Village of Greenport

Request for Proposals

for

Architectural/Engineering Design, Bidding and Construction Administration and Inspection Services

For

Greenport Municipal Utility Microgrid Project

February 2018

Responses must be received by:

March 8, 2018

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Request for Proposals

1 INTRODUCTION AND OVERVIEW

The Village of Greenport is eligible to apply for U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant–Disaster Recovery (CDBG-DR) funding for long-term recovery and resiliency projects. Construction funding will be delivered through the Microgrid Program of the New York State Governor's Office of Storm Recovery (GOSR). Accordingly, Respondents are obligated to comply with applicable federal and state laws and regulations, as well as with the Village of Greenport's Procurement Policy and Procedures. In addition, Respondents are obligated to comply with all municipal codes, ordinances, and regulations.

Only responsible vendors who have the technical and financial competence to perform as well as an exemplary record of integrity will be selected under this procurement. Before selecting a vendor, the Village of Greenport intends to review the federal and state lists of vendors excluded from procurement. Contracts shall not be awarded to debarred, suspended, or otherwise ineligible vendors. Accordingly, responses to this Request for Proposals must include a completed NYS Vendor Responsibility Questionnaire and notarized certification, along with verification that a completed NYS Vendor Responsibility Questionnaire has been filed with the NYS Office of the State Comptroller: http://www.osc.state.ny.us/vendrep/.

In accordance with New York State General Municipal Law Section 104-b, this RFP is designed to identify New York State licensed professional architectural and engineering (A/E) firms best qualified to provide the services necessary for the engineering design, bidding and construction administration and inspection services for an electric utility microgrid project that includes but is not limited to the following elements: pole replacement and reconductoring, switch installation, and renewable generation components, consistent with the requirements of the CDBG-DR funding stream. Respondents will be reviewed on the basis of their eligibility and ability to provide services in a manner sensitive to specific requirements and timetables established by federal law. Not all qualified Respondents will be selected to provide these services.

The Village of Greenport will select qualified architectural and engineering firms of the highest caliber that employ adequate staff and possess the financial management capacity to be able to focus immediate attention on this project.

Through its Evaluation Team, the Village of Greenport will select the Respondent whose proposal receives the greatest number of points. The Evaluation Team will only open or evaluate Cost Proposals from those firms that it has determined are qualified on the basis of the Technical Factors listed below. After the firms that are qualified have been identified, the Evaluation Team will factor in the cost of the qualified

proposals using the formula set forth below under "6. Selection Process." The Cost Proposal is included as Schedule IV: Cost Proposal.

The Village of Greenport reserves the right to negotiate the distribution of the A/E fee. The Village of Greenport reserves the right to reject any and all proposals either in whole or in part. The Village of Greenport reserves the right to: 1. amend, modify, or withdraw this solicitation; 2. revise any requirement of this solicitation; 3. require supplemental statements or information from any responsible party; 4. extend the deadline for submission of responses hereto; 5. negotiate or hold discussions with any firm and to correct deficient responses which do not conform to the instructions contained herein; 6. cancel, or reissue in whole or in part, this solicitation, if the Village of Greenport determines in its sole discretion that it is its best interest to do so; and 7. extend the term of any agreement on terms consistent with this procurement. The Village of Greenport makes no representations or warranties regarding the accuracy of any information provided in this RFP and will have no liability or obligation with regards to its contents.

Respondents will not be reimbursed for costs incurred in the preparation of the proposal.

GOSR will be delivering grant funding exclusively for the construction portion of the Microgrid project. The funding level anticipated for the construction portion of this project is a minimum of $ 1,000,000 and a maximum of $5,000,000 dependent on final project elements and parameters, and acceptance thereof.

2 PROJECT DESCRIPTION

The Village of Greenport owns and operates a municipal electric distribution system that provides electric utility service to the residents and businesses within the one square mile of the Village, as well as a small area outside, but contiguous to, the Village boundary. The Village purchases wholesale electricity through a long-term contract with the New York Power Authority. The electricity is delivered via a 13.8KV circuit from a nearby substation owned by the Long Island Power Authority. At a Village owned substation there exists two stepdown transformers that drop the voltage from 13.8KV to 4.16KV. At this substation there are three diesel engine generators that can provide electricity to the Village if there is a loss of supply. The vast majority of the system is constructed of overhead infrastructure. The system consists of six (6) distribution circuits operating at 4.16KV three phase. During times of circuit interruptions, there are points to manually switch from the damaged circuit to an adjacent circuit while repairs are made on the damaged circuit.

As an overhead system, the Village is susceptible to wind and tree damage during storms. This project will design system improvements to mitigate the possibility of damage through improved conductor design, pole replacements and switching systems to automate restoration as much as possible. In addition, this project will integrate a renewable energy source (e.g. solar, fuel cell, wind, etc.) with an energy storage component. The successful Respondent will assist with the selection of the most appropriate renewable source that will best integrate with Village's system.

The successful Respondent will assist the Village of Greenport with all basic services necessary for design, bidding, construction administration and inspection of this project, in accordance with HUD and GOSR requirements and timetables.

The Village of Greenport reserves the right to modify the project description.

3 DEADLINES AND COMPLETION DATE

The Technical Proposal and Cost Proposal must be delivered **in separate envelopes** to the Village of Greenport in accordance with Schedule II: Deadline Schedule. Proposals are due at 10 a.m. on March 8, 2018. The Village of Greenport reserves the right to extend receipt of submissions beyond March 8, 2018.

4 SCOPE OF WORK

The Village of Greenport reserves the right to modify the Scope of Work.

Modifications to this scope of work by a Respondent to this RFP shall not be permitted unless approved by the Village of Greenport.

- To avoid duplication of efforts, unless otherwise specified by GOSR in writing, the selected A/E firm will not conduct environmental review activities. It is presumed that GOSR will serve as lead agency for the purposes of NEPA and SEQRA. The selected A/E firm will be required to coordinate with GOSR and its contractors in support of any environmental review activity. Notwithstanding the above, the selected A/E firm will be responsible for acquiring all applicable, local, state and federal permits.
- The selected A/E firm must abide by GOSR's environmental requirements, including but not limited to, elevation design standards adapted to address impacts of climate change. Updated copies of these environmental requirements are available at www.stormrecovery.ny.gov/environmental-docs.
- Assist the Village of Greenport in the preparation of its CDBG-DR Project Application, including a project description, an estimate of the total project costs broken out by services and construction costs, and a project schedule.
- Prepare a design report that includes the following components: (1) problem definition; (2) existing conditions; (3) project description; (4) preliminary drawings/site plan; (5) estimate of total project costs broken out by services and construction costs; (6) project schedule; (7) preliminary engineering analysis (e.g. hydrocad model, building code, constructability, etc.); (8) alternatives to the project that address the problem; and (9) summary.
- After the initial pre-design conference, the successful Respondent shall meet and work with the Village of Greenport to determine more detailed program requirements for the project and shall refine and complete the program in a form acceptable to the Village of Greenport.
- Design the Project so that the actual Total Project Construction Cost does not exceed the Approved Construction Budget. In the event it is discovered at any phase of design that the

estimated Total Project Construction Cost of the work is in excess of the Approved Construction Budget, or the bids received are in excess of the Approved Construction Budget, the Respondent shall revise, at its own cost and expense, all or any part of the Schematic Deliverables, the Design Development Deliverables, the Construction Documents or the Bid Documents necessary to bring the estimated Total Project Construction Cost within the Approved Construction Budget. In order to reduce the estimated Total Project Construction Cost to the Approved Construction Budget, the Respondent shall, in addition to the above, at the Village's request and at no additional cost to the Village , (i) provide value engineering to reduce the estimated Total Project Construction Cost to the Approved Construction Budget; (ii) assist the Village of Greenport in redefining the scope of the Project; (iii) incorporate all scope reductions and Project modifications into the modified Schematic Deliverables, Design Development Deliverables, Construction Documents or Bid Documents; and (iv) develop and incorporate bid alternates into the Construction Documents and Bid Documents.

- Prepare, at a minimum, the following deliverables: 1) Preliminary design or 30% Schematic design; 2) Design Development or 60% design; 3) Draft final or 90% design and 4) 100% construction documents or Final Contract Documents. At each submission, Respondent agrees to provide an opinion of probable cost. Respondent shall also prepare a detailed schedule in seven (7) calendar days of each deliverable.
- Prepare a complete set of Final Contract Documents (drawings, specifications, and calculations), including an estimate of probable construction costs for use as the basis for advertising the construction project for bid within 180 calendar days of the executed design contract.
- Prepare and submit any and all required permit applications.
- Assist the Village of Greenport during the construction bid process by attending the pre-bid site meeting, responding to bidder questions, distributing documents to prospective bidders by mail or email and maintaining a list of prospective bidders, issuing any necessary addenda, and reviewing bids received to determine technical responsiveness and bidder experience and qualification to perform the work.
- Recommend to the Village of Greenport, award to the lowest, responsive, responsible bidder and assist the Village of Greenport in the preparation of the Notice of Award.
- Review the selected bidder's submittals of bonds and insurance certificates and assist in the preparation of the Notice to Proceed.
- Conduct the pre-construction meeting and prepare meeting minutes.
- Review submittals for contract document compliance.
- Answer Requests for Information within three (3) business days.
- Prepare agendas and conduct regular construction progress meetings in accordance with the Village's requests. Prepare meeting minutes. Meetings shall be held weekly, biweekly or monthly; depending on the duration and complexity of the construction.
- Conduct regular construction inspections to ensure contract compliance, design intent, quality of workmanship, and material acceptance. The frequency of inspections will be based on the duration and complexity of the construction and the level of construction activity.
- Prepare and issue Field Orders and Change Orders.
- At Substantial Completion, conduct Substantial Completion Inspection and prepare punch list of work to be completed
- At Final Completion, conduct Final Completion Inspection and prepare Certification of Final Completion

- Collect contract closeout documents from all prime contractors, including, but not limited to, lien and claim releases from all subcontractors and vendors, Consent of Surety to Final Payment, and equipment warranties, if applicable.
- Prepare Record (as-built) drawings
- If applicable, prepare Operation and Maintenance Manual
- Coordinate project activities with the activities of the Village of Greenport and other parties.
- Review and approve all contractor requests for payment and submit approved requests to the Village of Greenport. Payment requests shall meet GOSR requirements for reimbursement.
- Attend and present project update at one NYRCR Planning Committee update meeting. This meeting is separate from other meetings referenced in this Scope of Work.

5 SUBMITTAL CONTENT

Respondent must supply 10 (ten) copies of its submission to the attention of the Village of Greenport's RFP Coordinator no later than 10 a.m. on March 8, 2018.

RFP Coordinator: Sylvia Lazzari Pirillo, Village Clerk

Sylvia Lazzari Pirillo, RMC
Village Clerk
236 Third Street
Greenport, NY 11944
Phone: 631-477-0248 x 206
Email: spirillo@greenportvillage.org

While there is no specific page limit, brevity, whenever practical, is strongly encouraged and will be considered in evaluating responses. The Proposal must contain the following information and documentation:

- **Firm.** Respondent's legal structure, areas of expertise, length of time in business, number of employees and detailed contact information for the person authorized to contractually obligate the Respondent and for the person administratively responsible for the Proposal.

- **Subconsultants.** Identify any Subconsultants, including a summary of the organization, experience and technical skills. Respondent shall not employ, contract with, or use the services of any consultant for the work of this Contract (except such third parties which may be used by the Respondent in the normal course of business, such as couriers, imaging services, etc.) without obtaining the prior written approval of GOSR.

- **Disclosure.** Disclose all allegations or claims of substandard work, unethical or illegal practices or debarment or suspension from state- or federally-funded projects within the previous 10 years, and provide documentation as to the resolution of these matters. Respondent must not be

suspended or debarred from participation in state- or federally-funded projects. Include a completed NYS Vendor Responsibility Questionnaire and notarized certification, along with verification that a completed NYS Vendor Responsibility Questionnaire has been filed with the NYS Office of the State Comptroller: http://www.osc.state.ny.us/vendrep/. Failure to complete and submit the NYS Vendor Responsibility Questionnaire may be cause for a proposal to be rejected.

- **Relevant Experience.** Previous projects that demonstrate relevant experience and identify public sector clients for whom Respondent has provided similar work in the past five years. For each project described, provide current contact information for the individual with whom Respondent worked.

- **Approach and Methodology.** Respondent's understanding of the scope, including a detailed work plan to complete the requested services.

- **Staffing Plan.** Respondent's capacity to provide services in the required timeframe, and key personnel to provide services and the proposed staffing plan. Outline the resumes of key personnel who will be assigned to the project, including their years of experience and functions on this project.

- **Resilient & Sustainable Design.** GOSR is committed to promoting sustainability and resiliency through resilient and green design in building and infrastructure projects funded through the NY Rising Community Reconstruction program. Engineering and design work should incorporate sustainability measures, resilient techniques, and green infrastructure practices where possible. (See Exhibit A: Environmental Review for NY Rising Community Reconstruction Program Projects). Respondents should include in their submission a brief description of the green and resilient projects on which they have worked, and if applicable how that experience may be applied to this project. Previous experience in such design will be considered in the evaluation of responses.

- **Ability to Conform to the Village's Deadline Schedule**. Describe firm's workload and the impact on its current capacity to perform services on this project, and describe specifically how the firm will comply with the required delivery schedule set forth in Schedule II.

- **Costs.** Complete the Cost Proposal (Schedule IV) by providing a not-to-exceed, lump sum price [and itemized cost breakdown, by task, showing estimated manhours and hourly rates] for completing this project. Also provide a schedule of hourly billing rates for all labor classifications that might be involved in the work. The Cost Proposal must be included in a separate sealed envelope.

- **Attachments**. Resumes and material helpful to the technical evaluation may also be attached (short project descriptions, brochures).

6 SELECTION PROCESS

Technical Proposals responsive to the requirements of this RFP will be evaluated and scored in accordance with the Village's internal evaluation criteria. After evaluation of the Technical Proposals, Cost Proposals will be scored for cost.

During or after the review of responses, the Village of Greenport may submit written questions and requests for clarification, and may conduct interviews. Respondents must comply with the calendar identified in Schedule II: Deadline Schedule, which may be adjusted if necessary.

The Village of Greenport shall evaluate each respondent in terms of:

Technical Factors	***Maximum Points***
1. Relevant Experience (3 similar projects minimum)	20
2. Approach and Methodology	10
3. Staffing Plan / Qualification	15
4. Resilient Design	20
5. Ability to Conform to the Village of Greenport's Deadline Schedule	10
6. Commitment to Comply with all Applicable Federal, State and Local Regulations.	10
Total Technical Points	**85**
Total Cost Points	**15**
Maximum Points (Total Technical Points + Total Cost Points)	**100**

The Village of Greenport's Evaluation Team will conduct a technical evaluation of the non-cost elements as described in the RFP prior to opening the Cost Proposals. No more than 85 technical total points will be awarded to any one Respondent.

The Cost Proposal will remain sealed until completion of the technical evaluation, and will only be considered for the best qualified firms. No more than 15 points will be awarded to any Respondent.

Cost points will be awarded as follows:

- The lowest priced qualifying technical proposal will be awarded the full 15 points. Other bidders will be awarded as follows:

  Total cost points for bidder X = (lowest bidder cost/bidder X's cost) x 15

- The Village of Greenport will weigh the technical and cost evaluation results of each submittal as two components, which together will have a maximum total score of 100 points. The contract will be awarded to the respondent with the highest total score.

After evaluation of selected Technical Proposals and Cost Proposals, the Village reserves the right to award without delay subsequent to the approval of the Village Board of Trustee. The Village of Greenport will issue a Letter of Intent to Award, and a Notice to Proceed, after costs are negotiated and accepted by the Village of Greenport Board of Trustees.

7 SPECIFIC LEGAL OBLIGATIONS

7.1 PROCUREMENT

All responses to this Request for proposals must adhere to the Village of Greenport's Procurement policy which can be found in the Code of the Village of Greenport, Chapter 29, which is available online at http://villageofgreenport.org and New York State Law.

7.2 DIVERSITY AND NON-DISCRIMINATION REQUIREMENTS

The Village of Greenport is an equal opportunity employer and does not discriminate on the basis of race, color, creed, ancestry, disability or handicap, marital / financial status, military status, religion, sex, sexual orientation, age or national origin with respect to employment or any employment related matter and the Village of Greenport requires that all contractors participating in contracts for public work in the Village of Greenport and all subcontractors of those contractors comply with that same requirement and evidence of that compliance to the Village of Greenport by providing an affidavit to that effect. The Village of Greenport encourages proposals for public contracts, and public contracts with the Village of Greenport and subcontracts of those contracts by minority and women-owned contractors and entities, and the Village of Greenport solicits proposals and contracts from such entities with respect to the public work noticed herein.

7.3 NEW YORK LAW AND VENUE

This contract shall be construed under the laws of the State of New York. All claims, actions, proceedings, and lawsuits brought in connection with, arising out of, related to, or seeking enforcement of this contract shall be brought in the Supreme Court of the State of New York, Suffolk County.

SCHEDULE I: DETAILED PROJECT DESCRIPTION

The Village of Greenport owns and operates a municipal electric distribution system that provides electric utility service to the residents and businesses within the one square mile of the Village, as well as a small area outside, but contiguous to, the Village boundary. The Village purchases wholesale electricity through a long-term contract with the New York Power Authority. The electricity is delivered via a 13.8KV circuit from a nearby substation owned by the Long Island Power Authority. At a Village owned substation there exists two stepdown transformers that drop the voltage from 13.8KV to 4.16KV. At this substation there are three diesel engine generators that can provide electricity to the Village if there is a loss of supply. The vast majority of the system is constructed of overhead infrastructure. The system consists of six (6) distribution circuits operating at 4.16KV three phase. During times of circuit interruptions, there are points to manually switch from the damaged circuit to an adjacent circuit while repairs are made on the damaged circuit.

As an overhead system, the Village is susceptible to wind and tree damage during storms. This project will design system improvements to mitigate the possibility of damage through improved conductor design, pole replacements and switching systems to automate restoration as much as possible. In addition, this project will integrate a renewable energy source (e.g. solar, fuel cell, wind, etc.) with an energy storage component. The successful Respondent will assist with the selection of the most appropriate renewable source that will best integrate with Village's system.

The Village reserves the right to modify the project description.

The offeror will provide a schedule of deliverables to include a minimum of the following data. Additional data may be provided at the offeror's discretion.

Schedule of Deliverables		
30% Design	Contents of delivery	07/03/2018
60% Design	Contents of delivery	10/03/2018
90% Design	Contents of delivery	01/03/2019
100% Design	Contents of delivery	02/03/2019

(See Exhibit B and attached Microgrid Design Submission guideline documents)

The offeror will deliver copies of all GIS data generated during this project to the Village with the final design delivery.

SCHEDULE II: DEADLINE SCHEDULE

A.	Date for Publication of Notice:	February 8, 2018
B.	Final Date for Questions from Respondents:	February 22, 2018
C.	Final Date for Response to Respondents' Questions:	March 1, 2018
D.	Date for Submission of Proposals:	March 8, 2018
E.	Date for completion of Proposal(s) Evaluations:	March 15, 2018
F.	Date for Contingent Award:	March 22, 2018
G.	Date for Initial Meeting between Selected Firm, Village of Greenport and GOSR:	April 5, 2018
H.	Date for Receipt of Draft Contract from Selected Firm:	April 19, 2018
I.	Date for Execution of Contract with Notice to Proceed:	April 26, 2018
J.	Date for Receipt of Deliverable I :	June 21, 2018

The Village of Greenport reserves the right to modify this Deadline Schedule as necessary. All Submittals shall be submitted in hard copy, signed in the original, and received and date stamped by Village of Greenport on or before 10 am on March 8, 2018.

Respondent is responsible for meeting all deadlines. The selected firm will be responsible for submitting a draft A/E contract that includes a scope of services or scope of work and cost proposal within two (2) weeks of the initial meeting (G above). Failure to meet this deadline may result in the Village of Greenport exercising its right to terminate negotiations with the selected firm.

SCHEDULE III: INSURANCE REQUIREMENTS

Contractor shall effect and maintain throughout the period of this project the following insurance coverages at its own cost and expense:

Workers' Compensation Insurance

Bodily injury each occurrence $ 250,000 Aggregate $ 500,000

Liability property each occurrence $ 1,000,000 Aggregate $ 1,000,000

Automobile Liability and General Liability Insurance

each occurrence $1,000,000 aggregate $2,000,000

Professional Liability Insurance each occurrence $ 1,000,000

Aggregate $1,000,000

to protect itself from claims under Workers' Compensation Acts; from claims for damages because of bodily injury, including sickness, disease, or death of any of its employees; from claims for damages because of injury to or destruction of tangible property; and from claims arising out of the performance of professional services caused by errors, omissions, or negligent acts for which it is legally liable. Each policy shall name the Village of Greenport and the Greenport Village Electric Utility as additional insured. Contractor shall provide evidence of such coverage to Village in the form of original policies or policy endorsements, not less than five business days prior to the execution of a contract with the Village. The Village shall receive written notice of the expiration, termination or any change in the policies that are provided in accordance with this contract.

SCHEDULE IV: COST PROPOSAL

Village of Greenport request for Proposals for

Architectural/Engineering Design, Bidding and Construction Administration and Inspection Services

For

Greenport Municipal Utility Microgrid Project

Respondent Name: _____

Contact Information: _____

Bid price: $_____

Bid Price (in words) _____

Signature of Authorized representative:

_____

Print Name: _____

Title: _____

EXHIBIT A: ENVIRONMENTAL GUIDANCE

ENVIRONMENTAL REVIEW

for community development block grant-disaster recovery (CDBG-DR) funded projects in the NY Rising Community Reconstruction Program

INTRODUCTION

All projects funded by the Governor's Office of Storm Recovery (GOSR) must undergo environmental review pursuant to both the National Environmental Policy Act (NEPA) and State Environmental Quality Review Act (SEQRA). These environmental reviews are typically conducted by GOSR's Bureau of Environmental Review and Assessment (BERA) and are informed by information provided by engineering and design professionals, as well as qualified environmental professionals.

Because GOSR must conduct NEPA reviews as the "responsible entity" under the authority of the United States Department of Housing and Urban Development (HUD), for efficiency purposes and as a service to grant recipients, GOSR assumes Lead Agency status for coordinated Unlisted and Type I actions pursuant to SEQRA. GOSR is unable to delegate NEPA decision-making authority. Should a grant recipient or other Involved Agency wish to assume SEQRA Lead Agency status, GOSR's BERA may concede upon request.
As an added benefit to grant recipients, GOSR's BERA will assume the costs associated with the NEPA and SEQRA process. The generalized breakdown of cost sharing is summarized by the chart below. If you have questions, comments, or suggestions with regard to information contained in this document, please contact GOSR's BERA staff at nyscdbg_dr_er@nyshcr.org or call at (518) 473-0015.

ACTIVITY	BERA	SUBRECIPIENT
NEPA Review	X	
SEQRA Lead Agency	X[1]	
Asbestos/Lead/Radon surveys	Project by project determination[2]	
Phase 1 and 2 ESAs	X	
Phase 1 Arch Survey	X	
Noise Analysis	X	

[1] Although the subrecipient agreement template indicates that GOSR will serve as Lead Agency, this is a responsibility that can be delegated to municipalities demonstrating experience with conducting SEQRA reviews. A Subrecipient may apply to GOSR's Certifying Officer to obtain Lead Agency status on any project.

[2] Subrecipients should coordinate with GOSR's BERA and NYRCR Program Staff to assign responsibility.

Site Remediation and Hazard Abatement		X
Permitting		X[3]
Sole Source Aquifer Analysis	X	
Threatened and Endangered Species	X	

ANALYSIS OF ALTERNATIVES

The NEPA and SEQRA environmental review processes require GOSR to consider reasonable alternatives that achieve the purpose and need of most projects. GOSR relies upon project engineers, architects, designers and planners to inform this alternative analysis.

In some cases, the NY Rising Community Reconstruction Program planning process has identified a specific project to be implemented, such as the replacement of a particular bridge or culvert. In these cases, in addition to the "no action" alternative, reasonable alternatives might include investigation into the various sizing possibilities for the hydraulic opening of the structure. In other cases, design professionals are tasked with undertaking a study or crafting recommendations to address community needs. In these cases, design professionals working on NY Rising Community Reconstruction Program projects must be sure to document various alternative design solutions, including the type of sustainable and resilient alternatives described below.

In accordance with the requirements of Executive Order 13693, Planning for Federal Sustainability, GOSR is requiring consideration of sustainability measures in all design and engineering projects. In addition to meeting the requirements of all applicable existing federal, state, and local codes, laws, and ordinances, engineering design reports should analyze practicable alternatives that incorporate sustainability measures and green infrastructure practices into the proposed design where possible. These alternatives should include natural systems, ecosystem processes, and nature-based approaches to achieve the purpose and need of the project and overall design objectives. These sustainable practices should be integrated into the base design of the engineering projects.

Evaluation of project design alternatives should consider site/project suitability, environmental benefits, operating and maintenance costs, decommissioning, and useful lifetime. Where sustainable

[3] Permitting responsibilities will reside with the responsible permitee. Please note that BERA will assist as need in coordinating permitting with the New York Department of Environmental Conservation (DEC), United States Army Corps of Engineers (USACE), New York Department of State (DOS), and other permitting agencies.

practices are determined to be infeasible or in conflict with project objectives or budget, design reports should document the evaluation of sustainable practices.

ENVIRONMENTAL BEST PRACTICES

Environmental best practices can and should be incorporated into all types of recovery and resilience projects.
Some of the most common projects proposed for HUD Community Development Block Grant – Disaster Recovery (CDBG-DR) funding are culvert resizing or replacement, drainage and stormwater management improvements, streambank stabilization and restoration, emergency generator installation, and repair or renovation of structures. An overview of key sustainable design practices related to these categories of projects, as well as hyperlinks to guidance documents, are provided on the following pages.

CULVERT RESIZING / REPLACEMENT

In addition to ensuring that culverts are properly sized, several environmental design factors must be considered in a culvert resizing or replacement project. While traditional culverts enable bridges and roadways to safely cross a stream or wetland, they can disrupt stream continuity, inhibiting passage for fish and wildlife and causing significant streambed erosion and destabilization. Open bottom culverts are effective for facilitating fish and aquatic species passage. When closed bottom culverts are used, they should be designed and installed to mimic natural stream flow and bottom substrate. Inadequate culvert sizing is a primary factor in streambed erosion. In general, culverts should be sized such that they are wider than the bankfull width (BFW) of the stream. In all culvert projects, pre-installation stream conditions should be retained to the maximum extent possible and construction schedules should be coordinated to minimize impacts to wildlife and vegetation.

recommendations

- The capacity and size of the culvert should be maximized to accommodate a 100+ year flood event. At a minimum, the width of the structure should be 1.25 times the BFW of the stream
- Use open bottom culverts when possible
- Construct culverts to match the characteristics of the natural stream channel, including: slope, substrate, stability, and width
- Make stream crossings, such as roads and bridges, perpendicular to the direction of streams or drainage to minimize the area of disturbance
- Replacement structures must not create an inlet or outlet drop that restricts aquatic organism passage

resources

- New York State Department of Environmental Conservation (NYSDEC) Stream Crossing Guidelines: http://www.dec.ny.gov/permits/49066.html
- Bureau of Land Management (BLM) Culvert Use Guidelines: http://www.blm.gov/bmp/low%20volume%20engineering/J_Ch8_Culvert_Use_Installation_&_Sizing.pdf
- U.S. Army Corps of Engineers (USACE) Stream Crossing BMPs: http://www.nae.usace.army.mil/Portals/74/docs/regulatory/StateGeneralPermits/NEGP/BMPStreamCrossings21Jan2015.pdf
- Wetland Crossing BMPs: http://www.dem.ri.gov/programs/benviron/water/permits/fresh/pdfs/bmpch9. pdf
- Water Crossing Design Guidelines – Washington Department of Fish and Wildlife: http://wdfw.wa.gov/ publications/01501/wdfw01501.pdf

STREAMBANK / STREAMBED RESTORATION

Degraded streambanks and streambeds can lead to erosion, slope instability, water quality impairment, and other significant environmental issues. Riprap revetments and other streambank armoring measures can cause environmental damage of their own, as they impede the natural functions of a streambank, diminish aquatic habitats, and can even cause destabilization downstream. Natural streambank stabilization uses targeted vegetation, engineered logjams, and other bioengineering methods to return streams to a natural state of hydraulic stability. In addition to providing long-term stream stability benefits, natural stream restoration measures encourage healthy, vegetated stream buffers, thereby improving water quality and increasing riparian habitat.

recommendations

- Plant hardy and flood-resistant native species on riverbanks to stabilize soil and strengthen the riparian buffer
- Use biodegradable erosion control blankets to provide temporary erosion protection during vegetation establishment
- Install tree revetments or engineered logjams to dissipate flow in locations of excessive erosion

resources

- Federal Emergency Management Agency (FEMA) Bank Stabilization Alternatives: http://www.fema. gov/pdf/about/regions/regionx/Engineering_With_Nature_Web.pdf
- Minnesota Vegetated Stream Restoration Program: http://files.dnr.state.mn.us/publications/waters/understanding_our_streams_and_rivers_resource_sheet_2.pdf

- Natural Resources Conservation Service (NRCS) Stream Restoration Design Handbook: http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/water/manage/restoration/?cid=stelprdb1044707
- Westchester County Aquatic Buffer Guide: http://www.westchestergov.com/planning/environmental/BronxRiver/Westchester%20County%20Water%20Resource%20Buffer%20Brochure%20FINAL%20 for%20e-mail1.pdf
- Integrated Stream Bank and Restoration Guidelines - Washington Department of Fish and Wildlife: http://wdfw.wa.gov/publications/00046/wdfw00046.pdf

DRAINAGE / STORMWATER MANAGEMENT

Effective and sustainable management of stormwater is critical to ensure the long-term sustainability and resiliency of infrastructure projects. Incorporating nature-based features, such as vegetated swales, bioretention cells, and tree box filters, not only reduces the quantity of stormwater runoff from an area, but also improves the quality of runoff by allowing for filtration and settling of solids. Structural stormwater BMPs, such as permeable pavement, inlet protection devices, and swirl separators, can provide cost-effective stormwater quantity and quality improvements in space-constrained projects. Many municipalities operate Municipal Separate Storm Sewer Systems (MS4) and are subject to specific permit requirements under National Pollutant Discharge Elimination System (NPDES) regulations. In the State of New York, the Federal MS4 Program is delegated to NYSDEC. Implementing State regulations and guidance are available on NYSDEC's website.

requirements

- The MS4 General Permit requires the consideration and incorporation of cost effective green infrastructure approaches in routine upgrades of stormwater conveyance systems and municipal properties to the maximum extent practicable

recommendations

- Incorporate low impact development principles into project design
- Incorporate green infrastructure, such as bioretention cells, rain gardens, or vegetated filter strips, into project designs to increase infiltration
- Use permeable paving material in parking areas or other paved site areas to increase infiltration and reduce runoff from these surfaces
- Collect roof top runoff in rain barrels or dry wells

- Install a swirl separator in a stormwater collection system to remove solids prior to discharge
- Daylight streams where feasible to improve water quality, increase infiltration, and decrease sewer overflow
- Utilize the U.S. Environmental Protection Agency's (EPA) Storm Water Management Model

resources

- Stormwater BMP overview: http://www.epa.gov/greeningepa/stormwater/best_practices.htm
- Low Impact Development overview: http://water.epa.gov/polwaste/green/
- NYSDEC Stormwater website: http://www.dec.ny.gov/chemical/8468.html
- NYSDEC MS4 website: http://www.dec.ny.gov/chemical/43150.html#Permit
- NYSDEC Stormwater Management Design Manual, Green Infrastructure Chapter: http://www.dec. ny.gov/docs/water_pdf/swdm2010chptr5.pdf
- NYSDEC Better Site Design guide: http://www.dec.ny.gov/docs/water_pdf/bsdcomplete.pdf
- Hudson Valley green infrastructure examples: http://www.dec.ny.gov/lands/58930.html

DRAINAGE / STORMWATER MANAGEMENT

resources (continued)

- New York Environmental Facilities Corporation (EFC) Green Grants program: http://www.efc.ny.gov/ Default.aspx?tabid=461
- EPA Showing Buried Streams the Daylight: http://www.epa.gov/ord/gems/buriedstream.htm
- EPA Storm Water Management Model: http://www2.epa.gov/water-research/storm-water-managementmodel-swmm

FLOOD ELEVATION DESIGN CONSIDERATIONS

Only if there are no practicable alternatives should a structure be located in the floodplain. Engineering and design professionals must use the best available flood hazard data identified by FEMA, where applicable, to guide decision-making. Best available flood hazard data should be used to determine elevation and floodproofing requirements. Best available flood hazard data is derived from the most current and restrictive of the following: FEMA Flood Insurance Rate Map, FEMA Advisory Base Flood Elevation Map, FEMA publicly released working map, or FEMA preliminary Flood Insurance Rate Map. Floodproofing is prohibited for residential buildings.

program requirements

- If the project or activity is located in a Special Flood Hazard Area, it must be designed using the best available base flood elevation plus two feet as the baseline standard for elevation, the Flood of Record plus two feet, or the 500 year flood elevation, whichever is highest
- Critical equipment and infrastructure is held to a higher design standard, which varies depending on if the equipment is in a floodplain that is subject to tidal influence
- For projects located in areas that are not subject to tidal influence, critical equipment and infrastructure should be designed to be placed at the best available base flood elevation plus three feet, the Flood of Record plus three feet, or the 500 year flood elevation, whichever is highest
- For projects located in areas that are subject to tidal influence, critical equipment and infrastructure should be designed to be placed at the best available base flood elevation plus five feet, the Flood of Record plus four feet, or the 500 year flood elevation, whichever is highest
- Note that if higher elevations are required by state or local codes or standards, those higher standards will apply
- In consideration of climate change, design standards for infrastructure projects subject to tidal influence should incorporate the NYSDEC sea-level rise projections, as described in 6 NYCRR Part 490, and in riparian areas north of New York City, flood elevations derived from flows provided by USGS Future Flow Explorer. This calculation should consider the useful life of the infrastructure.

resources

- FEMA Map Service Center: https://msc.fema.gov/portal
- FEMA Guidance - Floodproofing Non-residential Buildings: http://www.fema.gov/media-library-data/5420711cd929a194254329c15f11616e/P-936_front-matter_508.pdf
- NYSDEC Projected Sea-Level Rise Regulations - 6 NYCRR Part 490 - Proposed Regulations http://www.dec.ny.gov/regulations/103877.html

- USGS Future Flow Explorer: http://ny.water.usgs.gov/maps/floodfreq-climate/

EMERGENCY GENERATORS

Emergency generators serve a key role in ensuring continuity of operations at critical facilities. Though emergency generators are not designed to operate continuously, they have the potential to be sources of air pollutants and are thus subject to specific standards. Any new emergency generator installation must meet the maximum achievable control technology (MACT) standards for reciprocating internal combustion engines (RICE), often referred to as the MACT RICE standards. The MACT RICE requires that new generators can comply with the MACT by complying with the requirements in the New Source Performance Standards. Any new Compression Ignition generator will have to comply with 40 CFR 60, Subpart IIII, and any new Spark Ignition generator will have to comply with 40 CFR 60, Subpart JJJJ. New generators must be certified by the manufacturer that they comply with the EPA's New Source Performance Standards (NSPS).

Fuel tanks supplying generators pose an environmental threat from the risk of leaks, spills, and other accidental discharges of petroleum products. Fuel tanks for all new emergency generators must employ multiple leak protection systems, such as double-walled tanks, containment enclosures, or leak-tested valves. Flooding can cause significant damage to emergency generators and can cause accidental discharge of fuel and other engine fluids. All emergency generators and fuel tanks must be anchored and installed in accordance with the Flood Elevation Design Considerations, below. Design incorporating freeboard, or excess elevation of floor levels or equipment above the BFE, is considered a best practice and can be an effective means of eliminating risk to critical equipment.

requirements

- Specify a generator with a double-walled fuel tank and leak-proof fixtures
- Specify a generator that is manufacturer certified to meet EPA's NSPS
- Design the generator and fuel storage locations with adequate freeboard above the BFE

resources

- MACT RICE standards: http://www.epa.gov/region1/rice/
- FEMA Flood Insurance Rate Maps with BFE: https://msc.fema.gov/portal
- FEMA recommendations for reducing facility vulnerability: http://www.fema.gov/media-librarydata/1381404651877-881a2cf70a90ac63b9c067100ffccace/SandyRA2CriticalFacilities_508_FINAL2. pdf
- NYSDEC Petroleum Tank Requirements: http://www.dec.ny.gov/chemical/2642.html

FLOOD INSURANCE REQUIREMENTS

When Community Reconstruction projects are proposed that are located in the Special Flood Hazard Area
(100-year Floodplain), it is important to understand the implications of the Flood Disaster Protection Act of 1973 (42 U.S.C. 4012a). Insurable structures within the floodplain that are improved with CDBG-DR grant assistance must obtain and maintain flood insurance for the life of the structure. The insurance coverage must be at least the grant amount used to improve insurable property or the maximum available NFIP coverage, whichever is less.

One common issue is related to insurance requirements related to generator installations. When a generator is installed in the floodplain, flood elevation design standards (see page 7) must be adhered to and insurance must be obtained in certain circumstances. Section VIII of the FEMA Adjuster Claims Manual states:

> "Building coverage extends to the insured building and additions and extensions attached to and in contact with it by means of a common wall. Air conditioning condensers and solar heating panels are considered building property even if they are located apart from the structure and are not attached in accordance with the policy definition. Condensers are eligible for replacement cost coverage if the structures they service are eligible for it. Coverage does not apply to other equipment, such as generators, air compressors, and substation transformers owned by the policyholder that may service the building, but are located apart from the structure and are not attached (**see Diagram 1).** If a generator or other such equipment is attached in accordance with the policy definition or are in a fullyenclosed structure, coverage would apply (**see Diagram 2**)."

program requirements

- Structures, or improvements to structures, located in the 100-year floodplain and funded with CDBGDR must be insured under the NFIP prior to grant closeout.
- Equipment located in the 100-year floodplain and funded with CDBG-DR (e.g., generators, air conditioners, solar panels, substation transformers) that is attached to an insurable structure and is in contact with it by means of a common wall must be insured under the NFIP prior to grant closeout.
- When flood insurance is required, the insurance coverage must be at least the grant amount used to improve insurable property or the maximum available NFIP coverage, whichever is less.

resources

- FEMA Map Service Center: https://msc.fema.gov/portal
- FEMA Adjuster Claims Manual: https://www.fema.gov/media-library/assets/documents/2675

FLOOD INSURANCE REQUIREMENTS

Diagram 1.

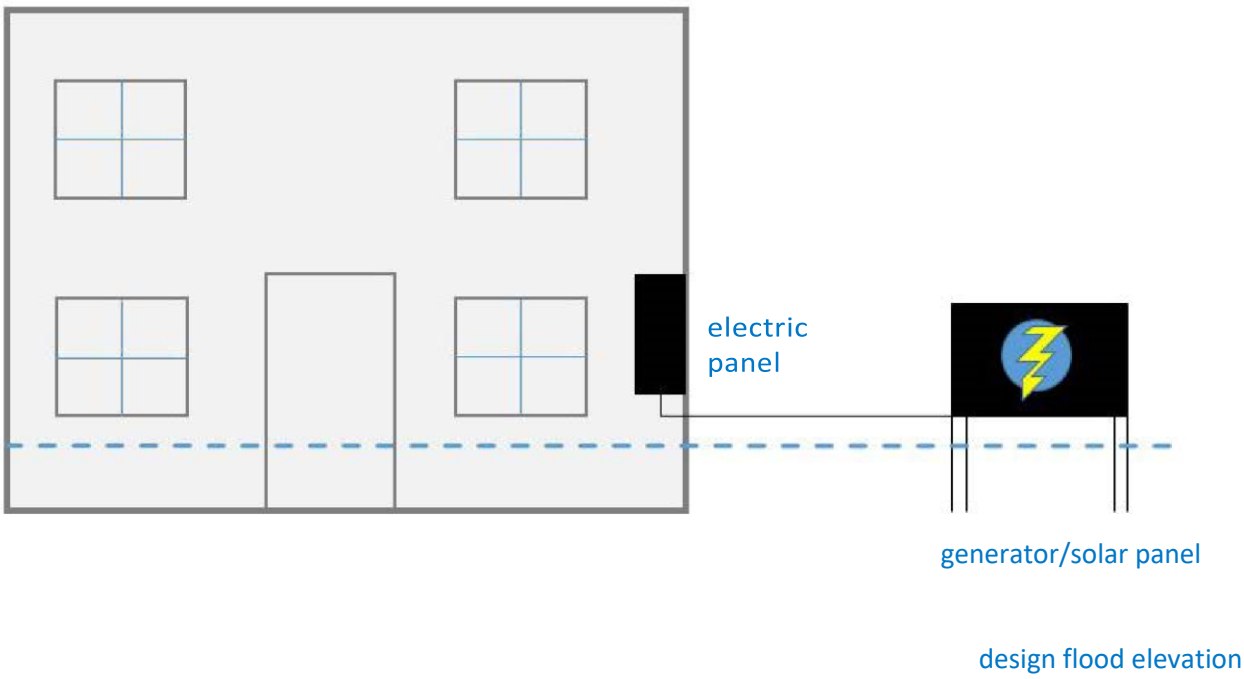
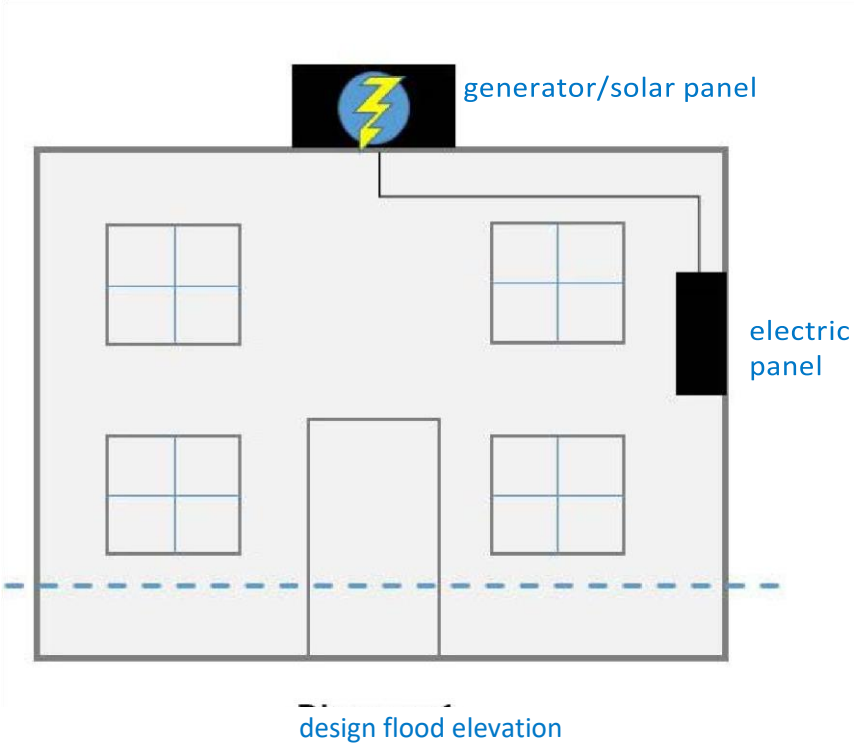


Diagram 2.



REPAIR / RENOVATION / DEMOLITION OF STRUCTURES

Building codes and standards form the basis of many design considerations for structural repair and renovation projects. In addition to these standards, incorporating environmental best practices can elevate the performance, safety, and cost-effectiveness of a project.

First and foremost, any project that requires modifications to existing buildings or certain other man-made structures must comply with all applicable asbestos and lead standards, including pre-construction surveys, abatement, and clearance by a qualified professional. Additionally, federal requirements for construction within the FEMA floodplain require adherence to floodplain regulations for construction or development within the Special Flood Hazard Area (See Flood Elevation Design Considerations below). Historic preservation requirements must also be met for any buildings or structures with landmark, historic, or other protected status, as well as those structures that are eligible for listing on the National Register of Historic Places.

Incorporating best practices that exceed these baseline standards can improve the environmental, economic, and energy performance of a building. Even if a project will not be submitted for an environmental certification, such as Leadership in Energy and Environmental Design (LEED), the guiding principles of such programs can help set measurable and achievable performance targets for any project.

requirements

- Prior to repair, renovation or demolition of a structure, a NYS Department of Labor-qualified professional must perform an asbestos and lead paint survey
- For structures that have been damaged at least 50% of their pre-flood value, or that will be reconstructed, rehabilitated, or added on to with the value of the improvement at least 50% of the pre-improvement value of the structure, the entire structure must meet local and state floodplain development standards
- All projects must be in compliance with the National Historic Preservation Act

recommendations

- Incorporate on-site renewable energy sources, energy efficient heating, ventilation, and air conditioning equipment, insulation, and water-saving fixtures into renovation plans
- Maximize use of existing building materials when feasible; incorporate recycled or renewable material when specifying new building materials

resources

- Asbestos in New York: https://labor.ny.gov/formsdocs/wp/p224.pdf
- Asbestos and Lead Hazard Mitigation: https://www.osha.gov/SLTC/etools/hurricane/buildingdemolition.html
- EPA Construction and Demolition Materials Guidelines: http://www.epa.gov/wastes/nonhaz/industrial/ cd/index.htm
- FEMA Guidelines for Development in Floodplains: https://www.fema.gov/permit-floodplaindevelopment
- NYSDEC Floodplain Construction Requirements: http://www.dec.ny.gov/lands/40576.html

REPAIR / RENOVATION / DEMOLITION OF STRUCTURES

resources (continued)

- NYS Historic Preservation Legislation: http://nysparks.com/shpo/environmental-review/preservationlegislation.aspx
- NYS Environmental and Historic Review Process: http://nysparks.com/shpo/environmental-review/
- LEED Principles for Major Renovations: http://www.usgbc.org/articles/federal-guiding-principles-newconstruction-and-major-renovations
- LEED Principles for Existing Buildings: http://www.usgbc.org/articles/federal-guiding-principlesexisting-buildings

- EPA Water Conservation Program, WaterSense: http://www.epa.gov/watersense/commercial/bmps.html

CONSTRUCTION EQUIPMENT STANDARDS

The noise and air quality effects that result from construction equipment can have a cumulative, negative effect on the environment. Though impacts from construction are temporary, they can be a source of environmental disturbance and should be mitigated through the use of BMPs. To mitigate or prevent these impacts a Construction Management Plan may be required. The following practices should be incorporated into plans and specifications:

equipment and fuel requirements

- Use ultra-low sulfur diesel fuel in all construction equipment with an engine of 50 horsepower (hp) or greater
- Use diesel engine retrofit technology where practicable, such as:
- Diesel Oxidation Catalyst or Diesel Particulate Filters
- Engine upgrades
- Engine Replacements
- Limit idling times to 3 minutes
- Locate diesel powered engines away from fresh air intakes
- Control construction dust through Soil Erosion and Sediment Control Plan measures, including use of a dust suppressant and fugitive dust controls
- All construction equipment over 50 hp must meet EPA's Tier 2 emission standards for non-road construction equipment. Where a project is located in a non-attainment or maintenance area under the Clean Air Act, Tier 3 and Tier 4 standards may be imposed

noise and vibration recommendations

- Schedule individual project construction activities such that activities resulting in the greatest noise or vibration impacts do not overlap
- Coordinate construction activities with construction in nearby or adjacent locations to minimize impacts
- Consider condition of surrounding structures and the potential effects of vibration, where appropriate
- Prepare contingency measures in the event that established limits are exceeded

resources

- NYSDOT Environmental Performance Commitments: http://www.northeastdiesel.org/pdf/RTE9A-NY. pdf

- Sacramento, California Construction Greenhouse Gas (GHG) Emissions Reductions: http://www.airquality.org/ceqa/cequguideupdate/Ch6FinalConstructionGHGReductions.pdf
- Los Altos, California Construction Site and Equipment Best Management Practices: http://www.losaltosca.gov/sites/default/files/fileattachments/Community%20Development/page/3751/ construction_equipment_bmp_handout.pdf

EXHIBIT B: DESIGN SUBMISSION GUIDANCE

Microgrid Program Design Submission Guidance

Table of Contents

1. INTENT OF THIS GUIDANCE DOCUMENT

The guidance contained in this document was developed to provide direction for Subrecipients and Design Professionals. Subrecipients are encouraged to use this guidance when preparing a Request for Proposals for project design services and design professionals should use this guidance during the preparation for design submissions. This guidance is viewed as the minimum information to be presented at the submission of each phase of the design and is not intended to be all-inclusive. Design Professionals should use their best judgment in including additional information to support the design at each phase.

2. USE OF THIS GUIDANCE

The 30%, 60% and 100% design submissions discussed in this guidance will apply to the typical Community Reconstruction project. It is the Subrecipient's responsibility to determine which of the design submissions are applicable to the scope-of-work of their project. Elements that do not apply to the scope-of-work may be omitted. For example, small-scale projects may not need a 30%, 60% and 100% submission. Conversely, large-scale, complex projects may need more frequent submissions beyond a 30%, 60% and 100% submission. Questions should be directed to your projects' Greenport representative.

All 100% design, submissions will undergo a review by Greenport prior to authorization to bid is issued. Greenport's review will ensure all program requirements are included in the Project Manual. A technical review will also be performed for code compliance, coordination between all drawings as well coordination between drawings and technical specifications, constructability, completeness and suitability for bidding purposes, as well as suitability and appropriateness of construction materials.

3. BID DOCUMENTS

The bidding documents are an integral part of the bidding process. The bidding documents consist of the Project Manual and Drawings. The Project Manual is described further in this document but generally consists of the technical specifications along with bidding and contract documents (i.e. bid advertisement, instructions to bidders, general conditions, supplemental conditions, form of agreement, etc.). The bidding document will identify environmental requirements such as permits, installation of vapor barrier, asbestos and lead procedures, and archeological oversight, to name a few. The Design Professional shall ensure that the current New York State and Federal labor wage rates are included.

4. SIGNING AND SEALING OF DOCUMENTS

The Design Professional shall sign and seal the construction documents (100% Submission). Each drawing shall be stamped with such seal and shall also be signed on the original with the personal signature of such Design Professional. The Project Manual cover shall also bear the signature and

seal of the Design Professional. The Design Professional shall also sign and seal the bidding documents. The use of electronic seals and signatures is acceptable when utilizing electronic documents.

For licensed architects, the professional shall also stamp the documents with the following:

> *"It is a violation of the law for any person, unless acting under the direction of a licensed architect, to alter an item in any way. If an item bearing the seal of an architect is altered, the altering architect shall affix to his item the seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration."*

For licensed professional engineers, the professional shall also stamp the documents with the following:

> *"It is a violation of this law for any person to alter a document in any way, unless acting under the direction of a licensed professional engineer. If a document bearing the seal of an engineer is altered, the altering engineer shall affix to the document their seal and the notation "altered by" followed by their signature and the date of such alteration, and a specific description of the alteration."*

5. SCHEMATIC DESIGN PHASE (30% SUBMISSION)

5.1 SUBMITTAL GUIDANCE FOR ALL DISCIPLINES

1) Narrative
   a) Provide a written description of the overall scope, extent of the project, presence or absence of public sewer and water, and evaluation of alternatives (how was the location of the project and design ultimately selected).
   b) General description of project indicating project goals, use, architectural concept, conformance to requirements, zoning, lot coverage, codes followed, and material and methods of construction.
   c) Include general descriptions of all major building components and systems to be incorporated into the project.
   d) If acquisition activity (e.g., easements, right-of-way plans) has not already been completed, provide a discussion of acquisition activity that will be required in order to complete the project as designed.
   e) Project including fire departments must include a truck turnaround study.
   f) If soil or sediment is to be excavated, provide quantity of to be excavated and disposal or reuse location when determined.

2) Codes, Standards and References
   a) Code analysis for major requirements must be complete, including a description of significant issues to be addressed and proposed solutions.

b) List of Applicable Codes and Standards:

i) Provide a detailed listing of all applicable codes, design guidelines, national standards.

ii) Provide a detailed listing of all federal, state, and local environmental permitting requirements. c) Code Compliance Summary:

i) Provide a written summary of the code analysis for each applicable code or standard.

ii) Provide information such as: occupancy classification (include primary and incidental occupancies), construction classification, seismic design category, seismic bracing requirements, fire protection requirements and systems, egress, exiting and separation requirements, etc.

d) Any variance request information made to all authorities having jurisdiction, as applicable to the project.

e) Demonstrate compliance with the Americans with Disabilities Act (ADA) and all applicable accessibility standards and requirements.

3) Environmental Considerations

a) Discuss environmental requirements identified in the environmental review and environmental permits for the project that are relevant to the design. Examples include the presence of wetlands, sensitive habitats, or historic/archeologically significant structures.

b) Identify the measures to be incorporated into the design that will mitigate the environmental considerations.

c) Identify any hazardous materials to be stored at the project location.

d) If structure demolition or re-habilitation is required, include age of building and potential presence of asbestos and lead.

e) New building design should include vapor barrier, especially in high radon zones. f) Identify trees to removed.

4) Drawings

a) Specific for each discipline, as applicable; a list of the drawings, general notes, abbreviations, legends, key notes, symbol keys, key plans, column lines, north arrow, and coordinated backgrounds.

b) The cover sheet and all typical drawings shall include the following: consultant name(s) and address and logo, Subrecipient name, project location, project title, project number, sheet name, sheet number, sheet date, drawing scale, graphic scale, revision block and block for seal and signature.

c) All drawings shall indicate the scale to which they are drawn and shall be appropriate for the specific item being represented.

d) The preferred size for each drawing sheet is 24" h x 36"w. The maximum size of all drawings shall be 36"h x 48"w (E size).

e) The drawings shall be appropriately coordinated with all disciplines.

f) Provide electronic copies of drawing.

5) Technical Specifications
   a) Project Manual cover sheet,
   b) A complete Table of Contents listing all anticipated sections to be used on the project. c) A scope of work description.
   d) A coordinated list of drawings.
   e) Any component of a system that is proposed to be provided on a proprietary, single-source, or sole- source basis, shall be reviewed with the Subrecipient. The Design Professional shall submit all required justifications and documentation.
   f) For generators, provide all generator specifications as well as the fuel type, storage specifications and fuel storage locations with consideration of HUD acceptable safe distances requirements
   (https://www.hudexchange.info/environmental-review/explosive-and-flammable-facilities/)
   g) Projects including fuel storage, provide tank specifications including leak detection, tank materials, pad construction, anchoring etc.

6. DESIGN DEVELOPMENT (60% SUBMISSION)

6.1 SUBMITTAL GUIDANCE FOR ALL DISCIPLINES

1) This phase shall consist of the development of the design scheme, including the mechanical, electrical and other systems required for the project. During the design development phase all design criteria
   and solutions shall be established and developed within the Program requirements and budget as established.

2) All items listed in the Schematic Design Phase (30%) Submittal Guidance for all disciplines , and each specific discipline, as applicable to the project, and not previously submitted.

3) A preliminary construction schedule for all disciplines.

4) An update to the explanation of the acquisition activity that will be required for project design as designed at the 60% design stage.

5) Written responses to all previous design review comments from Greenport, the Subrecipient, and other review entities (as applicable), along with the necessary corrections made to the contract documents. Responses shall be made in sufficient detail for verification purposes, such as locations of revised details, specification sections, and updated drawing numbers. Generic responses such as “will comply” are not acceptable.

6) Drawings
   a) The drawings shall be appropriately advanced since the schematic design submission and coordinated with all disciplines.

b) Specific for each discipline, as applicable; an updated list of the drawings, general notes, abbreviations, legends, key notes, symbol keys, key plans, column lines, north arrow, and coordinated backgrounds.

c) The cover sheet and all typical drawings shall include the following: design consultant name(s), address and logo, Subrecipient name, project location, project title, project number, sheet name, sheet number, sheet date, drawing scale, graphic scale, revision block and block for seal and signature,

d) Checked for spelling, grammatical and typographical errors, coordinated with respect to reference symbols, notes, abbreviations, specification sections, schedules and other d i s c i p l i n e s .

e) All drawings shall indicate the scale to which they are drawn which shall be appropriate for the specific item being represented.

h) The preferred size drawing sheet is 24" h x 36"w. The maximum size of all drawings shall be 36"h x 48"w (E size).

i) The drawings shall be appropriately coordinated with all disciplines.

j) Provide electronic copies of drawing.

7) Technical Specifications

a) An updated Table of Contents listing all anticipated sections to be used on the project.

b) An updated scope of work description.

c) Specification sections for all materials and systems proposed for the project.

d) All specification sections shall be relevant to the project.

e) All specification sections shall comply with the following:

i) Specifications shall be written in standard Construction Specification Institute (CSI) 50 Division three-part format:

(1)Part 1 General

(2)Part 2 Products

(3)Pat 3 Execution

ii) Specification sections shall have headers on each page, which includes the project title and project number and the date they were printed/revised. iii) Each page shall be numbered at the bottom of the page. iv) Each specification section shall have a submittal section.

v) Each specification section shall have a Quality Assurance section, which shall contain, (but not be limited to), the following:

(1)Information as qualifications of the material installers. (2)Test standards the products shall be manufactured to.

(3)Testing requirements required by Codes.

(4)Test requirements the contractor is to execute in the field.

(5)Who shall witness such testing.

vi) Accept/reject criteria as required for rejecting deficient work or accepting satisfactory workmanship. When manufacturer's names are cited in the specifications, the Design Professional shall ensure that all products and manufacturers cited meet the specification, not just the manufacturer used as the basis of design.

vii) Specification sections shall detail all source and field quality control requirements for items subject to Special Inspection, including the types of inspections and tests required, their frequency, and relevant reference standards. For project governed by the New York City Building Code, include inspection requirements for all required Progress Inspections.

viii) Any component of a system that is proposed to be provided on a proprietary, single-source, or sole-source basis, shall be reviewed with the design phase manager. The Design Professional shall submit all required justifications and documentation.

f) Edited General Requirements and General Conditions.

8) Pre-construction cost estimate with a maximum 15% contingency.

7. CONSTRUCTION DOCUMENTS (100 % SUBMISSION)

7.1 SUBMITTAL GUIDANCE FOR ALL DISCIPLINES

(Note: All drawings and specifications are to be fully complete at this submission)

1) All required items listed in the Schematic Design Phase (30%), and the Design Development Phase (60%) Submittal Guidance for All Disciplines, as applicable to the project.

2) Written responses to all previous design review comments from Greenport, the subrecipient, and other review entities (as applicable), along with the necessary corrections made to the contract documents. Responses shall be made in sufficient detail for verification purposes, such as locations of revised details, specification sections, and updated drawing numbers. Generic responses such as "will comply" are not acceptable.

3) Drawings

a) The drawings shall be complete and ready for bidding including the design professional's seal and signature on each sheet (See Signing and Sealing of Documents, at the beginning of these requirements).

b) Specific for each discipline, as applicable; an updated list of the drawings, general notes, abbreviations, legends, key notes, symbol keys, key plans, column lines, north arrow, and coordinated backgrounds.

c) The cover sheet and all typical drawings shall include the following: design professional name(s), address and logo, Subrecipient name, project location, project title, project number, sheet name, sheet number, sheet date, drawing scale, graphic scale, revision block and block for seal and signature.

d) Checked for spelling, grammatical and typographical errors, coordinated with respect to reference symbols, notes, abbreviations, specification sections, schedules and other disciplines.

e) Fully coordinated with all disciplines and ready for approval to bid.

4) Project Manual

a) Technical Specifications

i) Specifications shall include all Front End Documents, including the General Conditions, edited General Requirements, Schedule of Values, current NY State and Federal labor wage rates, sections pertinent to construction practices to support the goals, and all additional documents and forms organized to resemble the Bid Documents. Each document shall be prefaced with an individualized cover page.

b) An updated Table of Contents listing all included technical specification sections included and coordinated with all included sections.

c) An updated and coordinated list of drawings.

d) Technical specifications shall be complete and edited specifically to suit the project.

e) The cover of the Project Manual shall be signed and sealed by the design professional. (See Signing and Sealing of Documents, at the beginning of these requirements.)

5) Pre-construction cost estimated advanced from the 60% submission and with a maximum 10% contingency.