Sustainability in the Public Right-of-Way

- For Chicago and the region
- Focused on Public Right-of-Way
  - Comprises 23 percent of land area
  - Right-of-way = public space
  - Multiple stakeholder involvement
    - Sister Agencies
    - Sister Departments
    - Government Agencies
    - Utilities
    - Private Developers

- Applies to Planning, Design, Construction and Maintenance
  - Streets: Resurfacing & Reconstruction
  - Bridges & Bridge House
  - Transit Stations & BRT
  - Bike Facilities
  - Streetlights & Signals
  - Curb, Gutter & Sidewalks
  - Planning
  - Signage
  - Landscaping
Mission

The Sustainable Urban Infrastructure Guidelines and Policies will embrace and expand upon the environmental benefits of Complete Streets and help to create and maintain a city where all Chicagoans benefit from a high quality of life without depleting our natural resources.
Purpose & Need

To create a safe, livable, and sustainable City.

To provide simple, pointed design, construction, and maintenance guidance for the creation of a Sustainable Urban Infrastructure for all Chicagoans.

To prepare the City’s infrastructure to respond to the challenges of climate change and enact policies to reduce its negative impacts.
Chicago Plans & Policies

Chicago Climate Action Plan

Adding Green to Urban Design: A City for All Future Generations

Sustainable Development

Chicago Forward

Department of Transportation Action Agenda

Sustainable Chicago 2015

Guidelines and Policies
How we get to Great Streets

- Complete Streets Chicago
- Sustainable Urban Infrastructure Guidelines and Policies
- Placemaking Guidelines

[Diagram showing the relationship between Placemaking, Modal Hierarchy, and Ecological Services for achieving Great Streets]
Document Organization

- Starts with Mission and Purpose
- Organized around environmental categories for public ROW
- Supported by objectives for Chicago prioritized by need
- Objectives are tied to requirements and policies that provide means and methods
- Strategies implement the requirements
Project Delivery

Supports a process that

- Ensures these objectives are implemented at CDOT and others who work in the public way
- Transforms practice with set performance metrics

<table>
<thead>
<tr>
<th>SUSTAINABLE URBAN INFRASTRUCTURE POLICIES AND GUIDELINES PROJECT DELIVERY PROCESS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GOAL:</strong> Identify and promote projects that advance Sustainable Urban Infrastructure</td>
</tr>
<tr>
<td>1 stage</td>
</tr>
<tr>
<td>Scoping:</td>
</tr>
<tr>
<td><strong>GOAL:</strong> Identify sustainable infrastructure requirements and goals</td>
</tr>
<tr>
<td>2 stage</td>
</tr>
<tr>
<td><strong>GOAL:</strong> Confirm Sustainable Strategies</td>
</tr>
<tr>
<td>3 stages</td>
</tr>
<tr>
<td><strong>GOAL:</strong> Ensure project is built as designed for Sustainable Urban Infrastructure</td>
</tr>
<tr>
<td>4 stages</td>
</tr>
<tr>
<td><strong>GOAL:</strong> Measure the effectiveness of the Sustainable Urban Infrastructure</td>
</tr>
<tr>
<td>5 stages</td>
</tr>
<tr>
<td><strong>GOAL:</strong> Ensure Sustainability through project’s lifespan</td>
</tr>
<tr>
<td>6 stages</td>
</tr>
</tbody>
</table>

**Scoping:**
- Establish Objectives
- Perform Research
- Conduct Site Visits
- Assemble Data
- Revisit Objectives

**Design:**
- Design
- Evaluate Impact
- Obtain Feedback
- Prepare Final Design

**ENGAGE PUBLIC STAKEHOLDERS**
- Find key opportunities to interface with community groups, residents, and business owners - allow projects to be influenced by lessons learned through outreach efforts

**ENGAGE AGENCIES & DEPARTMENTS**
- Coordinate CDOT projects and measurement with external agencies and other city departments to assure the best use of resources and meet multiple objectives through complete design processes
# Project Matrix

**TABLE 7: URBAN ECOLOGY REQUIREMENT MATRIX**

<table>
<thead>
<tr>
<th>CDOT Project Type</th>
<th>Requirement UE1</th>
<th>Requirement UE2</th>
<th>Requirement UE3</th>
<th>Requirement UE4</th>
<th>Requirement UE5</th>
<th>Requirement UE6</th>
<th>Requirement UE7</th>
<th>Requirement UE8</th>
<th>Requirement UE9</th>
<th>Requirement UE10</th>
<th>Requirement UE11</th>
<th>Requirement UE12</th>
<th>Requirement UE13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Red Light Running Cameras</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Signage &amp; Pavement Marking Improvements</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lighting Projects</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tree Planting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADA Ramp Improvements</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pedestrian Safety Infrastructure Improvements</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arterial Resurfacing</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bike Facility Projects (primarily striping)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bridge Repair (not replacement)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sidewalk and Miscellaneous Concrete Projects</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vertical Clearance Improvements</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Landscaped Median Improvements</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traffic Calming</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transit Projects (BRT)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
WATER

OBJECTIVES

- Reduce basement and street
- Reduce CSO events and volumes
- Reduce potable water use
- Clean and direct stormwater to natural water bodies
- Reduce non-point source pollution to natural water bodies
- Ensure erosion and sediment control

REQUIREMENTS

W1 W2 W3 W4 W5 W6 W7 W8 W9 W10 W11

STRATEGIES

- Stormwater Paving
- Stormwater Landscape
- Water Conservation
Sample Requirement – W1a

• Rate Control: Green Infrastructure shall be designed to capture 100% of water from the public right-of-way that can be made tributary to best practices as outlined in Volume II of this document. The target release rate for the project ROW shall be 1.5 cfs/acre for the 10-year event.

• Stormwater rate, proximity to bodies of water, permeability & retention
ENERGY OBJECTIVES

- Reduce Energy use
- Use clean and renewable energy
- Generate and transmit renewable energy

REQUIREMENTS

EN1 | EN2 | EN3 | EN4 | EN5 | EN6 | EN7 | EN8 | EN9 | EN10 | EN11

STRATEGIES

- Responsive Lighting
- Alternative Energy for small facilities

CDOT
CHICAGO DEPARTMENT OF TRANSPORTATION

sustainable urban INFRASTRUCTURE guidelines and policies
Sample Requirement - EN2

- All new or retrofitted arterial lighting will be cut-off, including pedestrian, alley and viaduct fixtures.
- Energy efficiency, type of fixture, location of fixtures, renewable technologies
**ECONOMICS**  
**OBJECTIVES**  
- Quantify the environmental value of investment  
- Enhance property values  
- Coordinate with other city departments and agencies  
- Streamline utility coordination and installation  
- Maximize implementation of adaptation strategies  
- Support green collar job creation  

**REQUIREMENTS**  

<table>
<thead>
<tr>
<th>EC1</th>
<th>EC2</th>
<th>EC3</th>
<th>EC4</th>
<th>EC5</th>
<th>UE4</th>
<th>UE5</th>
<th>UE8</th>
<th>CM3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**STRATEGIES**  
- Sustainable Valuation  
- Climate-readiness

**CDOT**  
**CHICAGO DEPARTMENT OF TRANSPORTATION**
Sample Requirement - EC1

- Apply Sustainability Valuation to a pilot project that is proposing a value engineering (VE) study
MATERIALS & WASTE

OBJECTIVES

Maximize construction waste reduction and recycling of construction waste.
Maximize the reuse of materials and the use of recycled materials.
Support sustainable production practices

REQUIREMENTS

MW1  MW2  MW3  MW4  MW5  MW6  MW7  MW8  MW9  MW10  MW11

STRATEGIES

- Waste Management
- Cool Pavement
- Recycled Materials
- Transport Distance

sustainable urban infrastructure
guidelines and policies
Sample Requirement - MW6

- Maximize the use of cool pavement strategies
- Albedo, heat island, recycled materials, transport distance,
CLIMATE & AIR QUALITY

OBJECTIVES

Reduce urban heat island effect
Use low-emitting materials
Promote alternative fuel use
Reduce emissions related to construction activities

REQUIREMENTS

CA1  CA2  CA3  CA4  CA5  CA6  CA7  CA8  MW2  MW6  MW7  MW8  MW9  MW10  UE1  UE5

STRATEGIES

- Truck Staging Areas
- Air Quality Action Days
- Cool Pavement
- Noise Mitigation
- Dust Control
- Cleaner Fleets
- Recycled Materials
- Transport Distance
Sample Requirement - CA1

• Require ultra low sulfur diesel and enforce a 3-minute anti-idling policy during construction
• Construction equipment, methodologies & operations protocols
# Beauty & Community

## Objectives

- Implement the complete streets policies
- Create unique and quality spaces that reflect the local neighborhood
- Educate and promote environmental awareness
- Include stakeholder input in your decision making process

## Strategies

- Plantings

## Requirements

<table>
<thead>
<tr>
<th></th>
<th>BC1</th>
<th>BC2</th>
<th>BC3</th>
<th>BC4</th>
<th>BC5</th>
<th>BC6</th>
<th>BC7</th>
<th>BC8</th>
<th>BC9</th>
<th>BC10</th>
<th>UE5</th>
<th>UE9</th>
<th>W11</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
</tr>
</tbody>
</table>
Sample Requirement - BC3

• For projects over $10 Million, design the project according to the principles of Context Sensitive Solutions
• Public art, placemaking features, outreach
URBAN ECOLOGY

OBJECTIVES

- Create and support natural habitat
- Protect and restore natural habitat
- Allow for interaction and observation of both people and the natural world

REQUIREMENTS

| UE1 | UE2 | UE3 | UE4 | UE5 | UE6 | UE7 | UE8 | UE9 | UE10 | UE11 | UE12 | EN2 | EN4 |

STRATEGIES

- Plantings
- Climate-readiness
Sample Requirement - UE8

- Incorporate climate change adaptation into overall project design including plant and material choices. Consult Climate-Ready Checklist of Natural Areas and Green Spaces document.

- Plants, plant types, soil considerations
COMMISSIONING

OBJECTIVES

Maintain the site year round to ensure environmental benefits
Identify and develop design tools to predict performance
Evaluate verify and document performance and update design tools

REQUIREMENTS

CM1 CM2 CM3 CM4 CM5 CM6

STRATEGIES

- Comissing Plan
- Stormwater Paving
- Responsive Lighting
- Plantings
- Climate readiness
Sample Requirement - CM2

• All projects of $5 Million or more have a monitoring and commissioning plan

• Construction Consideration
  – Contractor participation in commissioning
Implementation

- Project Documentation and Tracking
- Data and Measurement
- Economics
- Strategies (Volume II)
Follows a project from inception to commissioning
Provides summary of sustainable goals and implementation
Provides a document chain of responsibility

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Name</th>
<th>Contract Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR, I, US</td>
<td>MP Limits</td>
<td></td>
</tr>
</tbody>
</table>

**REVIEW ITEMS**

A. **SCOPING (to be completed after project scoping)**

1. Did the project team evaluate potential synergies with nearby CDOT and Water Dept. projects?  
   Yes  No\(^{(1)}\)  N/A  
   - \(\text{O} \quad \text{O} \quad \text{O}\)

2. Did the project team coordinate with utility agencies to avoid construction inefficiencies?  
   Yes  No\(^{(1)}\)  N/A  
   - \(\text{O} \quad \text{O} \quad \text{O}\)

3. Did the project team considered partnering with nearby community groups and adjacent property owners to maximize co-benefits?  
   Yes  No\(^{(1)}\)  N/A  
   - \(\text{O} \quad \text{O} \quad \text{O}\)
### Project Documentation and Tracking

#### DESIGN CHECKLIST

This document is an organizing tool for designers to document their consideration and selection of the requirements appropriate for their project. It allows the diversity of requirements to be summarized neatly on one page and provide, at a glance, the sustainability elements the project will focus on.

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### CONCEPTUAL DESIGN (< 10 percent design)

1. Identify the CDOT function that best applies to your project from the list to the right.
   - Signal
   - Red Light Running Cameras
   - Signage & Pavement Markings
   - Lighting
   - Tree Planting
   - ADA Ramp
   - Pedestrian Safety
   - Bike Facility
   - Arterial Resurfacing
   - Bridge Repair
   - Sidewalk/Misc Concrete
   - Vertical Clearance
   - Landscaped Median
   - Traffic Calming
   - Transit Projects
   - Aisle Improvements
   - City-funded Capital Projects
   - CREATE/rail projects
   - Streetscape
   - Federal Aid Capital Projects
   - WPA/Industial Streets

2. From Table 2, which WATER requirements apply to your project type?
   - W1A or W1B
   - W2A or W2B
   - W3A or W3B
   - W4A or W4B
   - W5A or W5B
   - W6
   - W7
   - W8
   - W9
   - W10
   - W11
   - W12

3. From Table 3, which ENERGY requirements apply to your project type?
   - EN1
   - EN2
   - EN3
   - EN4
   - EN5
   - EN6
   - EN7
   - EN8
   - EN9
   - EN10
   - EN11
   - EN12

4. From Table 4, which ECONOMICS requirements apply to your project type?
   - EC1
   - EC2
   - EC3
   - EC4
   - EC5

5. From Table 5, which MATERIALS & WASTE requirements apply to your project type?
   - MW1
   - MW2
   - MW3
   - MW4
   - MW5
   - MW6
   - MW7
   - MW8
   - MW9
   - MW10
   - MW11

6. From Table 6, which CLIMATE & AIR QUALITY requirements apply to your project type?
   - CA1
   - CA2
   - CA3
   - CA4
   - CA5
   - CA6
   - CA7
   - CA8
   - CA9
   - CA10

7. From Table 7, which URBAN ECOLOGY requirements apply to your project type?
   - UE1
   - UE2
   - UE3
   - UE4
   - UE5
   - UE6
   - UE7
   - UE8
   - UE9
   - UE10
   - UE11
   - UE12

8. From Table 8, which PLACEMAKING requirements apply to your project type?
   - PL1
   - PL2
   - PL3
   - PL4
   - PL5
   - PL6
   - PL7
   - PL8
   - PL9
   - PL10

9. From Table 9, which COMMISSIONING requirements apply to your project type?
   - CM1
   - CM2
   - CM3
   - CM4
   - CM5
   - CM6

10. Refer to the project requirements matrix for full description of each applicable requirement

11. Identify the types of data needed for your project from the data matrix.

*Full Design checklist can be found within Volume 2*
Data and Measurement

- Data informs and improves design decisions with specific information about project area
  - Soils
  - Land use
  - Tree canopy
  - Urban heat island data map

- Performance metrics
  - Monitoring
  - Modeling
  - Reporting
Economics

• Sustainability Valuation
  – Incorporating environmental costs and benefits --- in dollars--- of the project into a cost-benefit ratio
• Ability to communicate environmental and social values of the project in dollars
• Ability to assess contribution to the economy
• Looking at total project cost (life-cycle)
• Strategies
• Descriptions of How To
• Guide for Calculations
• Some Technical Drawings
• Description of Policies
4.3 COOL PAVEMENT STRATEGIES - DESIGN CONSIDERATIONS

WHEN DESIGNING A "COOL PAVEMENT", CONSIDER THE FOLLOWING:

1. Conventional Asphalt Pavement: Conventional asphalt pavement consists of asphalt binder mixed with aggregate. It can be modified with high albedo materials, like using light-colored aggregate, colored asphalt by pigments or sealant, or using tree resin in place of asphalt. It also could be treated after installation to raise reflectance, like applying light-colored coating, or chip seals, white-lining, ultrathin white-lining (UTW) and microsurfacing with light-colored aggregate and/or emulsified polymer resin for maintenance. This pavement could be applied in a wide range of functions from parking lots to highways.

2. Conventional Concrete Pavement: Conventional concrete pavement is made by mixing Portland cement, water and aggregate. It can be used in a wide range of applications including trails, street road, parking lots, and highways. The concrete pavement generally has a higher reflectance than asphalt pavements. It can be modified to increase the reflectance by using white cement, or cement finished with a light color slag.

3. Permeable Pavement: Permeable pavement contains more voids than conventional pavement and is designed to allow water to drain through the surface into the sublayers and even ground below. Permeable pavements include porous asphalt pavement (PAP), open-graded friction course (OGFC) or permeable friction course (PFC), pervious concrete pavement, and brick or block pavers. (See permeable pavement section for more details)

4. Shading/Vegetation: Pavement shading includes tree shading, vegetation shading which especially could be used in parking lots. Besides tree shading and vegetation shading, another emerging option considered by some local governments and private firm is to install canopies that incorporate solar panels in parking lots, even along or on the highway. Beyond shading pavement surface from incoming solar energy, these photovoltaic canopies also could generate electricity that can help power nearby buildings or provide energy for plug-in electric vehicles.
Integrated Design: Blue Island Cross Section

- Permeable Pavement for Stormwater Management
- Photocatalytic for Air Quality
- High SRI for Lighting and UHI
- Bike/ Parking Lane
Streetscapes – Lawrence Avenue

Proposed Cross Section
Next Steps

- Gather your input
- Revise final document
- Release Guidelines & Policies in early spring
- Introduce ordinance
Peggy Notebaert Nature Museum  
2430 N. Cannon Drive, North Gallery  
January 29th  
9 - 11 am

Center for Neighborhood Technology  
2125 W. North Avenue  
January 29th  
6 - 8 pm

Chicago Center for Green Technology  
445 N. Sacramento Boulevard  
January 30th  
9 - 11 am

Chicago Metropolitan Agency for Planning*  
233 S. Wacker Drive, Suite 800  
January 31st  
9 - 11 am

Southeast Environmental Task Force  
13300 S. Baltimore Avenue  
February 6th  
10 am - 12 pm

Greater Auburn Gresham Development Corporation  
@ Urban Partnership Bank  
7801 S. State Street  
February 7th  
6-8 pm

*RSVP required for Willis Tower security purposes. RSVP to lwilkison@metrostrategiesinc.com. Please be prepared to show photo identification at the security desk in the Willis Tower lobby.
Contact

Gerardo Garcia, Project Manager
gerardo.garcia@site-design.com
312.742.0318

www.chicagodot.org
Sustainable Urban Infrastructure Guidelines and Policies

- Looked across best practices and pilot projects
- Compiled into a document that integrates sustainability throughout:
  - Planning
  - Design
  - Construction
  - Maintenance of Public Space
Sustainable 2015

- Set specific city goals
- Set performance metrics
- Informed SUIG requirements and policies

<table>
<thead>
<tr>
<th>REQUIREMENT/POLICY</th>
<th>POLICY/GOAL</th>
<th>PERFORMANCE METRIC</th>
</tr>
</thead>
</table>
| MW1                | Increase access to recycling and improve policies to promote waste reduction and reuse.  
  • Divert 75% eligible municipal construction waste | 1. Metric tons of waste diverted |
| PL7                | Improve local air quality by accelerating performance towards federal standards and decreasing greenhouse gas emissions  
  • Improve transportation options by creating bicycling, walking, and public transportation options.  
  • Implement the Chicago Clean Diesel Contracting Ordinance's Clean Fleet Score and ban high polluting equipment and vehicles on City projects starting in 2014. | 1. Miles of bike lanes, linear feet of sidewalks  
  2. Implementation of Complete Streets  
  3. Implementation of equipment ban |
# National Best Practices

<table>
<thead>
<tr>
<th>Rating System</th>
<th>Review Process</th>
<th>Roadway Design &amp; Construction</th>
<th>Building Design &amp; Construction</th>
<th>Site Development</th>
<th>Community Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greenroads™</td>
<td>Third Party</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INVEST</td>
<td>Self-assessment</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>envision™</td>
<td>Third Party</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>STARS-Project</td>
<td>Third Party</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STEED</td>
<td>Self-assessment</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sustainable Sites Initiative</td>
<td>Not Established</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>GreenLITES</td>
<td>Self-assessment</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-LAST™</td>
<td>Self-assessment</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BE²ST in Highways</td>
<td>Self-assessment</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GreenPave</td>
<td>Self-assessment</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green Guide for Roads</td>
<td>Self-assessment</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Project Documentation and Tracking

- Sustainable Workbook
  - Integration with Complete Streets
  - Summary of decision making process
  - Evaluation of data and context
  - Technical documentation
Data and Measurement

- Performance metrics
- Monitoring
- Modeling
- Reporting