

A nighttime photograph of a cityscape featuring a complex highway interchange with multiple overpasses and ramps. The city buildings in the background are illuminated with lights, and the sky is dark. The overall color palette is dominated by blues and oranges from the city lights.

# Introducing **ENVISION**

March 5, 2024 | Presenter Name

# Institute for Sustainable Infrastructure (ISI)

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**Education and research nonprofit** (501c3) based in Washington, D.C.

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**Founded in 2010** by ACEC, APWA, and ASCE



Collaborated with the then **Zofnass Program for Sustainable Infrastructure at the Harvard Graduate School of Design** to develop and manage a sustainability rating system for infrastructure



The first version of the **Envision framework** and rating system was introduced in 2012



# Getting Infrastructure Right

## A GENERATIONAL OPPORTUNITY



Infrastructure provides **the building blocks on which communities depend**, but historic underfunding led to significant infrastructure gaps.



Too often infrastructure development was also environmentally costly **and not aligned with community needs**.



Public agencies and the A/E/C community are tasked with the **timely renewal of infrastructure**.



Their work is supported by policies like the **Infrastructure Investment and Jobs Act** and the **Inflation Reduction Act** that have transformed the industry.

## DID YOU KNOW?

Many of those same companies and agencies **are also ISI organization members**

# ISI is the Hub of a Unique Community



*\*as of March 31, 2024*

# ISI Programs

**ISI provides tools, resources, and roadmaps** for civil infrastructure projects to be more sustainable, resilient, and equitable.



## MEMBERSHIP

A network of industry experts leading the charge for sustainable infrastructure



## CREDENTIALING

Training and certification on the knowledge and application of the Envision framework



## VERIFICATION

Third-party evaluation of project sustainability performance against the Envision criteria



## RESEARCH

In 2022, ISI brought the Zofnass program over from Harvard to support research related to advancing sustainable infrastructure



ENVISION™

# Introducing Envision

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**Envision is a blueprint for fundamental change in infrastructure development.**

- Enables a **thorough examination** of the sustainability and resiliency of infrastructure projects
- Provides **practical guidance** on how to improve performance
- Drives **better project management**

# Components of the Envision Framework



## GUIDANCE MANUAL

The primary reference document of the Envision sustainability framework.



## PROJECT SELF-ASSESSMENT TOOL

Rate a project's sustainability components against the framework's criteria.



## PROFESSIONAL TRAINING & CREDENTIALING

Be recognized in the industry for your sustainability knowledge and skills.



## PROJECT VERIFICATION & AWARDS / RECOGNITION

*Based on % of applicable points achieved*



**Verified**  
20-29%



**Silver**  
30-39%

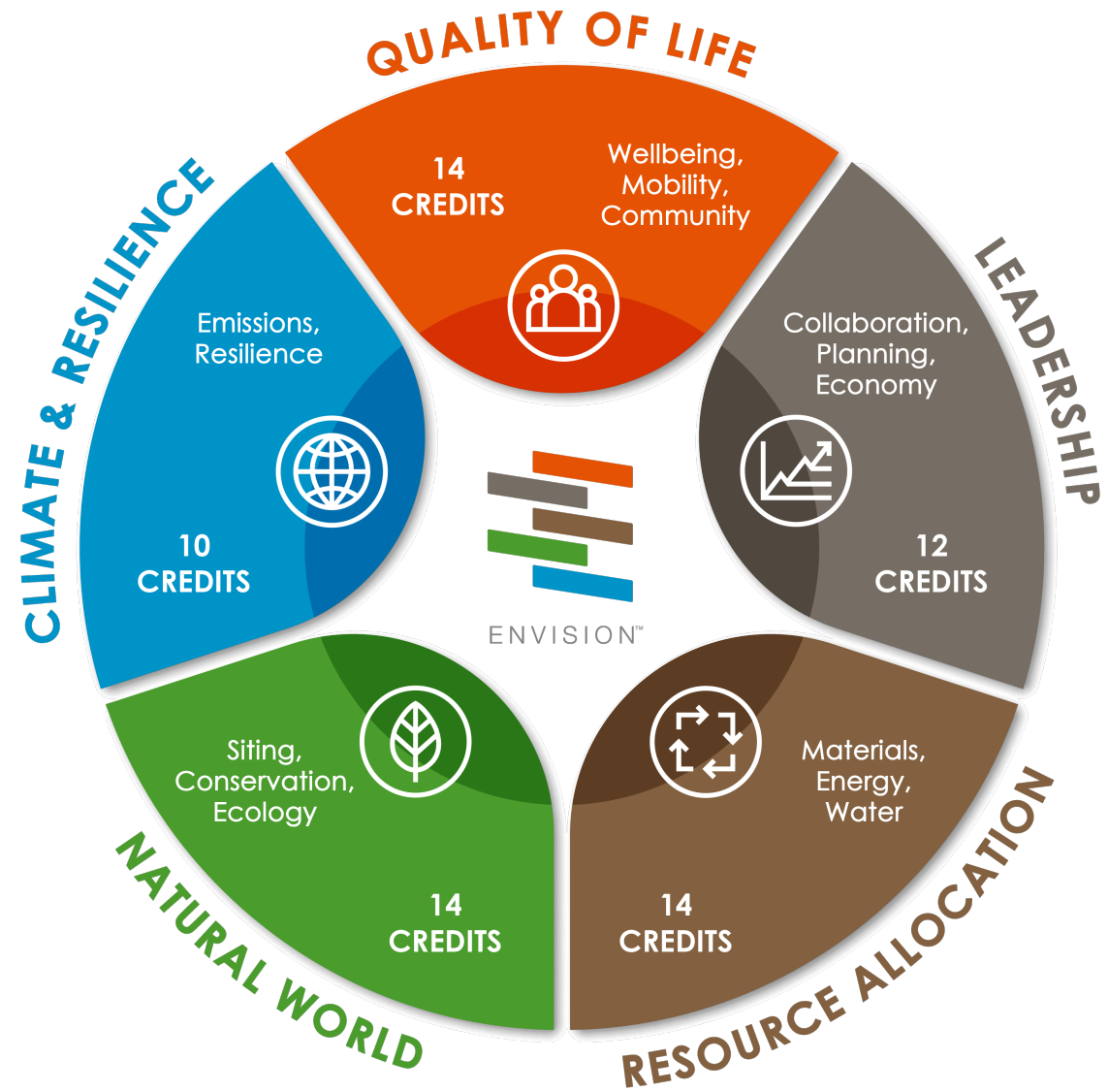


**Gold**  
40-49%



**Platinum**  
50% or more

# 5 Categories of Sustainability Indicators





# 64 Credits (Sustainability & Resilience Indicators)



## WELLBEING

- QL1.1 Improve Community Quality of Life
- QL1.2 Enhance Public Health & Safety
- QL1.3 Improve Construction Safety
- QL1.4 Minimize Noise & Vibration
- QL1.5 Minimize Light Pollution
- QL1.6 Minimize Construction Impacts

## MOBILITY

- QL2.1 Improve Community Mobility & Access
- QL2.2 Encourage Sustainable Transportation
- QL2.3 Improve Access & Wayfinding

## COMMUNITY

- QL3.1 Advance Equity & Social Justice
- QL3.2 Preserve Historic & Cultural Resources
- QL3.3 Enhance Views & Local Character
- QL3.4 Enhance Public Space & Amenities

QL0.0 Innovate or Exceed Credit Requirements



## COLLABORATION

- LD1.1 Provide Effective Leadership & Commitment
- LD1.2 Foster Collaboration & Teamwork
- LD1.3 Provide for Stakeholder Involvement
- LD1.4 Pursue Byproduct Synergies

## PLANNING

- LD2.1 Establish a Sustainability Management Plan
- LD2.2 Plan for Sustainable Communities
- LD2.3 Plan for Long-Term Monitoring & Maintenance
- LD2.4 Plan for End-of-Life

## ECONOMY

- LD3.1 Stimulate Economic Prosperity & Development
- LD3.2 Develop Local Skills & Capabilities
- LD3.3 Conduct a Life-Cycle Economic Evaluation
- LD0.0 Innovate or Exceed Credit Requirements



## MATERIALS

- RA1.1 Support Sustainable Procurement Practices
- RA1.2 Use Recycled Materials
- RA1.3 Reduce Operational Waste
- RA1.4 Reduce Construction Waste
- RA1.5 Balance Earthwork On Site

## ENERGY

- RA2.1 Reduce Operational Energy Consumption
- RA2.2 Reduce Construction Energy Consumption
- RA2.3 Use Renewable Energy
- RA2.4 Commission & Monitor Energy Systems

## WATER

- RA3.1 Preserve Water Resources
- RA3.2 Reduce Operational Water Consumption
- RA3.3 Reduce Construction Water Consumption
- RA3.4 Monitor Water Systems

RA0.0 Innovate or Exceed Credit Requirements



## SITING

- NW1.1 Preserve Sites of High Ecological Value
- NW1.2 Provide Wetland & Surface Water Buffers
- NW1.3 Preserve Prime Farmland
- NW1.4 Preserve Undeveloped Land

## CONSERVATION

- NW2.1 Reclaim Brownfields
- NW2.2 Manage Stormwater
- NW2.3 Reduce Pesticide & Fertilizer Impacts
- NW2.4 Protect Surface & Groundwater Quality

## ECOLOGY

- NW3.1 Enhance Functional Habitats
- NW3.2 Enhance Wetland & Surface Water Functions
- NW3.3 Maintain Floodplain Functions
- NW3.4 Control Invasive Species
- NW3.5 Protect Soil Health

NW0.0 Innovate or Exceed Credit Requirements



## EMISSIONS

- CR1.1 Reduce Net Embodied Carbon
- CR1.2 Reduce Greenhouse Gas Emissions
- CR1.3 Reduce Air Pollutant Emissions

## RESILIENCE

- CR2.1 Avoid Unsuitable Development
- CR2.2 Assess Climate Change Vulnerability
- CR2.3 Evaluate Risk & Resilience
- CR2.4 Establish Resilience Goals and Strategies
- CR2.5 Maximize Resilience
- CR2.6 Improve Infrastructure Integration

CR0.0 Innovate or Exceed Credit Requirements

# Envision Credit Detail



QUALITY OF LIFE: WELLBEING

## QL1.1 Improve Community Quality of Life

26

POINTS

### INTENT

Improve the net quality of life of all communities affected by the project and mitigate negative impacts to communities.

### METRIC

Measures taken to assess community needs and improve quality of life while minimizing negative impacts.

### LEVELS OF ACHIEVEMENT

IMPROVED	ENHANCED	SUPERIOR	CONSERVING	RESTORATIVE
A + B	A + B + C + D	A + B + C + D + E	A + B + C + D + E + F	A + B + C + D + E + F + G
(2) Community Considerations	(5) Community Linkages	(10) Broad Community Alignment	(20) Holistic Assessment & Collaboration	(26) Protecting The Future
<p>(A) The project team identifies and takes into account community needs, goals, and issues. For example, the project team has located and reviewed the most recent community planning information and assessed relevant community needs, goals, and/or issues.</p> <p>(B) The project meets or supports community needs and/or goals.</p>				
<p>(C) The project assesses the social impacts it will have on the host and affected communities' quality of life.</p> <p>(D) The affected communities are meaningfully engaged in identifying how the project supports community needs and/or goals.</p>				
<p>(E) Based on the social assessment, potential negative impacts on the host or nearby affected communities are mitigated following a hierarchy that prioritizes avoidance, minimization, restoration, and offsetting.</p>				
<p>(F) Community satisfaction is demonstrated by feedback from the stakeholder engagement process verifying actions taken in criteria A, B, C, and D.</p>				
<p>(G) The project proactively addresses trends in changing social, economic, and/or environmental conditions within the community in order to ensure a high quality of life over the long term.</p>				

# Envision Use

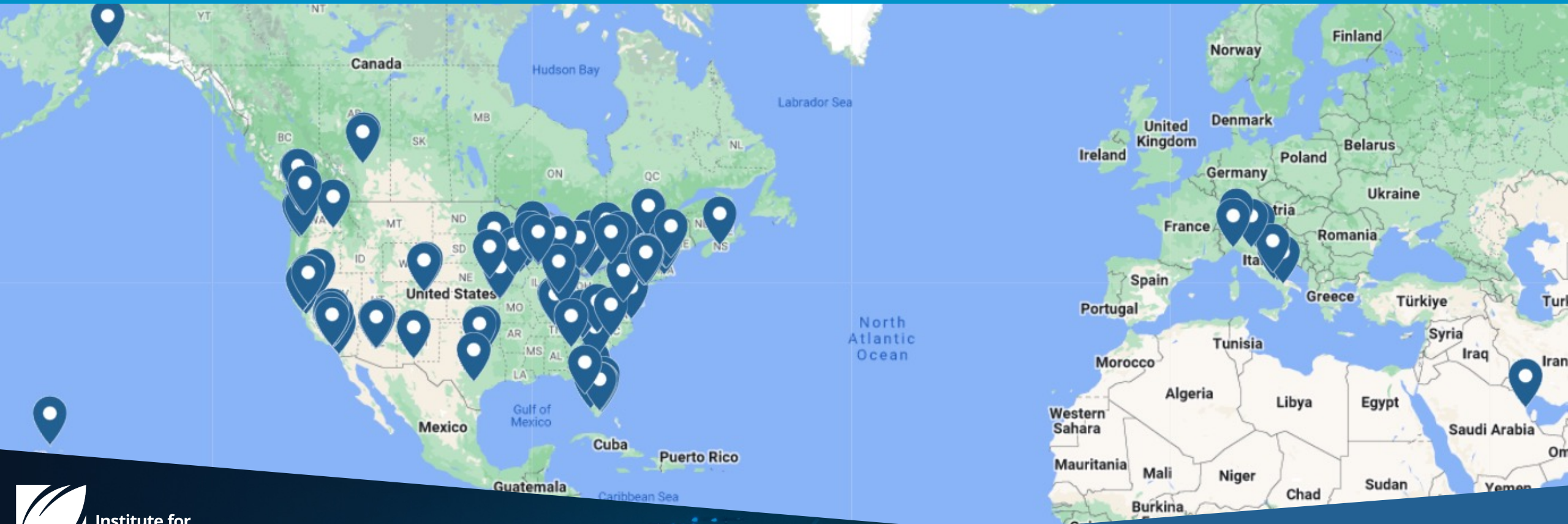
✓ 165+ verified projects,  
totaling ~\$130 billion

✓ 185+ projects in registration,  
totaling ~\$120 billion

✓ 9,250+ credentialed  
professionals

✓ 650+ organizational  
members

*\*as of March 31, 2024*



# Applicable to All Types & Sizes of Infrastructure

Envision demonstrates versatility across different sectors.



Transportation



Land/Environmental



Water



Waste



Energy



Information





# California High-Speed Rail

*Los Angeles - San Francisco, California*

ENVISION PLATINUM 2020

BEFORE



# Historic Fourth Ward Park

*Atlanta, Georgia*

ENVISION GOLD 2020





# LaGuardia Airport CTB Replacement

New York City

ENVISION PLATINUM 2019

# Entrance Building to the Vendôme Metro Station

Montreal, Quebec

ENVISION GOLD 2022





# South Los Angeles Wetland Park

*Los Angeles, California*

ENVISION PLATINUM 2014

# Gordie Howe International Bridge

*Windsor, Ontario*

ENVISION PLATINUM 2021



# North Rock Solar Project

*Rock County, Wisconsin*

ENVISION PLATINUM 2024



# Osborn Street Plaza Project

New York City

ENVISION VERIFIED 2024



# TESTIMONIALS

*“Envision goes beyond the basic efforts of project management and development, into areas that benefit the community in a holistic way.”*

- Dave Koster, General Manager, **Holland Board of Public Works**

*“Using the Envision certification process has helped the City become a better fiscal, social and environmental steward,”*

- Max Kirschbaum, Public Works and Utilities Director, **City of Westminster**

*“We’ve used Envision to build a culture of sustainability at Sound Transit.”*

- Denis Martynowych, Senior Sustainability Planner and Designer, **Sound Transit**

# How Envision is Being Applied

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**Federal Regulations**



**State Legislation**



**City and County Resolutions**



**RFP Requirements**



**Design Guidelines**

# Infrastructure Canada Climate Lens

**All federally funded infrastructure must conduct a climate change resilience assessment.** Approved methodologies to assess climate change risk and resilience consistent with ISO 31000 include **Envision**.

## California Bill SB-44 (2021)

Streamlined judicial review for environmental transit projects that meet sustainability goals.

“(F) The public agency demonstrates how it has incorporated sustainable infrastructure practices to achieve sustainability, resiliency, and climate change mitigation and adaptation goals in the project, including principles, frameworks, or guidelines as recommended by one or more of the following:

- (i) The sustainability, resiliency, and climate change policies and standards of the **American Society of Civil Engineers.**
- (ii) The **Envision Rating System of the Institute for Sustainable Infrastructure.**”





## St. Petersburg Code of Ordinances

“It is the objective of the City that any new qualified City infrastructure project shall be designed and constructed to achieve the current **Envision gold standard.**”

## Miami-Dade Board of County Commissioners (2017 and 2022)

Resolution directing the County Mayor “to incorporate **Envision** into the planning, design, construction, and operation of county-funded infrastructure projects where practicable and feasible.”

## RFPs

### **Requiring an ENV SP**

“As part of the County’s goal to incorporate environmentally sustainable design in infrastructure improvements, the Consultant is required to identify and provide a certified Envision Sustainable Professional (ENV SP) on its staff to assist with design.”

### **Requiring an Envision self-assessment**

“For a project which requires Envision, the Consultant will be responsible for completing an Envision rating assessment using ISI’s online rating tool and following the Envision guidance manual...”

### **Requiring ISI third-party verification**

“If third party verification is required, the Consultant shall be responsible for registering the project with ISI; gathering, preparing, and submitting all documentation to ISI that is required to complete the verification.”

## LA DPW Sustainable Infrastructure Guidelines

The guidelines “have been developed to complement Envision.”

“...Although all SIG strategies are specific to LA County, they address every Envision credit.”

“An analysis was completed to determine that achievement of all required SIG credits equates to an approximate Envision rating equivalency of Bronze...”

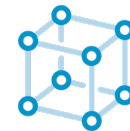
## Port Authority of New York and New Jersey Sustainable Infrastructure Guidelines

“With this update, the Port Authority Sustainable Infrastructure Guidelines Version 2.0 now leverages the Envision system, bringing PANYNJ into alignment with industry best practices while maintaining custom application criteria relevant to the Authority’s unique assets and operations.”

# Benefits of Envision for your Organization



Provides a free “off-the-shelf” framework that fosters **common understanding of sustainability** indicators and performance



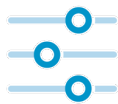
Enables **better project management** and a more streamlined process



Serves as a **single tool** for all infrastructure projects



Offers opportunity for **education and training programs** for staff and teams



Allows for **flexibility and customization** for unique organizations and projects



Supports sustainability **benchmarking and growth**

# Benefits of Envision for You

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Be a **Sustainability Leader**



Develop **new opportunities** to grow your knowledge, skills, and expertise



Serve as an example of **your organization's mission and culture** (*internally*)



Demonstrate your organization's **sustainability commitment** (*externally*)

# Thank You!

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[sustainableinfrastructure.org](https://sustainableinfrastructure.org)

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