

# Sustainable Infrastructure Guidelines

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## ACRONYMS & DEFINITIONS

### ACRONYMS

<b>CRG*</b>	Climate Resilience Design Guidelines
<b>ENV SP</b>	Envision Sustainability Professional
<b>EADD*</b>	Engineering/Architecture Design Division
<b>GHG</b>	Greenhouse Gas
<b>ISI</b>	Institute for Sustainable Infrastructure
<b>LE/A*</b>	Lead Engineer/Architect
<b>LOA</b>	Level of Achievement
<b>NA</b>	Not applicable
<b>NRC</b>	New/Reconstruction
<b>PA/PANYNJ*</b>	Port Authority Of New York And New Jersey
<b>PDPS*</b>	Project Delivery Performance System
<b>PDS*</b>	Project Definition Statement (Operating Projects)
<b>PIRF*</b>	Project Initiation Request Form (Capital Projects)
<b>RE/REO*</b>	Resident Engineer/Resident Engineer's Office
<b>REH</b>	Rehabilitation
<b>RSD*</b>	Resilience and Sustainable Design Group
<b>SBG*</b>	Sustainable Building Guidelines
<b>SCC*</b>	Sustainable Construction Coordinator
<b>SCM*</b>	Sustainable Construction Manager
<b>SD</b>	Sustainable Design
<b>SDC*</b>	Sustainable Design Coordinator
<b>SDM*</b>	Sustainable Design Manager
<b>SEP</b>	System Enhancing Project (i.e., "Expand and Connect")
<b>SIG*</b>	Sustainable Infrastructure Guidelines
<b>SPIF*</b>	Sustainable Project Initiation Form
<b>WEDG</b>	Waterfront Edge Design Guidelines

*\*specific to the Port Authority of New York & New Jersey*

**DEFINITIONS**

Contract Book	The Contract Book includes terms and conditions, as well as all applicable technical specifications required for contractors/vendors to submit bids.
Contract Drawings	The Contract Drawings are signed and/or sealed drawings for construction that include details of all elements fully defined as needed for a biddable contract. Together, the Contract Book and the Contract Drawings constitute the Contract Documents.
Envision Sustainability Professional (ENV SP)	Credential that indicates professional training in the Envision Sustainability Rating System. ENV SPs must pass a credentialing exam and complete annual continuing education to maintain knowledge of the latest approaches, innovations, and issues relevant to sustainable infrastructure.
Envision Sustainability Rating System	Envision is an internationally accepted sustainability rating system for infrastructure projects, developed and managed by the Institute for Sustainable Infrastructure (ISI).
Envision Online Scoresheet	The Envision Online Scoresheet is an online tool that allows project teams to collaboratively assess projects using Envision, upload documentation, describe key features of the project, and register the project for third-party verification.
Resilience and Sustainable Design (RSD) Group	Unit responsible for leading EADD's efforts to incorporate climate resilience and sustainable design into PANYNJ's capital program and related activities. RSD administers three design guidelines that are critical to fulfilling this mission, including the Climate Resilience Design Guidelines ("CRG"), Sustainable Building Guidelines ("SBG"), and Sustainable Infrastructure Guidelines ("SIG").
Sustainable Project Initiation Form (SPIF)	Form used during Engineering proposal / Scope of Work development to determine RSD Guideline applicability and evaluation tracks.
System Enhancing Projects (SEP)	SEP (also called "Expand and Connect") is a PANYNJ Capital Project category, defined as projects that expand system capacity, improve customer service levels/connectivity, or provide other functional improvements that yield regional or economic benefits to meet the growth of the region. SEPs are more likely to present opportunities for achievement in the "Quality of Life" and "Leadership" Envision categories.
Waterfront Edge Design Guidelines (WEDG)	WEDG is a rating system and set of guidelines to create resilient, ecological, and accessible waterfronts, developed by the Waterfront Alliance.

## SIG PROJECT SCOPE DEFINITIONS

Airfield Pavement	<p><u>New / Reconstruction</u>: The construction of new runway, taxiway or apron, or the complete reconstruction of a runway, taxiway or apron.</p> <p><u>Rehabilitation</u>: The milling and overlaying of a runway, taxiway or apron with airfield lighting work included.</p>
Bridge	New / reconstruction or rehabilitation of a bridge. Does not include roadway or deck pavement rehabilitation.
Marine Structures	New / reconstruction or rehabilitation of marine structures including docks, wharves, piers, decks or bulkheads.
Parking Lot	<p><u>New / Reconstruction</u>: The construction of a new parking lot or the complete reconstruction of an existing lot. Complete reconstruction includes full depth pavement rehabilitation and major changes to the drainage system.</p> <p><u>Rehabilitation</u>: The milling and overlaying of an existing parking lot.</p>
Roadway	<p><u>New / Reconstruction</u>: The construction of a new roadway or the reconstruction of an existing roadway. Reconstruction entails full depth pavement replacement and major changes to the drainage system.</p> <p><u>Rehabilitation</u>: The milling and overlaying of an existing roadway, including tunnel and bridge roadways.</p>
Trackwork	New / reconstruction or rehabilitation of trackwork.
Tunnel	New / reconstruction or rehabilitation of a tunnel. Does not include roadway or pavement rehabilitation.
Utility	New / reconstruction or rehabilitation of a subsurface utility system.

**Associated Infrastructure Scopes of Work**

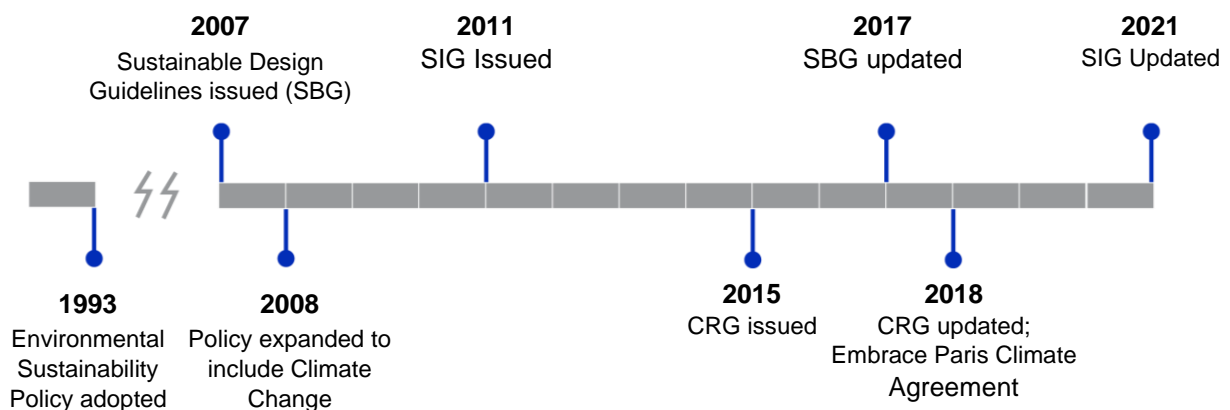
End-of-Life Renewal/ Replacement/Upgrade	Project requires Life Cycle Cost Analysis (LCCA) per PANYNJ Guidelines.
Exterior Lighting	Project includes new / reconstruction or rehabilitation of exterior lighting. Airfield lighting can be exempt if efficient lighting is not permitted due to regulations.
Landscaping	Project includes new / reconstruction or rehabilitation of permanently vegetated areas.
Plumbing/Irrigation/ Potable Water	Project includes new / reconstruction or rehabilitation of potable water systems (i.e., plumbing, irrigation, etc.)
Site Work/Excavation	Project includes excavation / soil disturbance.
Stormwater Drainage	Project includes increase in impervious surface or new / reconstruction or rehabilitation of stormwater drainage systems.
Traffic	Project affects the flow, capacity, or efficiency of vehicular traffic. Includes the use of Intelligent Transportation System (ITS) technologies.

# 1 INTRODUCTION

## 1.1 BACKGROUND

In 1993, the Port Authority of New York and New Jersey (PANYNJ) formally adopted an Environmental Sustainability Policy recognizing its “long-standing commitment to provide transportation, terminal and other facilities of commerce within the Port District in an environmentally sound manner.” In 2008, the Policy was expanded to address the agency’s response to climate change. PANYNJ pledged to make best efforts to reduce greenhouse gas (GHG) emissions from its facilities by 80 percent by 2050. In 2018, PANYNJ became the first public transportation agency in the United States to embrace the Paris Agreement, the aim of which is to strengthen the global response to the threat of climate change.

In the spirit of these broader policy directives, the Port Authority first issued Sustainable Design Guidelines in 2007. The original Guidelines were primarily oriented to buildings, so in 2011 PANYNJ broadened its focus, creating separate Sustainable Infrastructure Guidelines (SIG). The original Guidelines were retitled as the Sustainable Building Guidelines (SBG). Together, the Guidelines cover the full range of Port Authority asset types, providing a flexible, cost-effective approach to enhancing project sustainability. The Resilience and Sustainable Design (RSD) Group within the Engineering/Architecture Design Division (EADD) is responsible for administering these guidelines, along with the Climate Resilience Design Guidelines (CRG).



**Figure 1.1 PANYNJ Sustainable Design Timeline**

## 1.2 OBJECTIVES

The purpose of the Sustainable Infrastructure Guidelines is to ensure that the Port Authority’s non-building projects are planned, designed, and constructed in alignment with PANYNJ’s Environmental Sustainability Policy. The specific objectives of SIG include:

- Align technical criteria with national and global best-in-class industry standards (and thereby eliminate the need to develop and maintain custom technical criteria);
- Pursue a flexible approach to integrating sustainability into project planning, design, and construction while elevating key PANYNJ priorities, including emissions reduction and equity;
- Provide guidance, resources and tools that support users in achieving successful, measurable outcomes without imposing undue administrative burden; and
- Ensure that training and continuing education opportunities are readily available to a wide community of practitioners, both internal and external to the Port Authority.

## 2 SIG 2.0 OVERVIEW

### 2.1 UPDATE SUMMARY

Since the original launch of SIG in 2011, sustainable infrastructure practice has continued to evolve, and multiple third-party rating systems have been introduced. In particular, the Institute for Sustainable Infrastructure's (ISI) Envision Rating System (Envision) has gained significant traction as a flexible tool enabling project teams to pursue more sustainable strategies during project planning, design, and construction—often with ongoing, long-term benefits to operations and maintenance.

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. Accordingly, this update replaces the original PANYNJ-specific criteria with Envision's credits, developed and vetted by an international network of experienced practitioners. These credits will update periodically as the Envision Rating System evolves, global and national standards shift, and practices advance.

#### Envision Sustainability Rating System

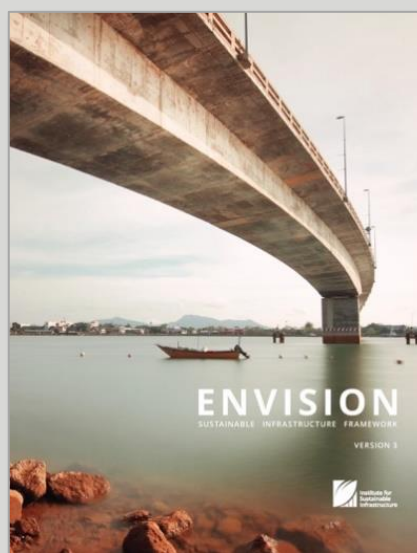
Envision is a decision-making guide that provides industry-wide sustainability metrics for all types and sizes of infrastructure to help users assess and measure the extent to which their project contributes to sustainability across the full range of social, economic, and environmental indicators.

Published in 2018, Envision v3 includes 64 sustainability and resilience indicators, called 'credits', organized into five categories:

-  **Quality of Life**
-  **Leadership**
-  **Resource Allocation**
-  **Natural World**
-  **Climate and Resilience**

The Envision framework includes the Envision Guidance Manual, Envision Online Scoresheet, Envision Sustainability Professional (ENV SP) Credential, Envision Verification (independent third-party project review process), and Envision Awards.

**Becoming an ENV SP** requires candidates to complete the official ENV SP training course and to pass a comprehensive written exam (online). The ENV SP training is offered as an online course or an in-person workshop and completion of the course is a prerequisite for taking the exam. For questions regarding the ENV SP certification and training, please contact [RSDEducation@panynj.gov](mailto:RSDEducation@panynj.gov).



[Envision v3 Guidance Manual](#)



## 2.2 SIG COMPONENTS

SIG 2.0 comprises several complementary resources:

- The Manual (this document), which helps the user navigate the SIG 2.0 process and resources.
- The [Quick Guide](#), a one-page 11x17 companion reference to the Manual, highlighting key SIG components, outlining the process workflow, calling out major milestones and deliverables, and defining primary roles and responsibilities.
- The [Project Credit Checklist](#) (Checklist) is a dynamic and interactive Excel file that all applicable projects will utilize to determine credit applicability, track project performance, and summarize credit documentation. The Checklist will be populated during the first stage of the project design process, updated as the design proceeds, and submitted for review and approval at all major milestone review submissions. Further detail on the Checklist is provided in [Section 5](#) and in the Instructions tab of the Excel file itself.

For more information on the other SIG 2.0 resources as shown in Figure 2.1, including instructions and file locations for these materials, see [Appendix A](#).

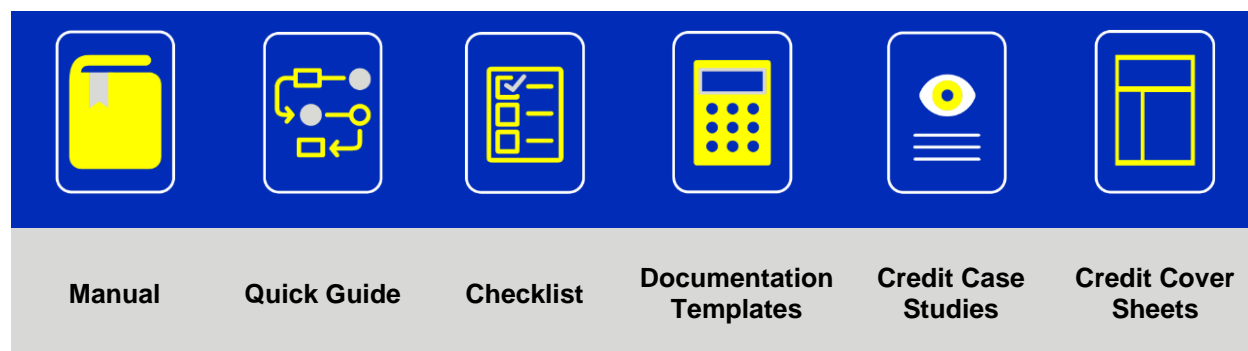


Figure 2.1 SIG 2.0 Components

### 3 ROLES AND RESPONSIBILITIES

The Resilience and Sustainable Design (RSD) Group works in cooperation with multiple units, disciplines, and departments to incorporate climate resilience and sustainable design into the Port Authority's capital program and related activities. RSD is responsible for administering the Sustainable Infrastructure Guidelines, providing subject matter expertise and resources to enhance project sustainability in close collaboration with the full project team through the design process.

As part of the SIG process, RSD fulfills the following roles and responsibilities:

- Sustainable Design Manager (SDM) – The SDM is the RSD representative responsible for approving the project evaluation track during project initiation and approving the final SIG submission upon design completion. For questions regarding the SIG, the Sustainable Design process, or roles and responsibilities, contact [sustainabledesignmanager@panynj.gov](mailto:sustainabledesignmanager@panynj.gov).
  - RSD Task Lead – The SDM appoints an RSD Task Lead to be the primary, day-to-day point of contact for the design team. The RSD Task Lead is responsible for reviewing the SIG technical application at milestone review submissions and providing guidance to the project team. The RSD Task Lead works closely with the SDM to ensure projects meet SIG standards.

The other key project team roles and responsibilities are as follows:

- Lead Engineer/Architect (LE/A) – The LE/A is responsible for managing the SIG implementation and documentation process to ensure successful completion. For projects of significant scale and scope, the LE/A may appoint a Sustainable Design Coordinator (SDC), preferably an Envision Sustainability Professional (ENV SP), from within the lead discipline. Regardless of whether an SDC is appointed, the LE/A retains primary responsibility for achieving a successful outcome.
  - Sustainable Design Coordinator (SDC) – If appointed, the SDC supports the LE/A in communication, coordination, and documentation activities pertaining to the fulfillment of sustainable design objectives. *Note: The tasks assigned to the LE/A throughout this Manual may be completed by the SDC at the LE/A's direction.*
- Resident Engineer (RE)/Resident Engineer's Office (REO) – The RE/REO is the Engineering project lead and primary Line Department liaison during Stage IV (Construction). The Resident Engineer's Office performs inspections and monitors the contractor's activities to ensure that the required equipment, material, and methods of construction comply with the contract drawings and specifications.
  - Sustainable Construction Coordinator (SCC) – As applicable, the SCC, working with or on behalf of the Resident Engineer's Office (REO) and in communication with the SDM, is responsible for construction phase inspections and documentation pertaining to SIG.
- Contractor – The Contractor is the entity providing and coordinating the use of materials, labor, and equipment for the construction of the project.
  - Sustainable Construction Manager (SCM) – The SCM, working with or on behalf of the Contractor and in communication with the SCC, is responsible for ensuring that the project conforms to and fully documents all sustainable design requirements.

## 4 PROJECT INITIATION AND EVALUATION PROCESS

### 4.1 SUSTAINABLE PROJECT INITIATION FORM (SPIF)

The Sustainable Project Initiation Form (SPIF) is completed by the LE/A at the onset of a design project (and updated at major Stage transitions) to establish appropriate evaluation tracks for all three of RSD's design guidelines, including SIG. The SPIF is a critical tool for ensuring clear expectations early in the design process. The SPIF must be submitted directly to the SDM, who will work with the LE/A to determine:

1. Whether the Sustainable Infrastructure Guidelines are applicable to a given project (see [Section 4.2](#) "Project Scope", below);
2. Which project evaluation track is most appropriate (see [Section 4.3](#) "Project Evaluation Tracks", below); and
3. Whether a Sustainable Design Workshop (SDW) is required (see [Section 4.4](#) "Sustainable Design Workshop").

See [Appendix A](#) for the SPIF file location.

### 4.2 PROJECT SCOPE

The categorization of each project scope as "Building", "Infrastructure", or (for some major projects) both "Building" and "Infrastructure" is determined during the development of the PANYNJ Project Definition Statement (PDS)/Project Initiation Request Form (PIRF) in reference to the following guidance:

Sustainable Building Guidelines	Sustainable Infrastructure Guidelines
<ul style="list-style-type: none"> <li>• Terminal (Airport, Rail, Port, Bus, etc.)</li> <li>• Commercial Space (Retail/Restaurant)</li> <li>• Office Facility</li> <li>• Parking Garage</li> <li>• Substation</li> <li>• Storage Facility</li> <li>• Toll Plaza</li> <li>• Ventilation Building</li> <li>• Limited Scope Building <u>or</u> Interior Alterations (<i>formerly "Small Projects &amp; Primary Systems"</i>): <ul style="list-style-type: none"> <li>○ See Sustainable Building Guidelines for details.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Airfield Pavement</li> <li>• Bridge</li> <li>• Marine Structures (Docks, Wharves, etc.)</li> <li>• Parking Lot</li> <li>• Roadway</li> <li>• Track Work</li> <li>• Tunnel</li> <li>• Utility</li> <li>• Associated Infrastructure Scopes <ul style="list-style-type: none"> <li>○ Site Work/Excavation</li> <li>○ Exterior Lighting</li> <li>○ Landscaping</li> <li>○ Stormwater Drainage</li> <li>○ Plumbing/Irrigation/Potable Water</li> <li>○ Traffic</li> <li>○ End of Life Renewal/Replacement/Upgrade</li> </ul> </li> </ul>

See the [SIG Project Scope Definitions](#) for further explanation of each project scope.

### 4.3 PROJECT EVALUATION TRACKS

The Sustainable Infrastructure Guidelines feature two project evaluation tracks:

- **Track 1:** Internal PANYNJ Certification
- **Track 2:** Formal Third-Party Envision Verification with ISI

Determination of the project evaluation track occurs during project initiation and is documented in the SPIF. Major differences between the two project evaluation tracks are as follows:

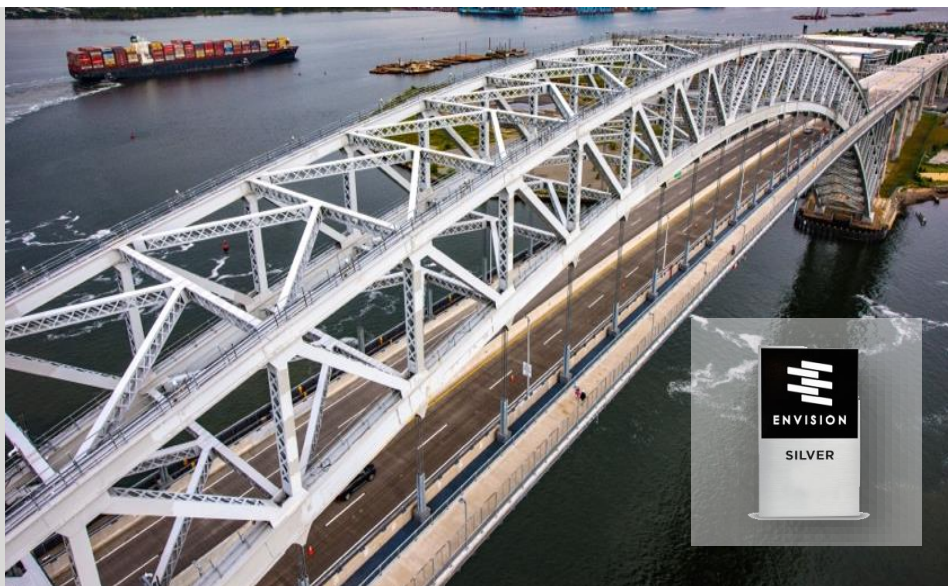
Track 1 Internal PANYNJ Certification	Track 2 Third-Party Envision Verification with ISI
<ul style="list-style-type: none"> <li>• Almost all projects will follow this track</li> <li>• Required to meet PA Silver award level</li> <li>• Credit applicability determined by project information in Checklist</li> <li>• Streamlined documentation requirements</li> </ul>	<ul style="list-style-type: none"> <li>• Applies only to large, multidisciplinary, and high-profile projects</li> <li>• Credit applicability determined by Envision credit definitions</li> <li>• Documentation as prescribed by Envision</li> <li>• Fees for registration and verification must be paid to ISI directly</li> </ul>

The following sections of this Manual for [Track 1: Internal PANYNJ Certification](#) and [Track 2: Third-Party Envision Verification with ISI](#) distinguish the requirements for these two tracks and provide step-by-step instructions for achieving internal PANYNJ certification.

*Note: For the purposes of this Manual, the term “certification” indicates the “Track 1” internal PANYNJ process while “verification” is the term adopted by ISI to confirm that a project meets the sustainability criteria in the Envision framework.*

Almost all projects will follow Track 1, with Track 2 applied primarily to large, multidisciplinary, and high-profile projects.

*Photo: Bayonne Bridge Navigational Clearance Program (Envision v2 Silver [verified](#), 2019)*



## 4.4 SUSTAINABLE DESIGN WORKSHOP

The purpose of a Sustainable Design Workshop is to collaboratively develop ideas for enhancing project sustainability and identify strategies for credit achievement. Projects for which a Workshop is required include, but are not limited to, projects pursuing Track 2 Envision verification and PA Capital Projects designated as System Enhancing Projects (SEP). The SDM will use the SPIF to indicate whether a Sustainable Design Workshop is required.

The Sustainable Design Workshop is conducted at each stage of project design, prior to the first milestone submission. The LE/A works with the RSD Task Lead to determine when to schedule the workshop and the appropriate parties to invite (particularly those with involvement in the entire project or with greater impact on significant credits). The workshop should be scaled appropriately to the size and complexity of the project. The LE/A and RSD Task Lead collaboratively fill out a preliminary version of the Project Information sheet (See [Section 5.1](#)) and Checklist sheet (see [Section 5.2](#)) prior to the workshop with input from the design team.

The RSD Task Lead is responsible for drafting the workshop agenda in consultation with the LE/A. A typical agenda for the Sustainable Design Workshop includes the following topics:

- Confirm project evaluation track and associated requirements;
- Review Sustainable Design Survey responses and confirm applicable credits (See [Section 5.1](#));
- Evaluate target level of achievement (LOA) for applicable credits;
- Discuss additional credits to be included and target LOA;
- Identify strategies for key credits;
- Identify required documentation;
- Identify person(s) responsible for key strategies and/or documentation;
- Confirm schedule for completion of action items.

The LE/A is responsible for distributing meeting minutes for comment no later than one week after the meeting.

Projects will receive **10 bonus points** for credit LD0.0 for completion of the Sustainable Design Workshop and distribution of the meeting minutes.





## 5 TRACK 1: INTERNAL PANYNJ CERTIFICATION

The internal PANYNJ certification process leverages ISI's Envision Rating System but provides agency-specific context for achieving credits and simplifies documentation requirements. The intention of this track is to increase focus on sustainable and resilient project design in a user-friendly, streamlined way.



The following sections provide a step-by-step guide for projects pursuing PANYNJ certification, utilizing the PANYNJ SIG Project Credit Checklist (Checklist). See [Appendix A](#) for the Checklist file location.

### 5.1 PROJECT INFORMATION SHEET: DETERMINE CREDIT APPLICABILITY

Prior to the project kick-off meeting, the RSD Task Lead completes the Project Information sheet (contained within the Checklist) in consultation with the LE/A to determine which credits are applicable to the project.

The Checklist is set up so that credits are not activated as “applicable” until the project type is selected and Sustainable Design Survey questions are set to “Yes” or “TBD” (“to be determined”). “Yes” and “TBD” both activate applicable credits, but “TBD” is used in preliminary design when project scope, features, or assessments will require future confirmation (all “TBD” responses should be switched to “Yes” or “No” during detailed design).

The Checklist is calibrated to accommodate a wide range of project types but is not meant to codify credit applicability for every possible project. For questions regarding applicable credits automatically generated by the Checklist, the LE/A should contact the RSD Task Lead. The LE/A is permitted to activate additional credits as “applicable”, but auto-generated applicable credits can only be removed by RSD.

Large, System Enhancing Projects<sup>1</sup> (projects that expand capacity, improve connectivity, or provide other functional improvements that yield regional/economic benefits), may be required to activate all credits as “applicable” and then switch individual credits to *not* applicable, as warranted. This approach also may be adopted voluntarily, if requested. To activate all credits as applicable, select “Yes” in response to the “All Credits” question of the Sustainable Design Survey.



<sup>1</sup> Projects pursuing Track 2 Envision verification will also use the checklist in this way.

## 5.2 CHECKLIST SHEET: DETERMINE PROJECT AWARD LEVEL

The Checklist sheet (a tab within the overall Checklist document) displays the applicable credits for the project, shows the points associated with each credit Level of Achievement (LOA), and automatically calculates the project award level.



The Checklist must be included in the Stage I/II Report (if applicable) and will be updated as needed throughout the design process. If a **Sustainable Design Workshop** is required/requested for the project (see [Section 4.4](#) for more detail), the LE/A is required to fill out the Checklist sheet prior to the workshop.

### 5.2.1 MINIMUM PROJECT AWARD LEVEL

Like Envision, the overall project award level is determined by the percentage of total applicable points achieved. Each project will have a distinct number of total points achievable based on 1) the applicable credits automatically generated by the Checklist and 2) any additional credits activated by the project team. For all activated credits, the LE/A populates the attempted Level of Achievement in consultation with the RSD Task Lead and project team (each credit LOA has a point value prescribed by Envision). With each entry, the Checklist automatically updates the total points achieved and the award level.

The three award levels for PANYNJ certification are:

- **Minimum:** PA Silver (30% of total applicable points)
- PA Gold (40% of total applicable points)
- PA Platinum (50% of total applicable points)

All projects must achieve a minimum award of PA Silver. If a project team is having significant technical, procedural, or financial difficulty meeting the PA Silver award level, the LE/A should contact the RSD Task Lead for guidance *as soon as possible*.

### 5.2.2 BONUS POINTS

“Bonus” points are purely additive, meaning that they are counted as “achieved” points without expanding the number of applicable points. Projects can earn bonus points by achieving the “Innovate or Exceed Credit Requirements” item included as item “0.0” in each credit category. This can be accomplished by:

- Meeting the Envision criteria stated for the “0.0” credit;
- Conducting a Sustainable Design Workshop for LD0.0 as required/approved by the SDM (see [Section 4.4](#) for more detail);
- Meeting WEDG Category 3: Edge Resilience credits for CR0.0;
- Creating a Credit Case Study (must be approved by the SDM);

Conducting a Sustainable Design Workshop is worth 10 bonus points. Otherwise, the number of points awarded is determined by the SDM based on the associated enhancement of project sustainability, contributions to practice innovation, and/or level of effort.



To pursue creation of a credit case study, the LE/A should contact the RSD Task Lead. See [Appendix A](#) for the location of existing Credit Case Studies and the Credit Case Study Template.

### 5.3 DOCUMENTATION SHEET: REPORT ACHIEVEMENT

The final step is to document credit achievement in the Documentation sheet of the Checklist.

#### 5.3.1 DESIGN DOCUMENTATION REQUIREMENTS

The Documentation sheet details the PA-specific required documentation for each credit LOA, the design stage required for submittal, and the party responsible for credit documentation. The LE/A is responsible for providing a summary description of how the credit criteria have been met and either referencing or submitting supporting documentation. *When referencing a document, the specific drawing, section or page should be indicated.*

The LE/A submits the Checklist via email to the RSD Task Lead with all major milestone review submissions in each stage of the design process (Stages I, II and III). Full access to all required templates and supporting documentation must be provided simultaneously to facilitate RSD's review. For Stage III submissions, the LE/A coordinates with the RSD Task Lead to incorporate all sustainable design elements into the Contract Documents.

At the conclusion of Stage III, the Sustainable Design Manager performs a final review (scheduled by the RSD Task Lead) and indicates compliance in PDPS.



See [Appendix A](#) for Documentation Templates and other resources. The LE/A must obtain new files for each project to ensure they are using the most recent version. See [Appendix B](#) for file naming conventions and organization.

#### 5.3.2 CONSTRUCTION DOCUMENTATION REQUIREMENTS

For select credits, additional documentation is required during the construction phase. The Sustainable Construction Coordinator (SCC), as designated by the Resident Engineer (RE), is responsible for inspections and documentation pertaining to achievement of these credits and for submitting documentation to the SDM via email at Substantial Completion in Stage IV.



## 6 TRACK 2: THIRD-PARTY ENVISION VERIFICATION WITH ISI

Track 2 entails formal Envision verification with the Institute for Sustainable Infrastructure (ISI). This track applies primarily to large, multi-disciplinary and high-profile projects. Track 2 general requirements include:

- **Award Level:** Project teams pursuing third-party verification are required to submit for an *Envision award level of Gold*, meaning that the initial submittal to ISI must achieve at least 40% of applicable points. In anticipation that ISI may disallow some requested points, ultimately projects must achieve a Silver award level from ISI, at a minimum.
- **Verification Pathway:** All Track 2 projects must follow ISI verification Pathway A (shown in Figure 2.1), where documentation is submitted for review at or shortly after 95% design completion and verified post-construction. Verification Pathway B (submission only at construction completion) is not a recognized SIG evaluation track.



**Figure 6.1 Envision Verification Pathway A**

- **Envision Version:** Project teams are required to use the most recent version of the Envision Rating System available *at the time of registration*.
- **Sustainable Design Workshop:** A *Sustainable Design Workshop must be conducted* for all Track 2 projects, following the terms of [Section 4.4](#).
- **Fees:** All associated fees, including those to ISI or any third-party service provider, *must be paid by the applicant*, whether Line Department, Facility, or designated project developer or tenant (including, but not limited to, Public-Private Partnerships and Design-Build entities).

Under Track 2, ISI's third-party verification substitutes for the PA's internal project evaluation.

Photo: LGA Terminal B (Envision v3 Platinum [verified](#), 2019)



## 6.1 TRACK 2 WORKFLOWS

The Track 2 process workflow differs depending on whether the project applicant is the Authority itself (a Line Department or Facility, for example) or a Port Authority tenant or development partner.

- **Port Authority:** Projects for which the Port Authority itself is the applicant (primarily PA Capital projects, but other project types as applicable) will follow the same process workflow described in [Section 5](#) and shown in the [Quick Guide](#). RSD will provide guidance throughout the project design and verification processes and manage online project registration and verification.
- **Tenant/Partner:** The Port Authority may contractually require its tenants or development partners to achieve an Envision award, in accordance with Track 2 of these Guidelines. In such instances, RSD will establish specific workflows, schedules, and deliverables as part of the project requirements and provisions for work. While RSD will provide guidance and review milestone deliverables throughout the design and construction processes, the partner/tenant is solely responsible for achieving ISI verification. The award levels stipulated within SIG Track 2 constitute the minimum acceptable standard and may be augmented by specific project requirements.

## 6.2 DOCUMENTATION REQUIREMENTS

### 6.2.1 PORT AUTHORITY

Port Authority projects pursuing ISI verification will follow the same milestones and deliverables described in [Section 5](#) and shown in the [Quick Guide](#). The project team is required to utilize the Checklist; but full documentation, submission, and verification processes take place using ISI's templates and the Envision Online Scoresheet (accessed via a user's Dashboard on ISI's website). RSD is responsible for registering the project and inviting the LE/A and other relevant project team members to the Envision Online Scoresheet no later than the 50% milestone review submission (Stages I, II, or III).



PANYNJ has developed generic language for some ISI credit cover sheet templates for credits that are typically not applicable (NA) or for which achievement is related to general agency policies/procedures. [Appendix A](#) includes a link to these templates.

When filling out the Checklist, the “All Credits” question at the top of the Sustainable Design Survey in the Project Information sheet should be set to “Yes” to make all credits applicable. The “NA” column in the Checklist sheet can then be used to designate credits as not applicable. Relevant credit templates within the Checklist should be used along with the Documentation sheet to provide a brief description of how all credits will be achieved (or designated “not applicable”). The Envision Guidance Manual should be referenced for full documentation requirements (the descriptions in the “Required Documentation” column in the Documentation sheet pertain to adapted, PA-specific requirements). See [Appendix A](#) for the Checklist file location and [Appendix B](#) for file naming conventions and organization.

### 6.2.2 TENANT/PARTNER

Projects led by a PA tenant or partner will use the Envision Online Scoresheet (accessed via a user's Dashboard on ISI's website) for tracking the project's status through the completion of construction and project award by ISI. The project Envision Sustainability Professional (ENV SP) must invite the SDM and RSD Task Lead to join the project's Envision Online Scoresheet at the time of project registration, which shall occur no later than the 50% milestone review submission (Stages I, II, or III).

Full documentation, submission, and verification processes take place using ISI's templates. The submission shall also be summarized using the Port Authority's Checklist and provided to the SDM at each milestone. Additional submittals to the Port Authority will be specified in applicable requirements and provisions for work and/or contract terms.

## APPENDIX A: SIG RESOURCES

### Templates

Document (Link)	Description / Location
<a href="#">SIG Project Credit Checklist</a>	<p>Dynamic and interactive Microsoft Excel file, used to determine credit applicability, as well as track and report credit achievement and documentation. Includes the following credit/calculation templates:</p> <ul style="list-style-type: none"> <li>• RA1.2 Use Recycled Materials</li> <li>• RA1.4 Reduce Construction Waste</li> <li>• RA1.5 Balance Earthwork On Site</li> <li>• CR1.1 Reduce Net Embodied Carbon</li> <li>• CR2.2, 2.3 &amp; CR2.4; Assess Climate Change Vulnerability, Evaluate Risk and Resilience &amp; Establish Resilience Goals and Strategies</li> </ul> <p>Location of file with example credit templates filled in: <a href="#">Link</a></p>
<a href="#">GOCOR Checklist</a>	Form to be filled out by PA GOCOR representative to document stakeholder/public engagement efforts (Microsoft Word file).
<a href="#">Construction Management Plan (CMP) Template</a>	CMP template providing draft language for mitigating construction impacts and reducing construction waste, intended as a resource for the Resident Engineer during construction (Microsoft Word file).
<a href="#">Credit Case Study Template</a>	Microsoft PowerPoint File to be used for creation of new credit case studies.
<a href="#">Envision Credit Cover Sheet Templates</a> (saved within the Example Envision Folder Structure on SharePoint)	<p>Credit Cover Sheet Templates (Microsoft Word files) publicly available from ISI for Envision v3:  <a href="https://sustainableinfrastructure.org/resource/verification/">https://sustainableinfrastructure.org/resource/verification/</a></p> <p>The following templates contain draft text for PANYNJ projects:</p> <ul style="list-style-type: none"> <li>• QL3.2 (NA)</li> <li>• LD1.1 (Conserving)</li> <li>• LD1.2 (Conserving)</li> <li>• NW1.3 (NA)</li> <li>• NW1.4 (Conserving)</li> <li>• NW2.3 (NA)</li> <li>• NW2.3 (Enhanced)</li> <li>• NW3.4 (NA)</li> </ul>

## Resources

Document / Organization (Link)	Description / Location
<a href="#">Sustainable Project Initiation Form (SPIF)</a>	Form to be filled out by LE/A during Engineering proposal / Scope of Work development to determine RSD Guideline applicability (Microsoft Excel file)
<a href="#">SIG Quick Guide</a>	A 1-page, 11x17 PDF companion reference to the SIG Manual highlighting the SIG components, process workflow, major milestones and deliverables, and responsible parties involved. Location: <a href="#">PANYNJ public webpage</a>
<a href="#">Credit Case Studies</a>	Collection of PANYNJ project write-ups that serve as examples for credit achievement.
Institute for Sustainable Infrastructure Website	<a href="https://sustainableinfrastructure.org/">https://sustainableinfrastructure.org/</a>
<a href="#">Envision v3 Guidance Manual</a>	Copy of Envision Manual saved on RSD SharePoint site.
<a href="#">Waterfront Edge Design Guidelines (WEDG) Manual</a>	Copy of WEDG Manual saved on RSD SharePoint site.
<a href="#">Legacy SIG Documents</a>	Legacy SIG 1.0 documents published in 2011 (for reference only).

## Education and Training

Document (Link)	Description
<a href="#">SIG 2.0 Training Presentation</a>	PowerPoint file and video recording of SIG 2.0 overview presentation.

**Note:** Parties external to PANYNJ do not have default access to the [RSD Sustainable Design SharePoint](#) site. For access to the files, please contact the SDM at [sustainabledesignmanager@panynj.gov](mailto:sustainabledesignmanager@panynj.gov). Access will be provided to parties working on active PA projects.

## APPENDIX B: FILE NAMING CONVENTION AND ORGANIZATION

### Track 1: PANYNJ Certification

Project teams pursuing PANYNJ certification shall use the following general guidance for file naming for SIG templates and documentation:

YYYYMMDD\_PID\_Stage / Milestone\_ Document Name

Examples:

20200516\_18049000\_50%\_Stage I\_SIG Checklist.xlsx

20200516\_18049000\_50%\_Stage I Report.docx

### Track 2: Envision Verification

PANYNJ project teams pursuing Envision verification shall set up a folder for each credit category (i.e. Quality of Life, Leadership, Resource Allocation, Natural World, and Climate and Resilience) and a folder for each credit within them. See the [RSD SharePoint](#) site for an example folder structure or contact the SDM for assistance at [sustainabledesignmanager@panynj.gov](mailto:sustainabledesignmanager@panynj.gov).

The credit cover sheet shall follow the naming convention below:

Credit Identifier\_00\_Coversheet\_LOA

Example:

CR1.1\_00\_Coversheet\_Enhanced.docx

The supporting credit documentation files shall follow the naming convention below:

Credit Identifier\_Attachment Number\_File Name

Example:

CR1.1\_01\_Embodied Carbon Calculator.pdf