Green Infrastructure Grant Program

Grant Workshop

Green Infrastructure Grant Program

- What is Green Infrastructure?
- What is the Green Infrastructure Grant Program?
- How has the Grant Program changed?
- Steps for Submitting an Application
  - Online Application
- Stormwater Calculations Presentation
- One on Ones with Engineers

What is Green Infrastructure?

Techniques that detain or retain stormwater runoff from impervious surfaces (parking lots, rooftops, walkways) by infiltration, vegetative uptake and evapotranspiration, and/or storage for reuse or controlled release.

Green Roofs

Blue Roofs

Rain Garden

Constructed Wetland

Subsurface Detention

Permeable Pavers

What is the Green Infrastructure Grant Program?

DEP will fund the design and construction costs for green infrastructure projects that manage 1” of stormwater from the contributing impervious area on private property in combined sewer areas of New York City.

Online application is available at
www.nyc.gov/dep/grantprogram
all eligibility requirements can be found after creating a log-in

Combined Sewer Areas

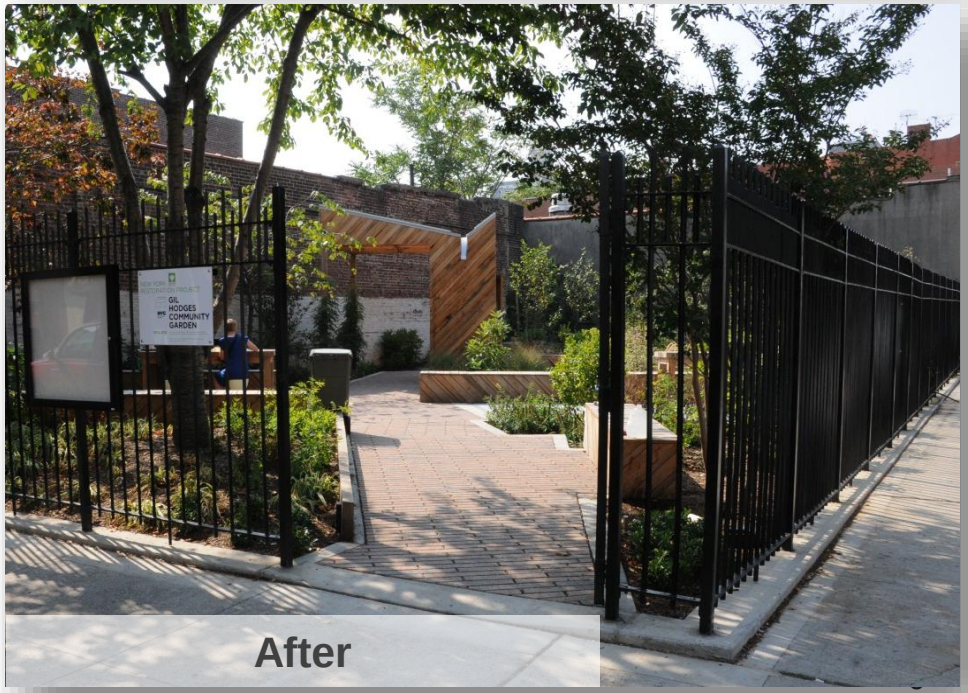
Ineligible Projects/Costs and Restrictions

- Maintenance and operations
- Education programs, signage or outreach materials
- Non-green infrastructure project components (new roof, fences, benches etc.)
- Research not related to the proposed grant project construction
- Political advocacy, boycotts, advertising or litigation
- Legally mandated actions under local, state or federal law
- Legal fees for contract execution

- Also…
  - Grantees must be in compliance with all local, state and federal permits and laws
  - The City of New York will have unrestricted rights to use the designs selected for any future project at no additional costs

Encouraged…but not required!

- Has secured matching funds/in-kind contributions
- Provides a monitoring plan
- Provides letters of support from community stakeholders
- Allows for education and/or public access
- Supports workforce development
- Advances the ultimate sustainability goals of the Green Infrastructure Plan and PlaNYC

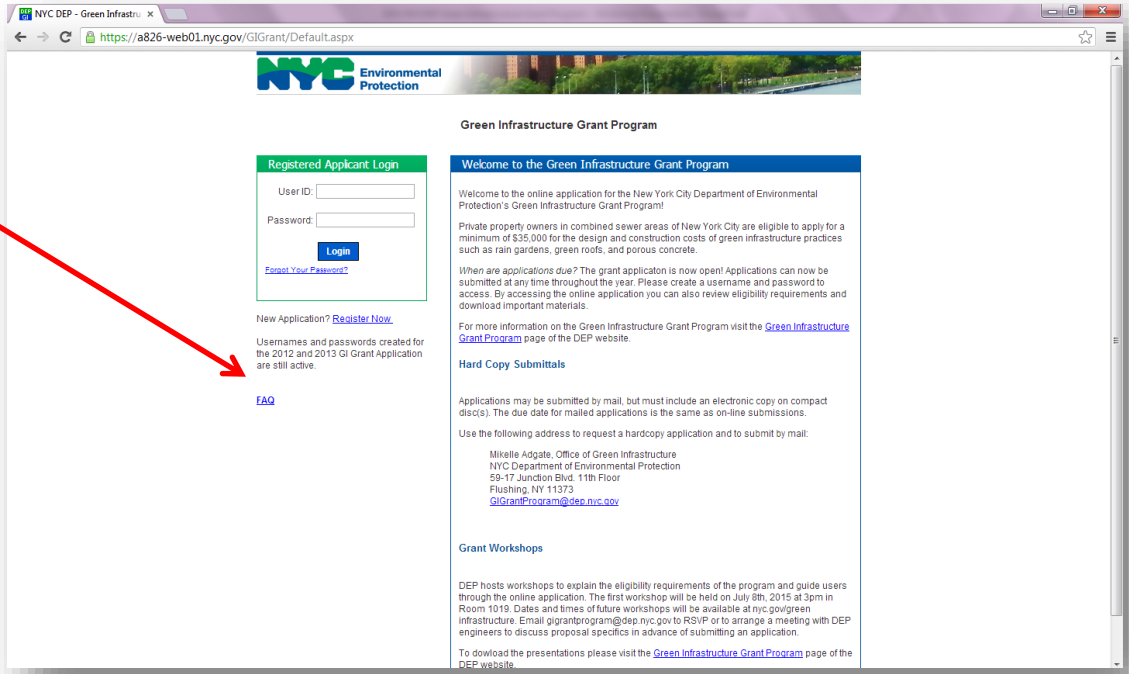


2011 GI Grant Winner New York Restoration Project

Changes From Previous Years of the Program

- No submission deadline! Apply at any day or time throughout the year.
- Green roof projects must submit a structural analysis with the application
- Opportunity to meet with DEP engineers on project proposal
- Restrictive Covenant – changes to Section 6 – *please review*
- Conceptual plan submission requirements are more defined in the application

New FAQ available on the application homepage.



Steps for Submitting an Application

Order	Steps
Step 1	Determine Eligibility
Step 2	Review Grantee Requirements
Step 3	Assemble a Project Team
Step 4	Advance a Design Concept
Step 5	Begin the Online Application

Step One: Determine Eligibility

The **proposed property** must:

- Be privately-owned
- Be in a combined sewer area of New York City
- Have an owner willing to sign the Funding Agreement and Declaration of Restrictive Covenant as-is

The **proposed project** must:

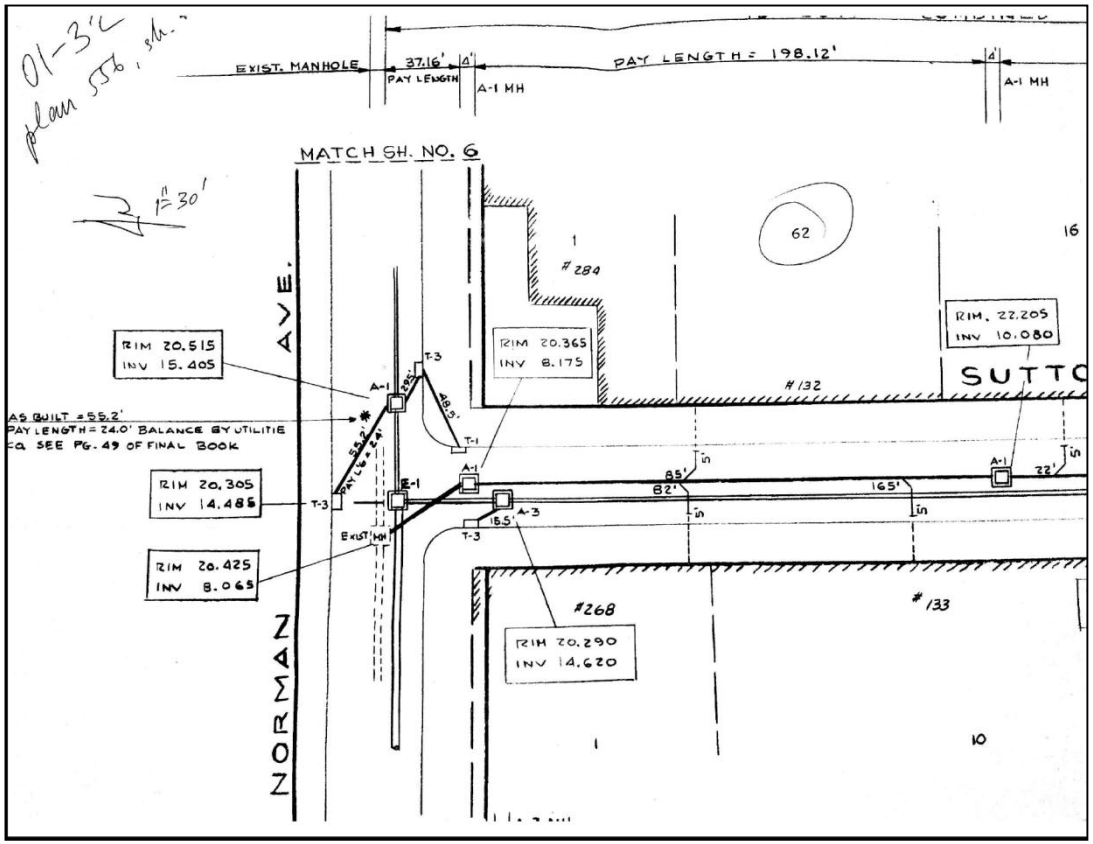
- Manage at least 1” of rainfall on the impervious tributary area
- Be completed within one year from the construction start date
- Provide for 20 years of maintenance
- Be eligible for **Capital Funding**:
  - Soft Costs: design, permitting, engineering services
  - Hard Costs: labor, materials, construction

Capital eligibility is defined by the **Generally Accepted Accounting Principles and Accounting Directive 10** issued by the Office of the New York City Comptroller (May 31, 2011) Link here

Step One (continued): Site Connection

All applicants must go to the relevant Borough Water and Sewer Records Office to determine the watershed and if the property is served by a combined sewer.

- Bring the property address and BBL information
- Request copies of certified Sewer Certification Proposals and sewer connections. Ask for assistance in retrieving all records available for the property
- If the Office indicates no records are available email gigrantprogram@dep.nyc.gov with the date/time of your visit and the name of the person you spoke to
- Convert the records to a PDF for the online application



Step One (continued): Legal Documents

Property Owners must sign a Statement of Agreement stating that they have reviewed the Funding Agreement and the Restrictive Covenant with their legal counsel and if awarded will sign both documents as-is.

Funding Agreement

- Contract between the Property Owner and the City of New York
- Boilerplate outlines Property Owner and DEP Responsibilities and cannot be altered
- Appendices are Project Specific (Final Scope of Work, Budget, Maintenance Plan)

Restrictive Covenant

- Required for all projects
- Provides for long term maintenance of the green infrastructure installation for the 20 year project term
- Cannot be changed or edited

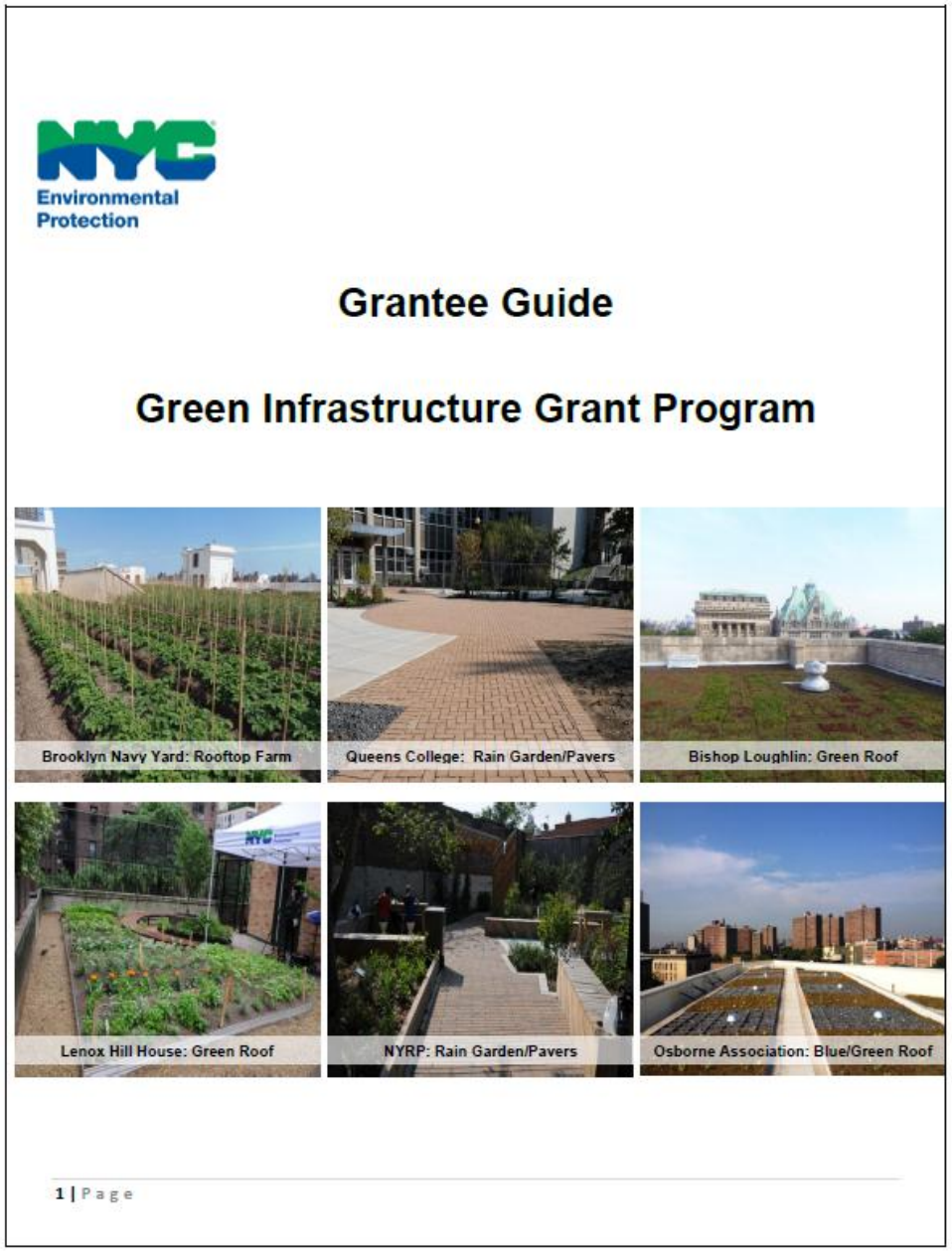
Step Two: Review Grantee Requirements

IMPORTANT NOTE: The GI Grant Program is a **REIMBURSEMENT** program. Grantees must begin and fund site investigations immediately after being selected.

Design Review will occur simultaneously to budget review.

DEP **WILL NOT** sign a Funding Agreement until designs are nearly final.

Grantee Guide is available or
the online applicatior



Step Three: Assemble a Project Team

Ultimately a design professional will be responsible for producing and stamping contract plans for construction.

Team Member	Role
Private Property Owner	• Owns the property where the project will be built • Signs all legal documents associated with the program • Ultimately responsible for the design, construction, and maintenance of the project
Project Manager (can be owner or design professional)	• Coordinates project with property owner and DEP
Designer Professional Engineer Registered Architect Registered Landscape Architect	• Prepares construction documents for the design submittals • Stamps final plans
Contractors	• Constructs and installs the project
Maintenance Team	• Maintains the project for its 20 year useful life

Step Four: Advance a Design Concept

Minimum Requirement: Manage 1” volume of stormwater runoff from the contributing impervious area

- This requirement is meant to encourage cost-effective projects given that 90% of storms in NYC are 1.2” or less
- Projects that propose to manage 3, 4, and 5x that amount may not necessarily be more competitive

Design Strategy:

1) Identify green infrastructure practices/technologies that are being proposed for the property.

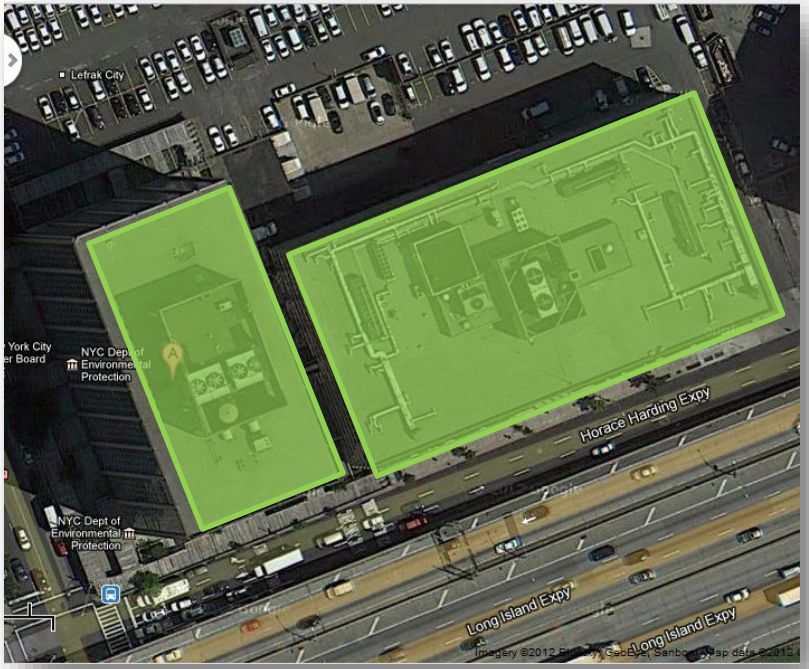
2) Identify design opportunities and challenges. Can the full 1” volume be managed? Are there existing drains on the site?

3) Review the Grantee Guide for the 60% design criteria before advancing a concept.

Note: DEP will not consider projects that propose to direct on-site flow into the street or street flow into the site.

Avoid these mistakes

- Colored boxes on images are not a conceptual design

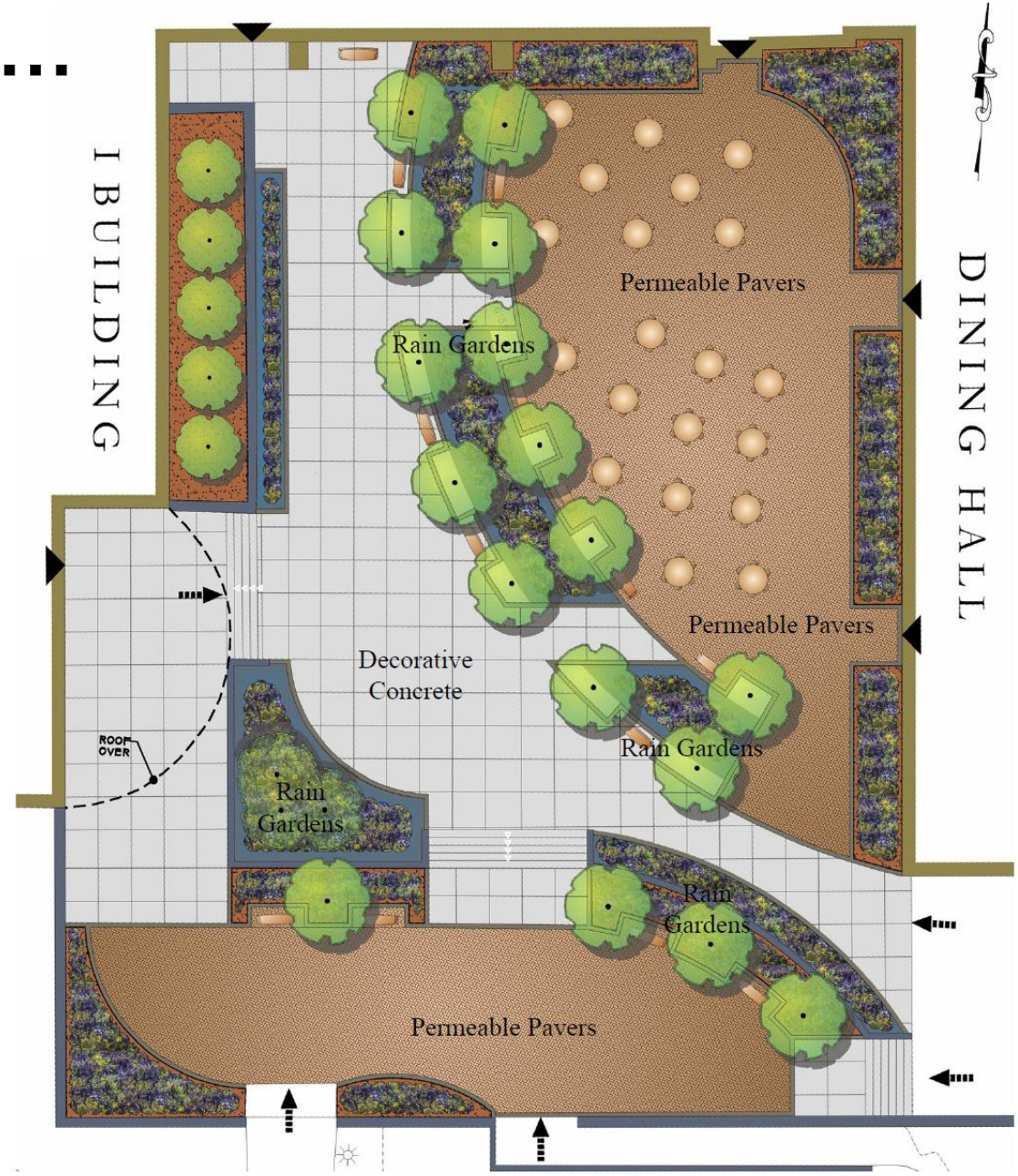


Green Roof

Porous Pavement

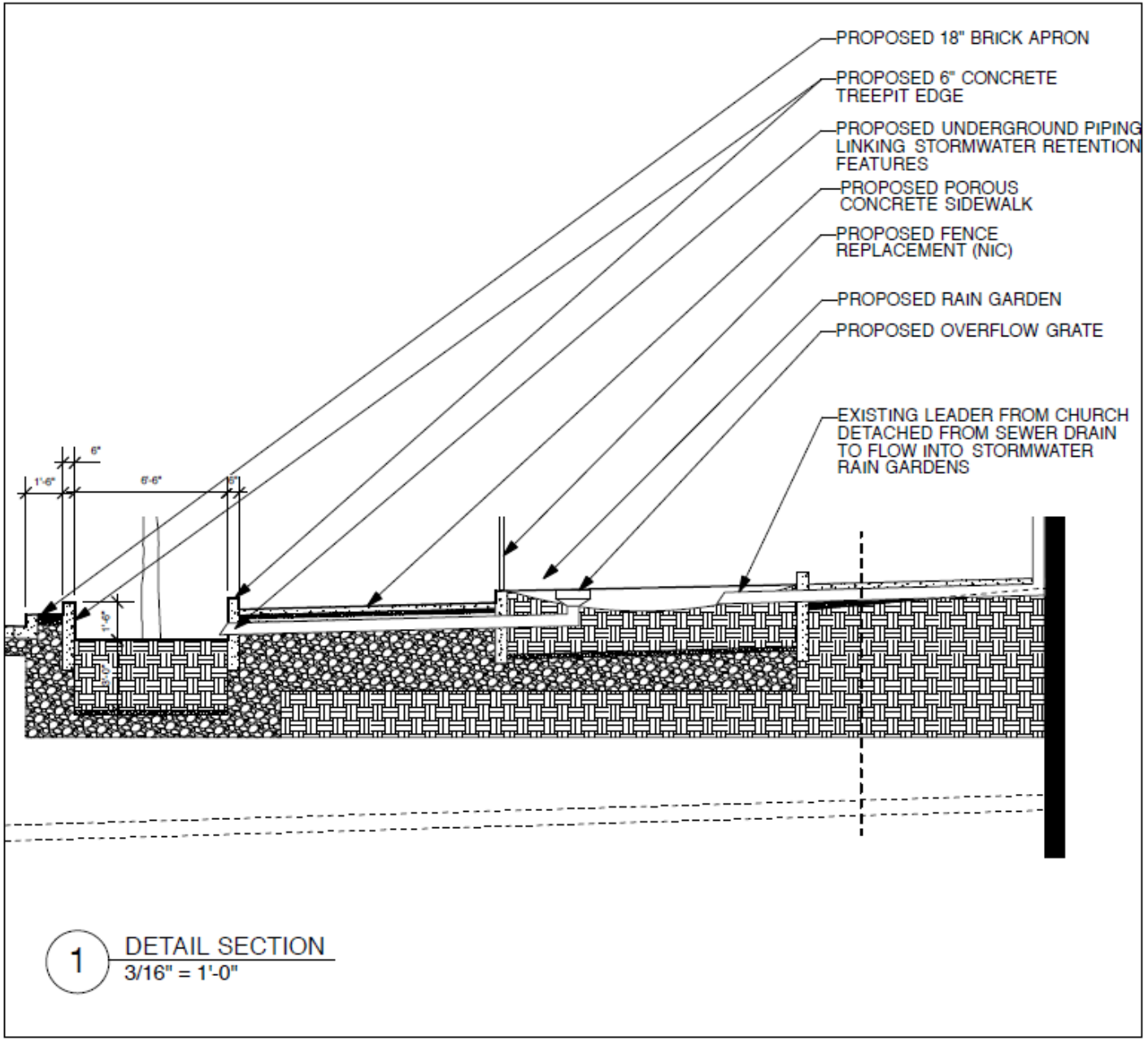
Conceptual Designs Should Show…

Site Plan…

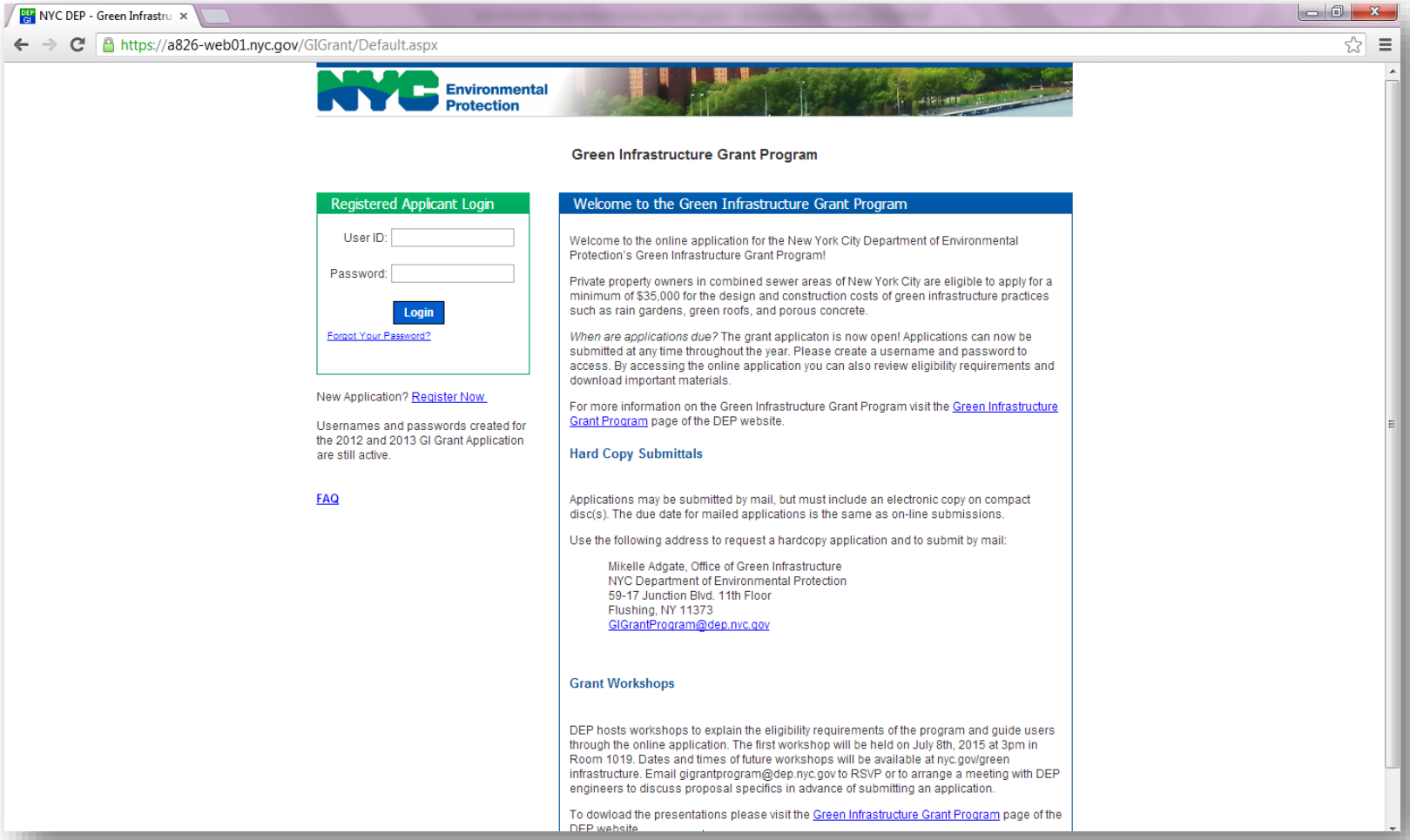


Conceptual Design Should Show..

Sections



Step Five: Begin the Online Application



Usernames & passwords from previous years are still active

Stormwater Calculations Presentation

General Information

Green Infrastructure Grant Program

Home | My Applications | Profile | Logout

General Information | Eligibility Criteria | Grantee Requirements | Project Scoring Information

General Information

DEP's Green Infrastructure Grant Program provides funding to design and construct green infrastructure projects on non-city owned property. All private property owners with property located in any of the combined sewered areas of New York City are eligible to apply. However, priority will be given to those projects that manage stormwater runoff in areas that discharge into the following water bodies: Bronx River, Hutchinson River, Westchester Creek, Gowanus Canal, Newtown Creek, Jamaica Bay, Flushing Creek and Flushing Bay. See map here.

The following list provides examples of the types of green infrastructure projects eligible for funding under the Green Infrastructure Grant Program:

- Rooftops
  - Green Roof
  - Blue Roof
  - Roof leader diversion to rain garden (subject to DOB approval)
- Bioinfiltration
  - Rain Garden
  - Vegetated Swales
- Rainwater Harvesting
  - Cisterns
  - Rainwater Reuse Systems
- Subsurface Systems with Infiltration Capacities
- Porous Paving Systems

Since 2011, DEP has committed $11.5 million to 29 projects. In March 2012, DEP and the New York State Department of Environmental Conservation (DEC) amended a consent order to incorporate green infrastructure into the City's CSO control program. As a result, DEP has agreed to dedicate $1 million in Environmental Benefits (EBP) Funding in addition to the $5 million set aside in City capital funds for the Green Infrastructure Grant Program. EBP projects are undertaken in connection with the settlement of an enforcement action taken by New York State and DEC for violations of New York State law and DEC regulations.

For information on the NYC Green Infrastructure Program and to learn about previous grantees, click here.

DEP, as the administrative manager of the Green Infrastructure Grant Program, has the sole discretion to determine eligibility, award or retain funds, and make payments to Grantees.

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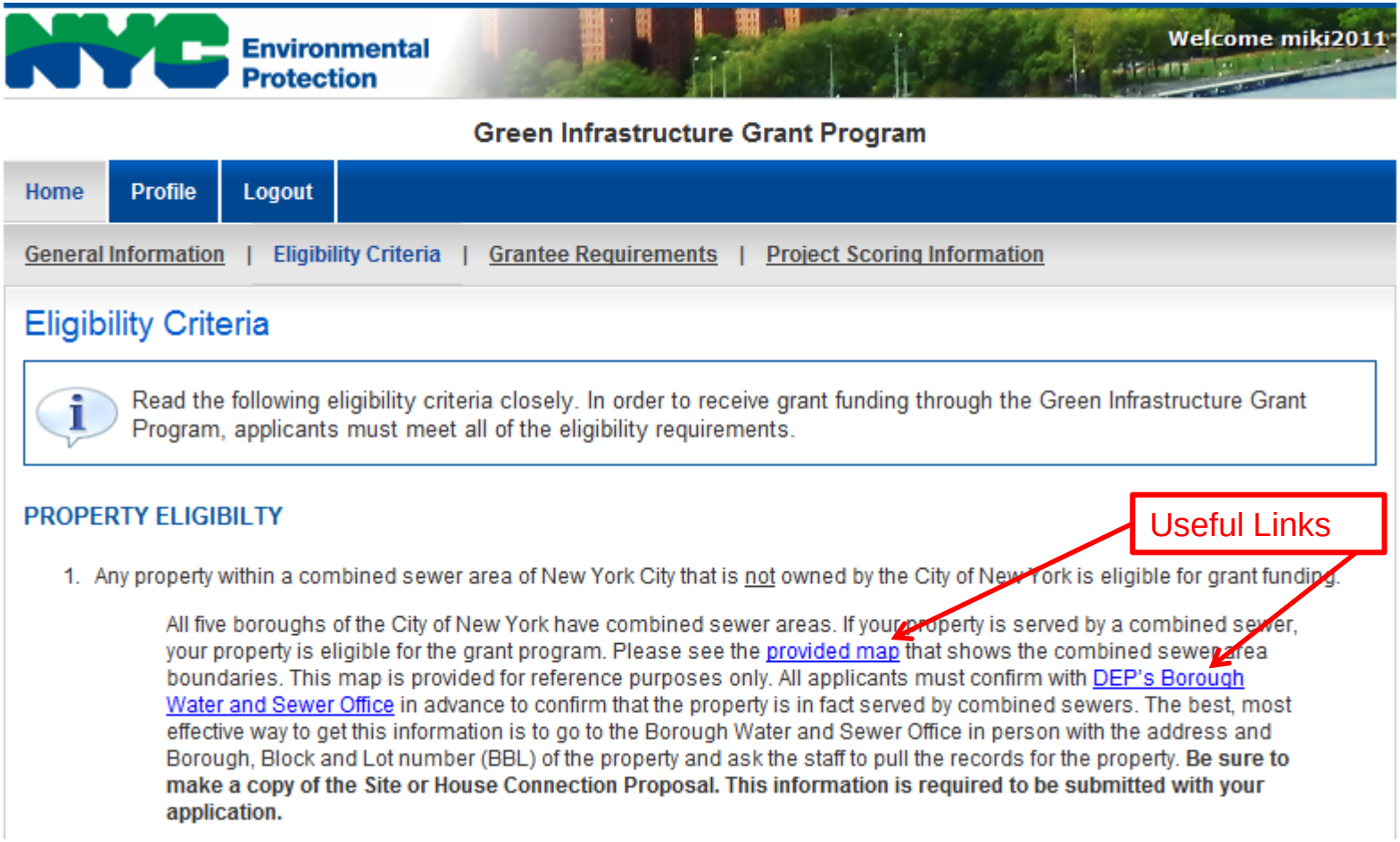
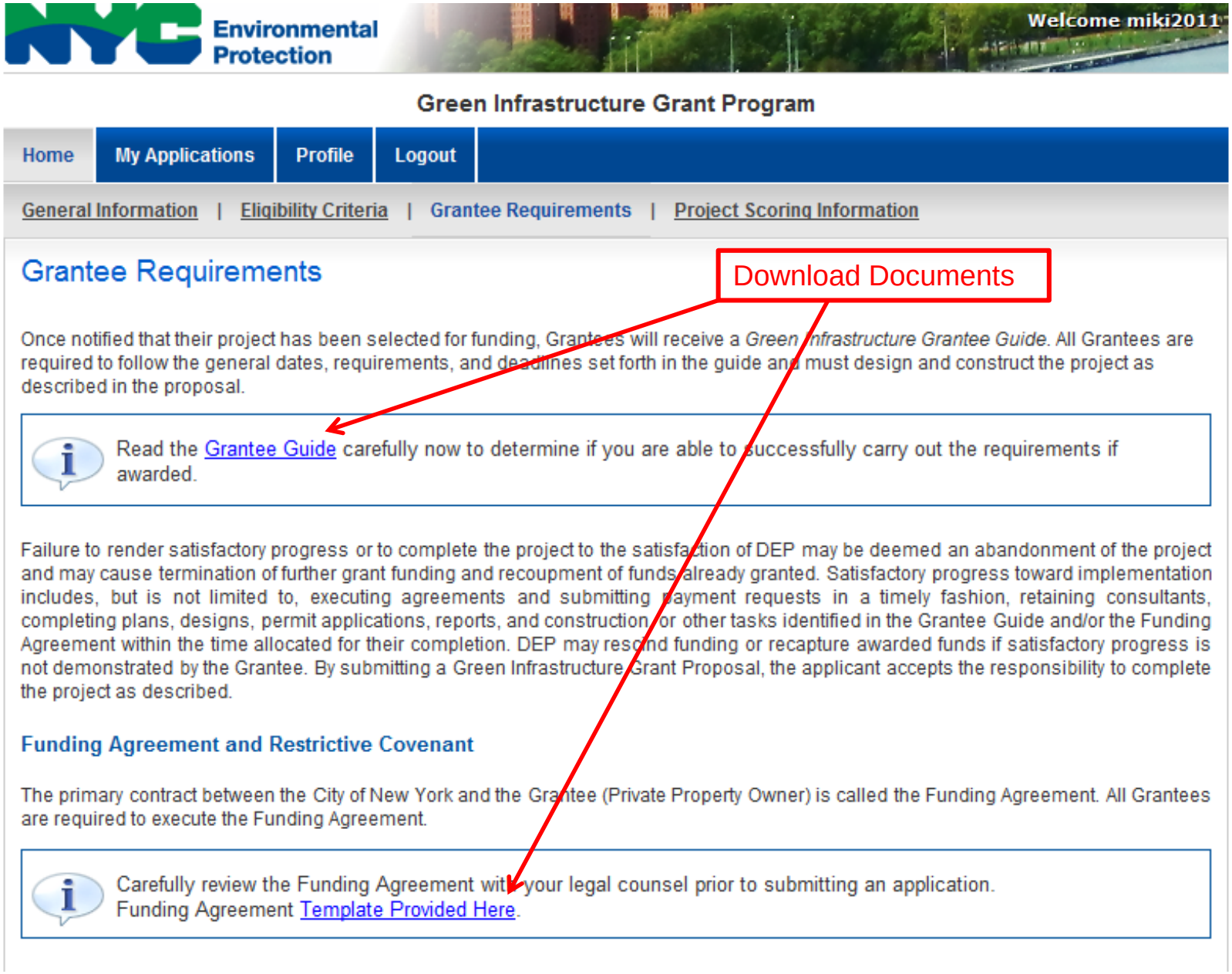
Eligibility Criteria



- Eligibility Criteria is split between "Property Eligibility" and "Project Eligibility"
- Users **MUST** acknowledge that they have read the eligibility criteria before proceeding with the application
- Applications that do not meet the Eligibility Criteria will not be reviewed

Grantee Requirements



Project Scoring

Green Infrastructure Grant Program

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General Information | Eligibility Criteria | Grantee Requirements | Project Scoring Information

Project Scoring Information

Although DEP is only able to fund capitally-eligible project components (i.e., project-related design and construction costs), DEP will take into account in project scoring any additional benefits that green infrastructure installations provide. DEP encourages applicants to highlight these ecological, community, or economic co-benefits in the application. **Projects that can be completed in shorter timeframes, use innovative designs, submit monitoring plans, facilitate community involvement, support economic or workforce development, and/or provide matching funds, are strongly encouraged.**

Priority will be given to those projects that manage stormwater runoff in areas that discharge into the following water bodies: Bronx River, Hutchinson River, Westchester Creek, Gowanus Canal, Newtown Creek, Jamaica Bay, Flushing Creek and Flushing Bay. See map here.

The project scoring system described below is one part of the evaluation process that will lead to selection of grant awards, and is provided for guidance. DEP retains the sole discretion to evaluate proposals and provide grants.

1) Cost/Benefit Ratio
DEP will only fund projects that offer stormwater management benefits that are cost-effective and reasonable in comparison to the project costs, including all soft costs. Note that an optimal project will manage 1" of rainfall (the 90th percentile storm) for a reasonable cost. Projects that propose to manage 3, 4, 5 times or more than that are not going to be cost effective as they are fully utilized during less storms. Note further that DEP will not fund soft-costs (design and project management costs) in excess of 20% of the hard-costs (construction, materials, and installation) and projects with soft costs closer to the industry standard (10%) will be looked upon favorably.

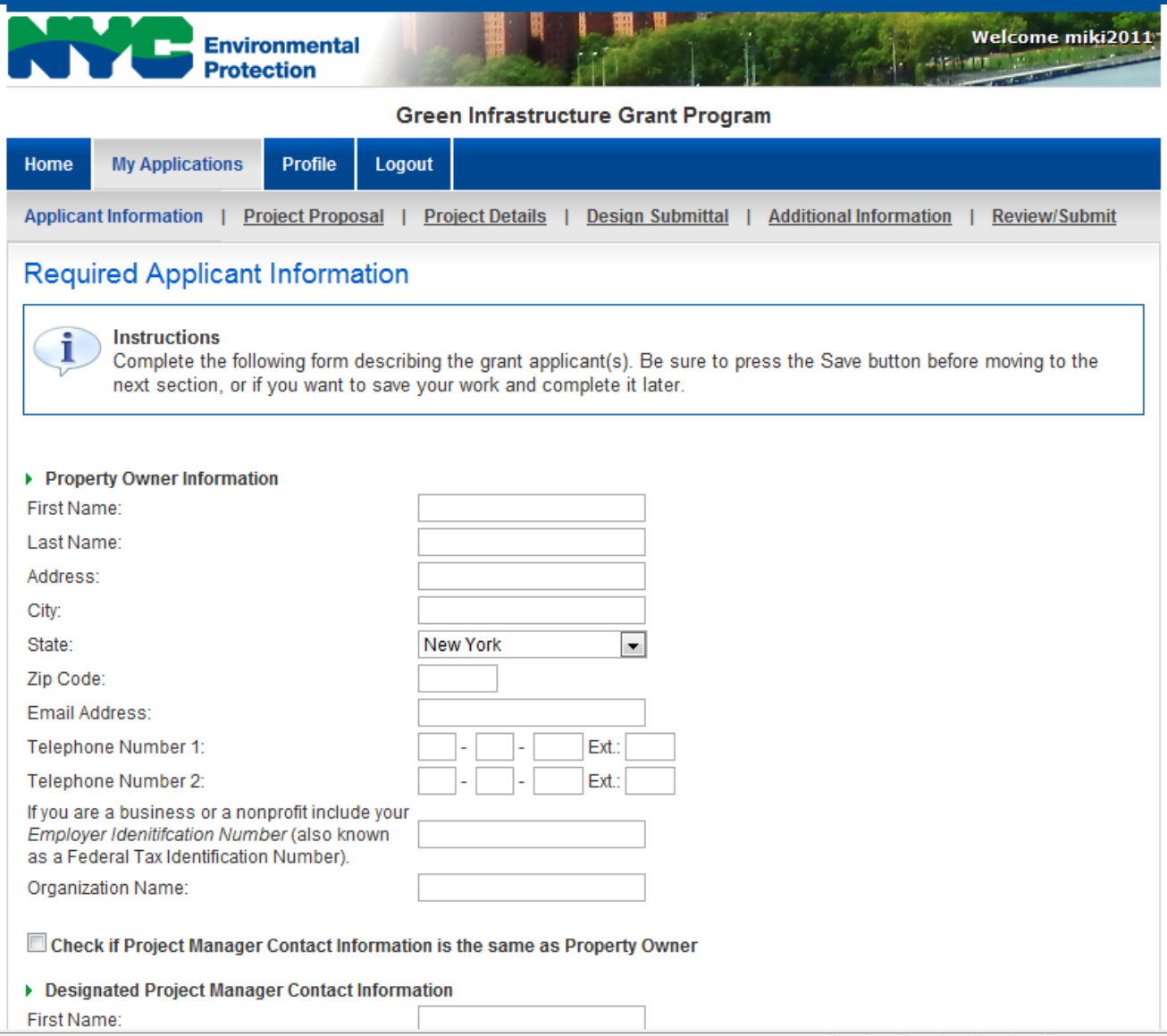
2) Feasibility
Projects will also be scored on the feasibility of construction and/or implementation (determined by the design, stormwater calculations, drawings, schematics, maps, and feasibility analyses such as soil borings and permeability tests or structural analyses).

3) Application Completeness
Applicants must provide detailed and accurate information about project scope, drawings, schematics, maps and plans. Applications with incomplete information will not be reviewed. All verification of property ownership must be included for the application to be complete. Finally, the package should be clear, legible, and timely.

4) Other Factors
DEP will consider the context of each project, including whether it:

- Has a short construction timeline;
- Leverages funding through matching funds or significant in-kind contributions;
- Is visible and accessible to the public;

Applicant Information



If the user begins more than one application – all can be accessed from the "My Application" landing page

Project Proposal

Green Infrastructure Grant Program

Home | My Applications | Profile | Logout

Applicant Information | Project Proposal | Project Details | Design Submittal | Additional Information | Review/Submit

Project Proposal Summary

Instructions
Complete the following form describing the proposed project. Be sure to press the Save button before moving to the next section, or if you want to save your work and complete it later.

Title for the Proposed Project: Rain Garden and Pavers

Address Where the Proposed Project is Located

Property Type: Industrial
Address: 59-17 Junction Bldv
City: Flushing , NY
Zip Code: 11373
Borough / Block / Lot: Queens / 21 / 5

CSO Tributary Areas Where the Proposed Project Is Located: Flushing Bay

Type of Green Infrastructure Technology

- [ ] Cistern
- [ ] Rainwater Reuse System
- [ ] Green Roof
- [ ] Blue Roof
- [x] Porous Pavement
- [x] Rain Garden/Bioinfiltration System
- [ ] Detention Systems With Infiltration Capabilities

Project Proposal (continued)

Approximate Project Timeline:

Complete Project Timeline template provided in the Project Details tab of the application and use to complete this field.

15 Weeks

Budget Summary

Complete Proposed Project Budget template provided in the Project Details tab of the application and use to complete the following fields.

Total Project Cost:	$ 200,000
Total Hard Costs:	$ 180,000
Total Soft Costs:	$ 20,000
Total Requested Funds From DEP:	$ 160,000
Matching Funds (if applicable):	$ 40,000
Soft Costs as % of Total Project Cost:	10 %
Monitoring Costs (if applicable):	$ 0

1) Download templates from the "Project Details" Section
2) Use the templates to fill in Project Timeline, Budget Summary, and Stormwater Capture Summary

Summary of All Matching Funds/In Kind Contributions Add

Stormwater Capture Summary

Use the numbers derived from stormwater calculations template provided in the Project Details section.

Total Impervious Tributary Area:	40000 sf
1" Volume/Impervious Tributary Area:	24933 gal
Total Proposed Volume Managed:	25000 gal

Costs Per Gallon Summary

Total Project Cost/Total Proposed Volume Managed:	8 $/gal
Total Requested Funds from DEP/Total Proposed Volume Managed:	6.40 $/gal

Cost per Gallon is automatically generated

Back Save Next

Project Details

Green Infrastructure Grant Program

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Project Details

Instructions
Complete the narrative descriptions for each of the questions below. Responses should be typed in **Word**. Click "Browse" to select your document and then click to complete the upload.

Existing Conditions – 2 pages max

Existing Conditions **must include** all of the following:

- Where exactly is the property located?
- Describe the site ownership and if leased, include name of lessor and length and general terms of lease.
- Describe the current uses of the property.
- What is the proposed project area (e.g. parking lot, rooftop etc.)? Describe the current uses of the proposed project area if different from above.
- Describe any feasibility studies or assessments prepared for the proposed project and any major results. This should include but is not limited to flow analyses, plant lists, soil borings, and permeability tests.
- Describe any required construction or necessary repairs that must be completed prior to installation of the green infrastructure.
- Describe the existing drainage, and if applicable plumbing, on the site including yard drains, downspouts, detention systems, or other related drainage systems or structures.

Lefrak---Existing-Conditions.docx

HINT: keep narratives simple and clear; *use the questions from the application as a guide!*

Proposed Scope of Work - 2 Pages Max

Project Scope of Work **must include** all of the following:
Using the conceptual design required in the Design Submittal section, describe the proposed project in detail.

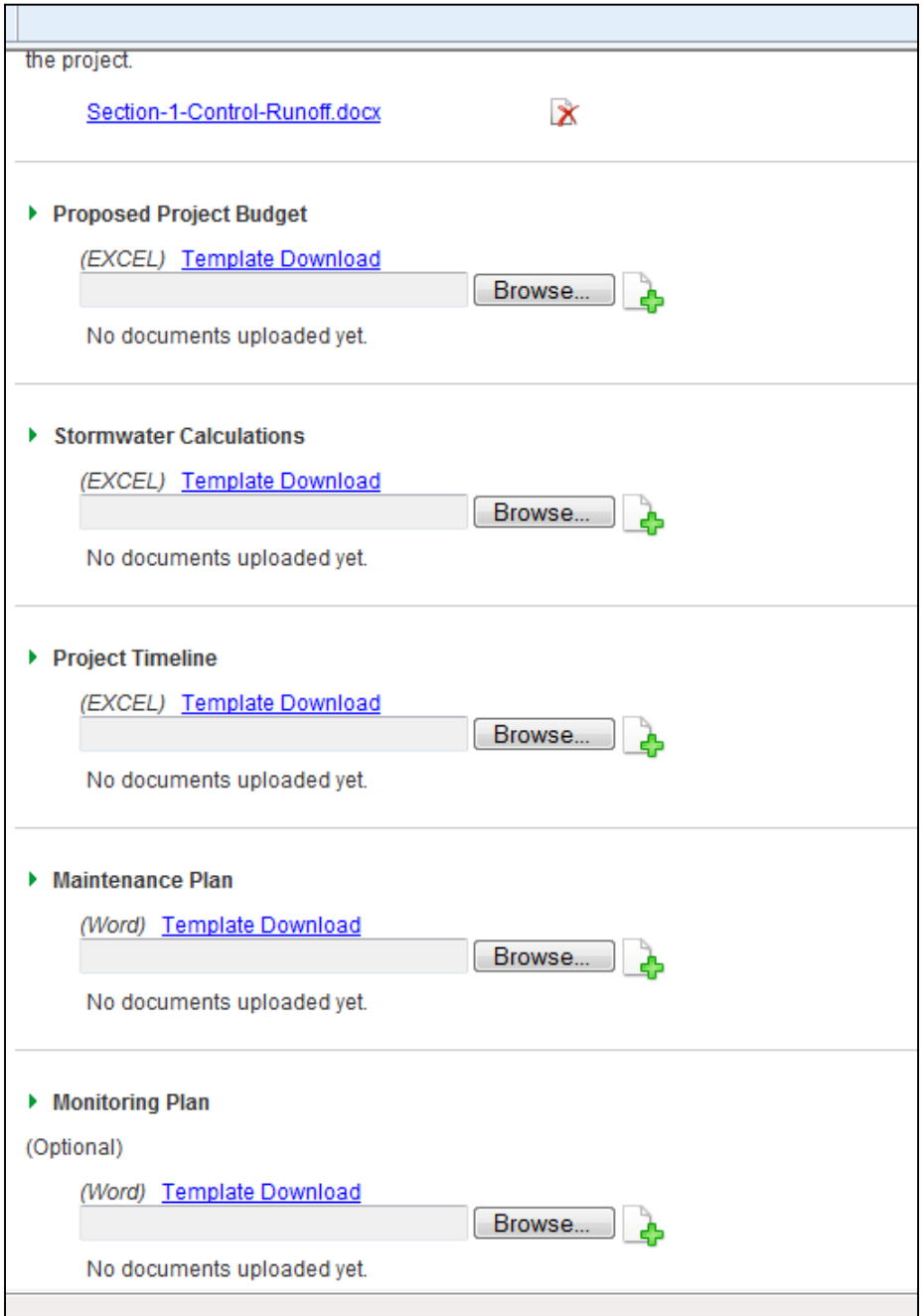
- Describe the green infrastructure design. What type(s) of green infrastructure is being proposed? What materials are required? Describe the cross-sections and section views of materials.

Project Details Continued

1) Download templates

2) Fill in with project details

3) Upload



Project Details – Budget Template

- **Hard Costs**: construction materials, installation costs
- **Soft Costs:** survey, borings, design, permitting, site investigations and general conditions

Notes:

- Use columns to show funding sources
- All costs in the DEP column must be eligible for capital funding

PROJECT NAME: JASMINE COURT

Hard Costs	Description	Unit	Unit Cost	Total Unit Cost	DEP	Matching Funds
[Enter Material name in each line]						
TPO Membrane, 45 mm	Root and Water barrier	6250	5	$31,250	$31,250	
TPO Grip Membrane	pathway surface	1750	4	$7,000	$7,000	
Protection Mat	Water retaining fleece	3090	1	$3,090	$3,090	
EnkaRetain and Drain	drainage and geotextile	3090	2.63	$8,127	$8,127	
Aluminum Edging	soil barrier	470	12	$5,640	$5,640	
Rooflite Intensive	green roof medium, 6" deep	840	3	$2,520	$2,520	
Rooflite Intensive	green roof medium, 3" deep	2250	1.5	$3,375	$3,375	
Gravel Edge Band	2" deep stone ballast	470	0.73	$343	$343	
Drain inspection chambers	drain boxes (Zinco)	4	80	$320	$320	
Irrigation Line and Timers	drip irrigation system	1	1400	$1,400	$1,400	
Vegetation (shallow soil)	Sempergreen Mat	2250	6	$13,500	$13,500	
Vegetation (deep soil)	Perennials and seeds	840	20	$16,800	$16,800	
Tools	garden tools	1	700	$700		$700
Water Source	spigot installation	1	2600	$2,600		$2,600
Installation						
Forklift	unload soil sacks	1	500	$500	$500	
Crane/Blower	materials lifting (4 days)	4	5,000	$20,000	$20,000	
Labor (expert)	3 installers 10 days	30	300	$9,000	$9,000	
Labor (volunteer)	4 installers 5 days	20	96	$1,920	$0	$1,920
General Conditions	garbage removal	1	2000	$2,000	$2,000	
Subtotal				$130,085	$122,865	$4,520

Soft Costs	Description	Unit	Unit Cost	Total Unit Cost	DEP	Matching Funds
General Contractor Fee	Brooklyn Grange (in days)	45	200	$9,000	$9,000	
Design Fee	Bromley Caldari	1	12,500	$12,500	$12,500	
Site Investigations	Structural Engineer	1	5,000	$5,000	$5,000	

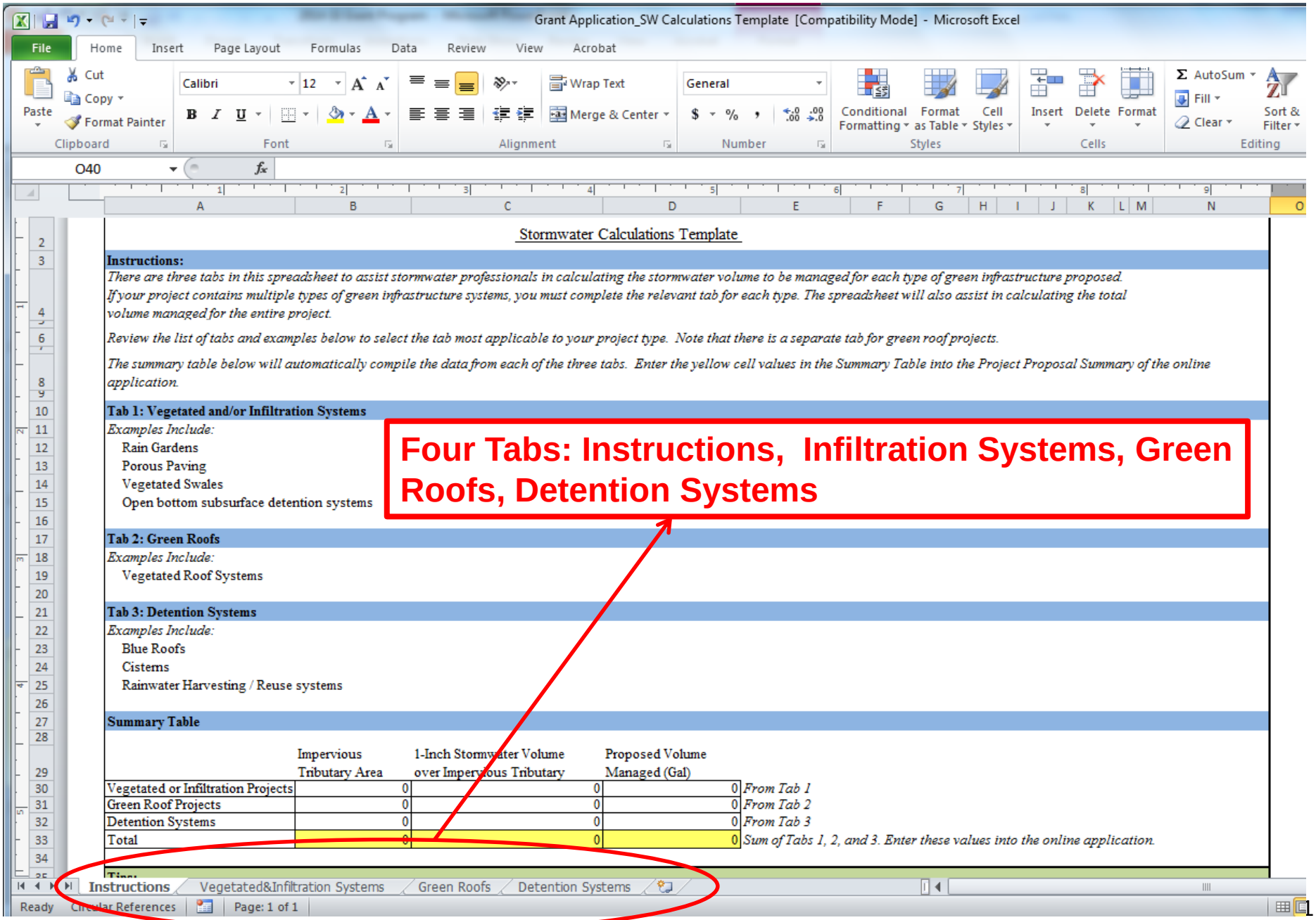
Example

DEP will not fund soft-costs (design and project management costs) in excess of 20% of the hard-costs (construction, materials, and installation) and projects with soft costs closer to the industry standard (10%) will be looked upon favorably

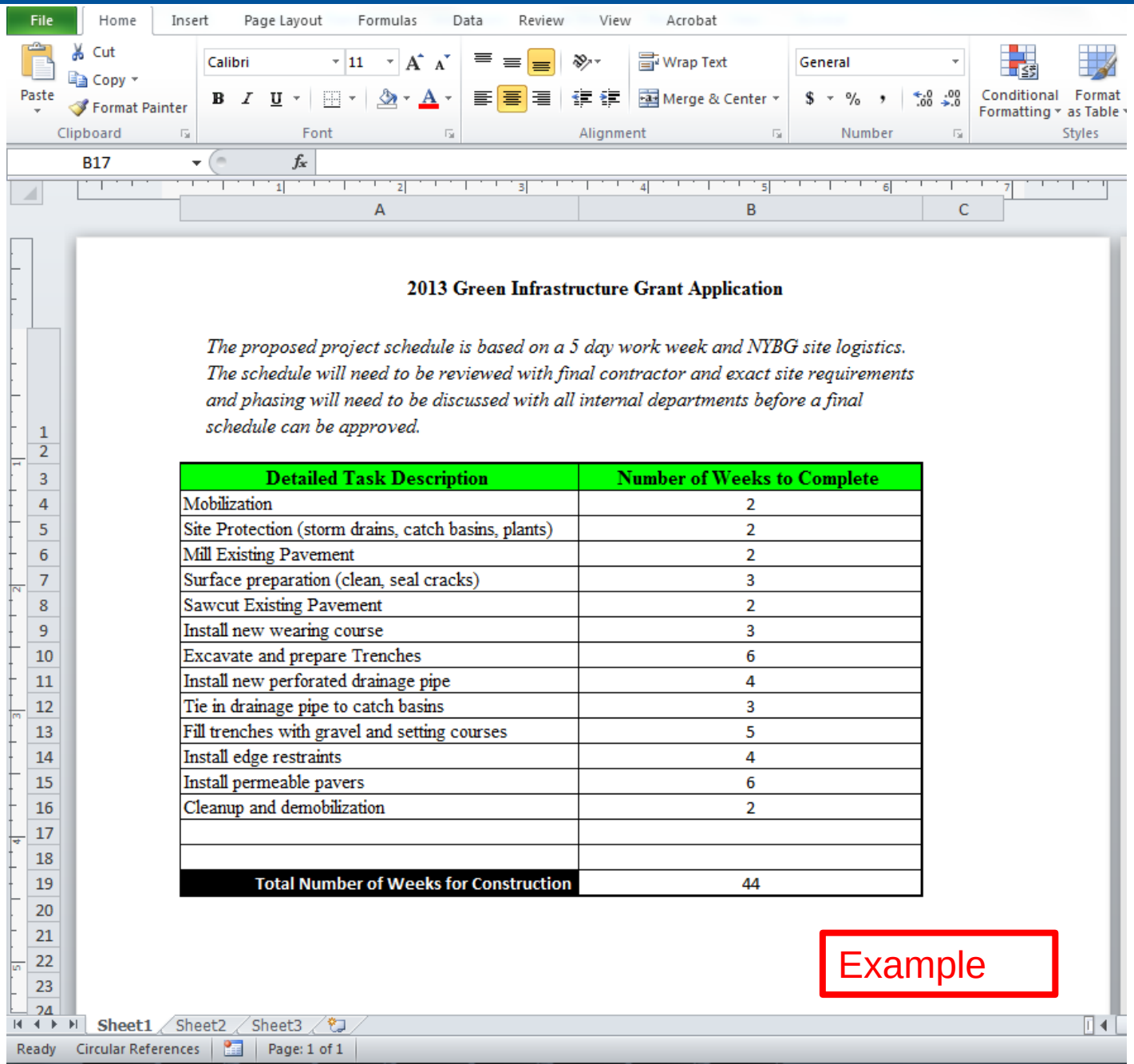
Budget Reminders

- All budgets must show line-item details
- Applications with lump sum budget amounts will not be reviewed
- Professional estimate is required to justify budget costs
- Maintenance Costs are not capitally eligible – Grantee must fund its own maintenance
- DEP cannot pay the Grantee directly for construction oversight or design. DEP can only pay third party contractors
- All costs in the DEP Column must be capitally eligible.
  - Design and Construction costs for the GI installation only
  - Ineligible costs include (training programs, educational materials, legal fees, rain barrel programs, fences, benches, etc.)

Project Details – Stormwater Calculations



Application – Construction Timeline Template



2013 Green Infrastructure Grant Application

The proposed project schedule is based on a 5 day work week and NYBG site logistics. The schedule will need to be reviewed with final contractor and exact site requirements and phasing will need to be discussed with all internal departments before a final schedule can be approved.

Detailed Task Description	Number of Weeks to Complete
Mobilization	2
Site Protection (storm drains, catch basins, plants)	2
Mill Existing Pavement	2
Surface preparation (clean, seal cracks)	3
Sawcut Existing Pavement	2
Install new wearing course	3
Excavate and prepare Trenches	6
Install new perforated drainage pipe	4
Tie in drainage pipe to catch basins	3
Fill trenches with gravel and setting courses	5
Install edge restraints	4
Install permeable pavers	6
Cleanup and demobilization	2
Total Number of Weeks for Construction	44

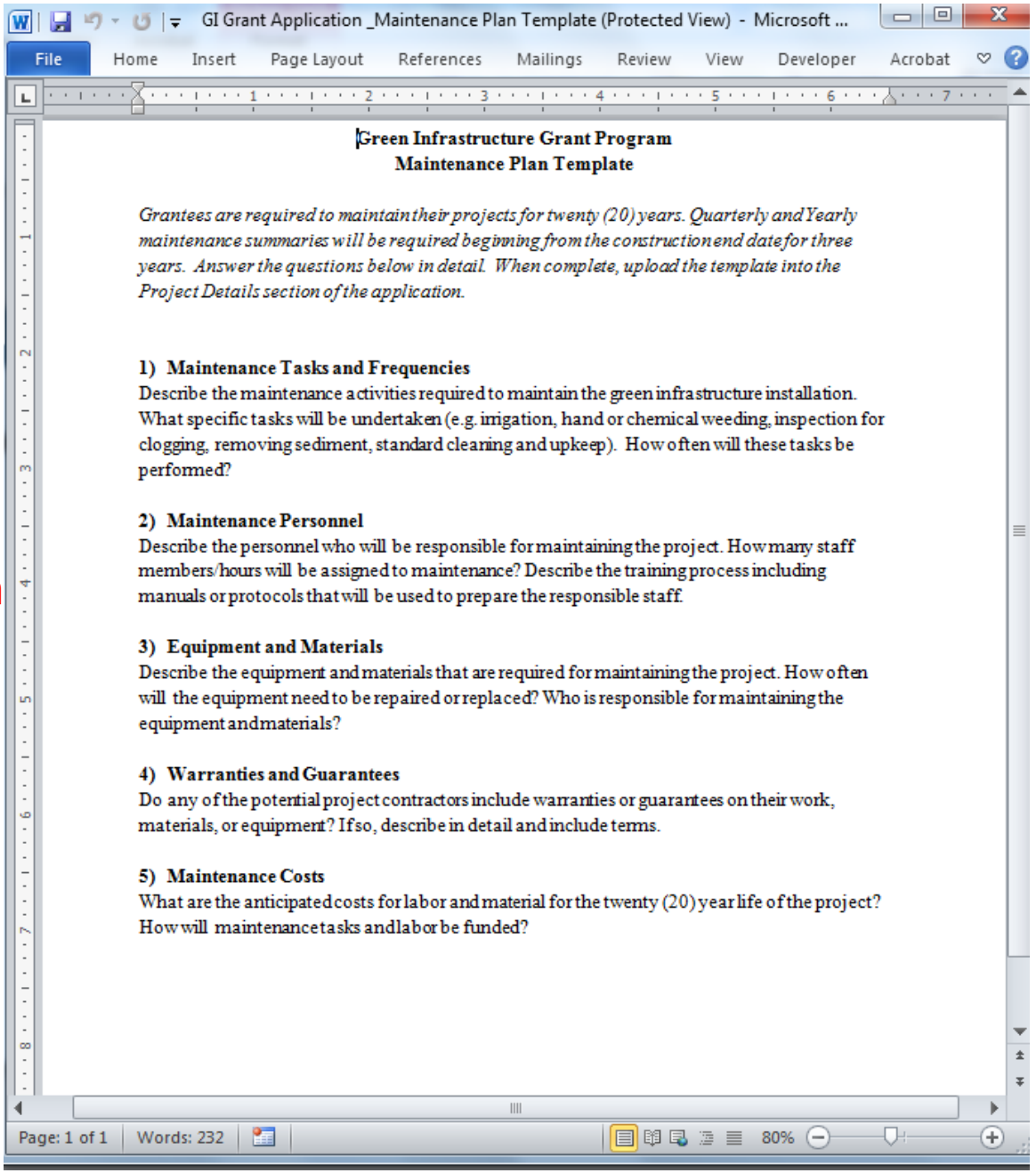
Example

Project Details – Maintenance Plan Template

Property Owners must sign a Declaration of Restrictive Covenant to ensure the functionality of the project for 20 years

Maintenance activities include removing sediment, cleaning blockages/floatables, vegetation maintenance, weeding, etc.

Grantees are required to submit maintenance reports each quarter for 3 years.

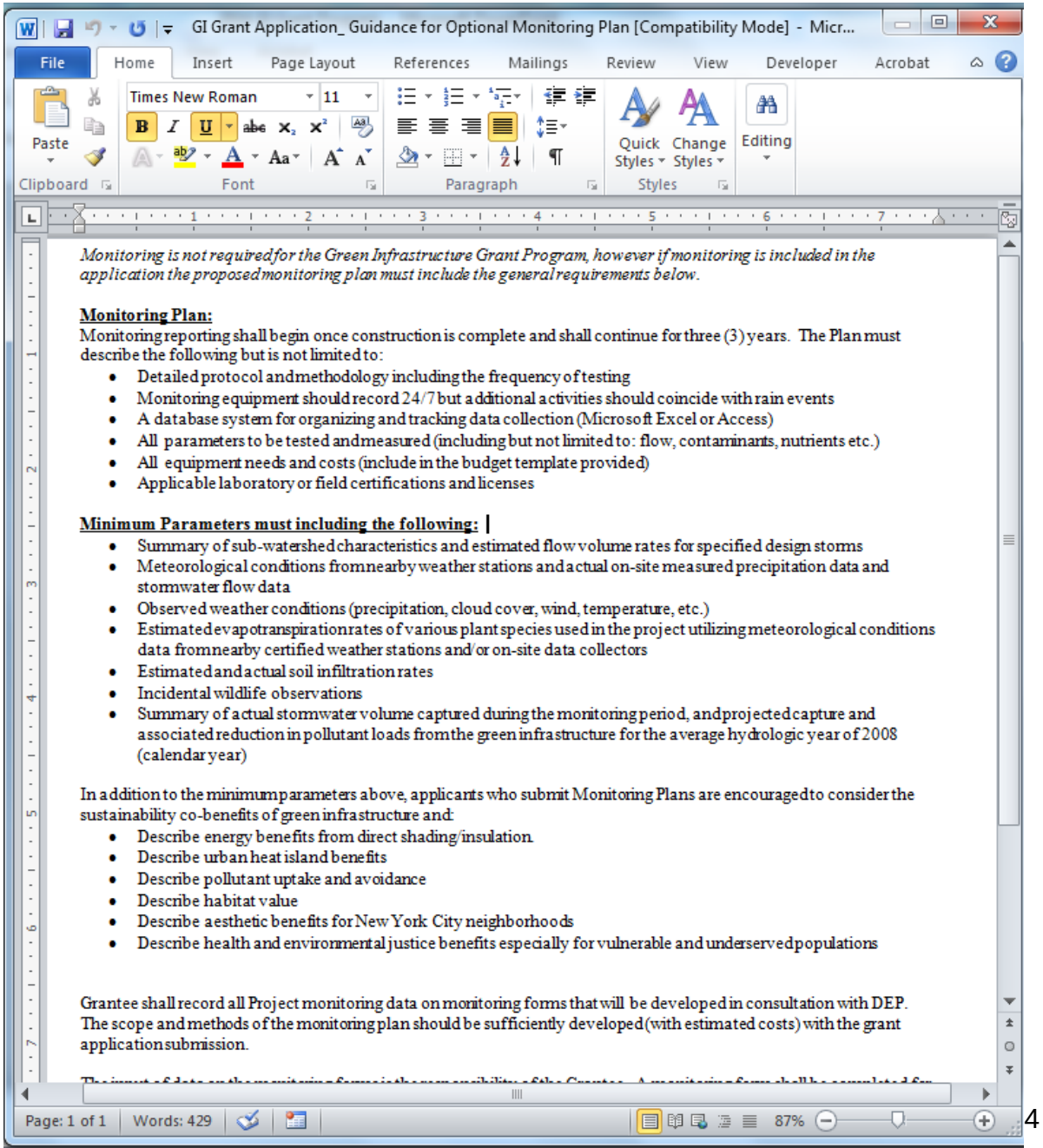


Project Details – Optional Monitoring Template

Monitoring protocol is optional

Purpose is to capture the performance of the project during wet weather

Projects that receive funding for monitoring must also submit monitoring reports every quarter for 3 years.

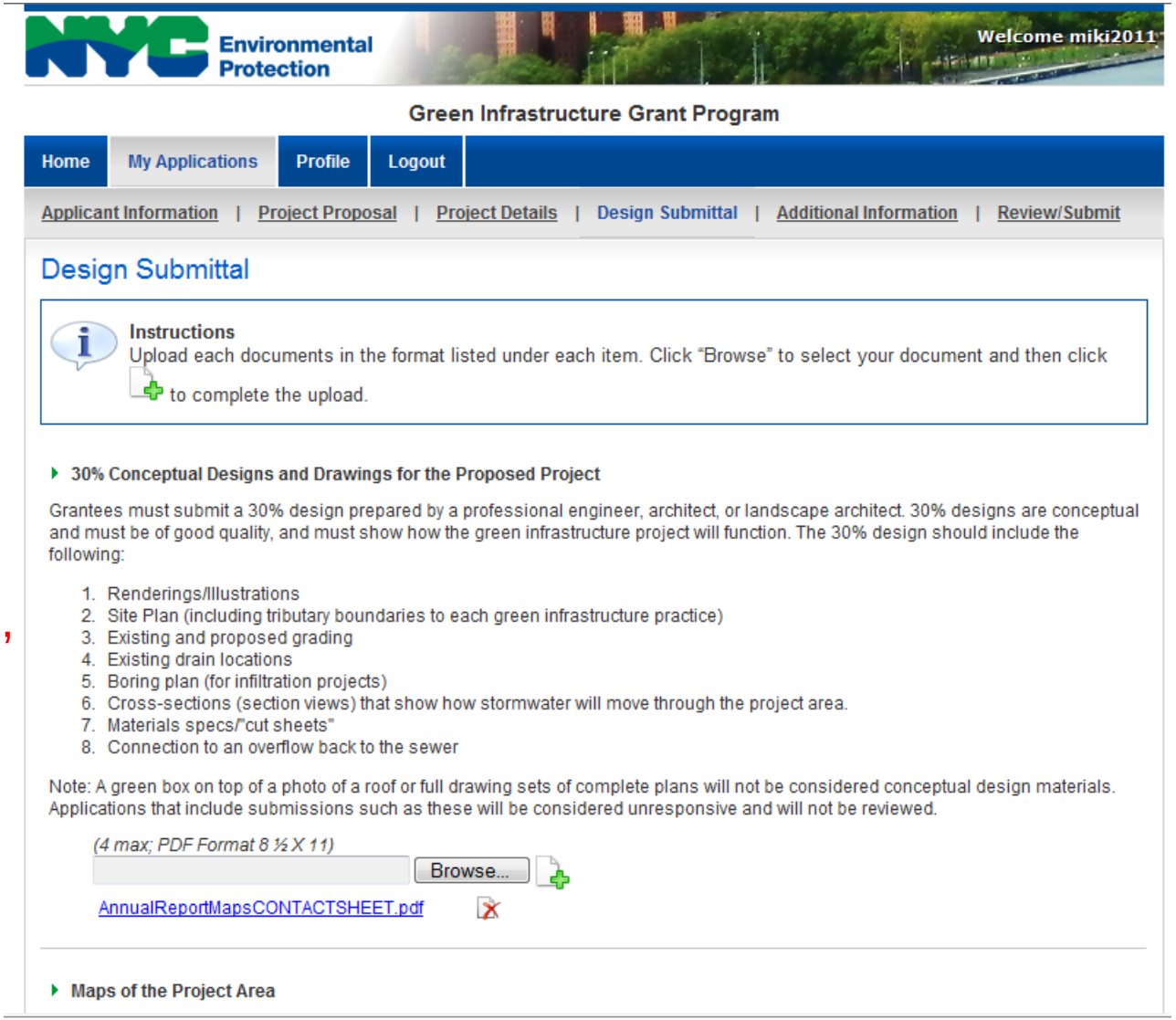


Design Submittal

All images and rendering should be simple and clear.

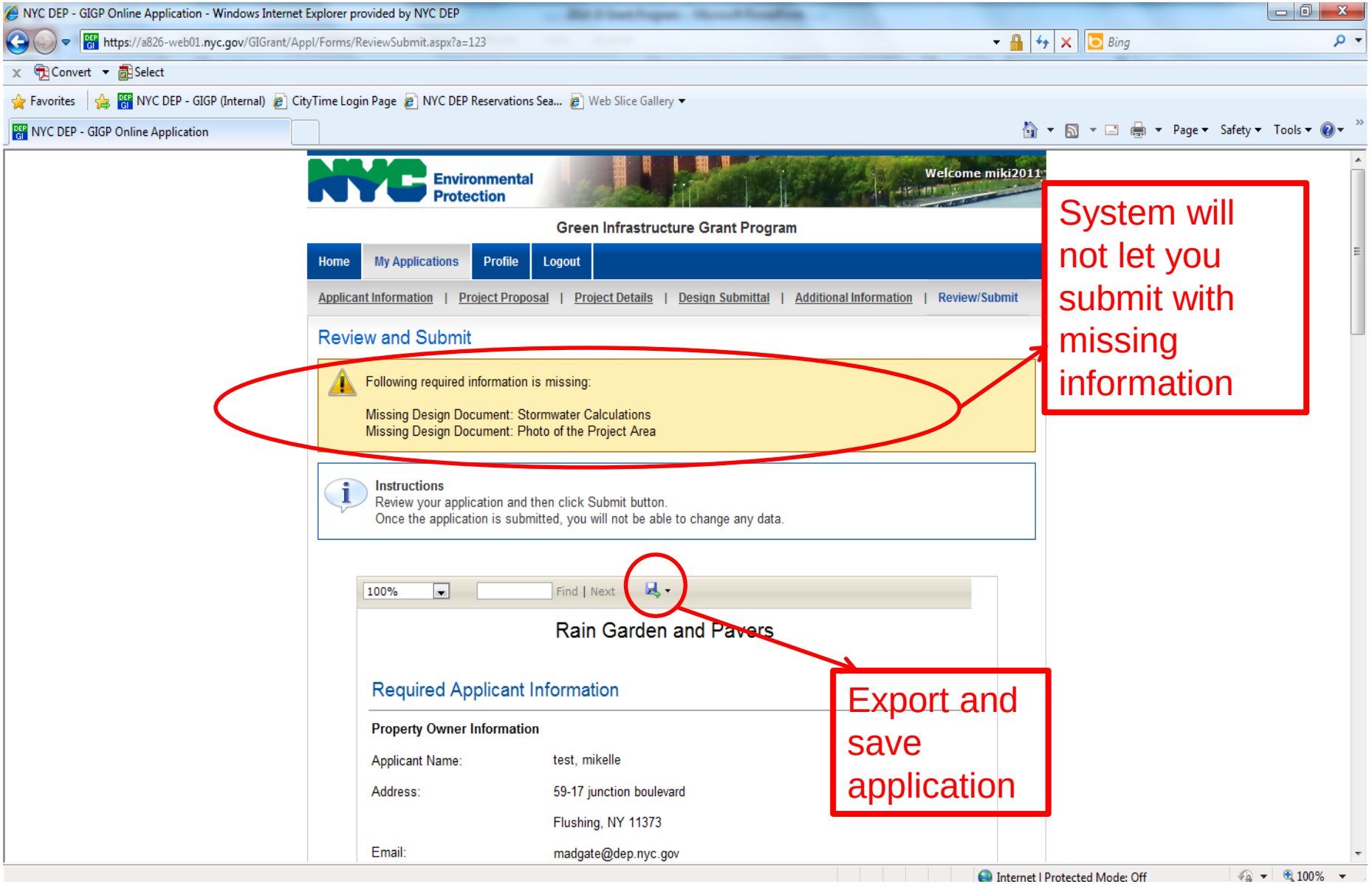
How is the project is designed to function?

Make sure to include: plan views, renderings, illustrations, details of proposed GI practice, cross sections that show how stormwater will be collected and managed through the project



Additional Information

Review and Submit



Considerations for a Stronger Application

Issue	Example
Cost Effectiveness	Is my project cost-effective? Do my proposed costs make sense for the amount of stormwater gallons managed?
Overall Design	Is the design sized correctly? Is the project overbuilt or underbuilt?
Feasibility	Is the proposed project feasible? Will it be accepted by DEP, DOB, or the Fire Department?
Replicability	Is the project overly complex? Can it be widely replicated?
Community Development	Does the project have community partners or is it publicly accessible? Is there a workforce development or educational component?

Questions?

- Visit www.nyc.gov/dep/grantprogram to access the online application, review eligibility criteria and grantee requirements

- Visit www.nyc.gov/dep/greeninfrastructure to
  - Download FAQs
  - Download Workshop Presentation
  - Review Press Releases with previous winner information
  - Find out about upcoming workshops

- Email gigrantprogram@dep.nyc.gov with questions

Helpful Resources

- **General Information**
  - NYC Green Infrastructure Plan
  - PlaNYC – Sustainable Stormwater Management Plan 2008
  - NYSDEC- Green Infrastructure
  - USEPA – Green Communities
  - The Low Impact Development Center, Inc.
  - UNH Stormwater Center
  - Other Municipalities specs – Philadelphia, Seattle, Portland, Syracuse
- **NYC Design Guidance**
  - Draft Guidelines for the Design and Construction of Stormwater Management Systems - 2011
  - NYC High Performance Parks Guidelines

Brooklyn Navy Yard – Rooftop Farm

NYC Environmental Protection

Bishop Loughlin – Green Roof

Queens College – Rain Garden and Pavers

NYC Environmental Protection

Lenox Hill Neighborhood House- Green Roof

NYC Environmental Protection

Osborne Association – Blue/Green Roof

New York Restoration Project – Rain Garden/Pavers

NYC Environmental Protection

New School – Green Roof

NYC Environmental Protection

Banana Kelly - Community Garden