
</tr>
<tr>
<td>7. Economic viability</td>
<td>Ensure the economic feasibility of transportation investments over time.</td>
</tr>
<tr>
<td>8. Ecosystems</td>
<td>Protect and enhance environmental and ecological systems while developing and operating transportation systems.</td>
</tr>
<tr>
<td>9. Waste generation</td>
<td>Reduce waste generated by transportation-related activities.</td>
</tr>
<tr>
<td>10. Resource consumption</td>
<td>Reduce the use of nonrenewable resources and promote the use of recycled materials and replacements.</td>
</tr>
<tr>
<td>11. Emissions and air quality</td>
<td>Reduce transportation-related emissions of air pollutants and greenhouse gases.</td>
</tr>
</tbody>
</table>

1. Goals that state the overall purpose of your program, keeping in mind the sustainability principles.
2. You can export customized worksheets from the compendium.
3. Specific objectives describe what will be done to achieve each goal.
4. Quantitative measures assess progress in meeting objectives. Some measures may apply to multiple objectives.
5. Each measure has a unique ID.
6. Measures in italics are those described further as example measures in Appendix D.
Regional Infrastructure Sustainability Elements (RISE) Table (working draft)

<table>
<thead>
<tr>
<th>Sustainability Goal or Objective</th>
<th>Measures</th>
<th>Current State</th>
<th>Desired State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve habitat: Aquatic, Terrestrial</td>
<td>Improve system efficiency for transit</td>
<td></td>
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<tr>
<td>Reduce number &amp; severity of crashes</td>
<td>Change in number of fish passage, hydrological obstructions</td>
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<td></td>
</tr>
<tr>
<td>Improve modal efficiency and modal LOS - connectivity</td>
<td>Percent lane miles in good and excellent condition on bus routes</td>
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</tbody>
</table>

**Why?**
- Goals, Objectives

**What?**
- Measures, Current State, Desired State

**How?**
- Plan, Accomplishments tied to program priorities

Representative Sample – Working Draft
Applying the Forward Four Guiding Principles

- Preservation First
- Maximize Return on Investment
- Make It Sustainable
- System Not Projects
Take Care of What You Have

Preservation First

System Not Projects

Safety

Maximize Return on Investment

Make It Sustainable
Key Components, Critical Links

System Not Projects

Preservation First

Maximize Return on Investment

SAFETY

Make It Sustainable
Get the Best Bang for the Buck

System Not Projects

Preservation First

Safety

Maximize Return on Investment

Make It Sustainable
Look to the Future

- Preservation First
- Maximize Return on Investment
- System Not Projects
- Make It Sustainable
Interweaving Our Sustainability Vision Into NYSDOT’s Culture

Exemplify How Transportation Supports a Sustainable Society

WHY?
- Strategic

WHAT?
- Tactical

HOW?
- Operational