



**Battery Park
City Authority**

REQUEST FOR PROPOSALS

FOR

**Battery Park City Sustainability Plan, New Green Guidelines, and
Sustainability Implementation Plan**

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I. SUMMARY & PROJECT BACKGROUND

Battery Park City Authority d/b/a Hugh L. Carey Battery Park City Authority (“BPCA”) requests proposals (individually, a “Proposal” and collectively, the “Proposals”) from engineering, environmental consulting and/or architectural firms (individually a “Proposer,” and collectively, the “Proposers”) to provide BPCA with specialized environmental consulting and design services in support of the creation of a Battery Park City sustainability plan, a set of new sustainability guidelines, and a sustainability implementation plan (collectively, the “Project” or the “Work”). The services provided in furtherance of the Project are collectively referred to herein as the “Sustainability Plan Services.”

A. Project Background

Created in 1968, BPCA is a New York State public benefit corporation responsible for financing, developing, constructing, maintaining, and operating Battery Park City (“BPC”) as a richly diversified mixed use community providing residential and commercial space, with related amenities such as parks, plazas, recreational areas, and a waterfront esplanade. A summary of BPCA’s structure, mission, and history, as well as the Battery Park City project area, may be viewed at: www.bpca.ny.gov. Public information regarding BPCA’s finances, budget, internal controls, guidelines, and policies may be viewed at: www.bpca.ny.gov/public-information. Information relating to the Battery Park City Parks Conservancy Corporation (“BPCPC”), BPCA’s affiliate, may be viewed at: www.bpcparks.org.

Through a public-private partnership between BPCA and private developers, BPC has become a blueprint for successful urban development. Environmental responsibility is a key component of BPCA’s mission, and is reflected in its adoption and advancement of high-performance environmental design. In 2000, BPCA issued the *Residential Environmental Guidelines* (the “Residential Guidelines”) to establish and formalize a process for the creation of sustainable residential buildings, appreciably ahead of the standards and practices for development at the time. These guidelines resulted in the achievement of LEED Gold and LEED Platinum certification among several new residential buildings in Battery Park City, including the Solaire, the first LEED certified residential high-rise building in the U.S. In 2005, the Residential Guidelines were updated to reflect the latest best practices in sustainable design. Responding to an increased demand for healthier working environments, BPCA also published the *Commercial/Institutional Environmental Guidelines* (the “Commercial Guidelines”) in 2002 to address the sustainable design practices of the area’s commercial buildings.

Since 2005, there have been ongoing and significant advancements and achievements in sustainable building performance and design standards. In recognition of the burgeoning need to respond quickly and decisively to increasingly dire projections regarding the impacts of carbon emissions, climate change, and sea level rise, and in tandem with various related policy initiatives by the City of New York and the State of New York, BPCA plans to build on and modernize its prior groundbreaking efforts.

B. Project Summary

The Project will primarily consist of the creation of a ten (10) year sustainability plan for Battery Park City. This plan will be supported by a newly-created set of sustainability guidelines focused on specific areas and activities, and a sustainability implementation plan which will include but not be limited to enforcement tools, collaboration strategies, and incentives, and may also include, if deemed appropriate or advantageous, a plan for the formation and implementation of a special purpose entity or a division/sub-entity within BPCA dedicated to the implementation of the sustainability plan.

A detailed scope of work for which the selected Proposer will be responsible is attached as **Exhibit A**. The selected Proposer must ensure that the appropriate expertise is provided in all disciplines required to perform the Project, including, but not limited to:

- Environmental and Energy Engineering;
- Consulting and Advisory Services For High-Performance, Energy Efficient and Sustainable Buildings and Infrastructure;
- General Architectural Design;
- Landscape Design;
- Sustainable Design and Sustainable Building and Site Operations;
- Mechanical, Electrical, Plumbing (“MEP”) Engineering;
- Structural, Transportation, Geotechnical, Water Resources and Building Services Engineering, as applicable;
- Cost Estimating and Value Engineering;
- Real Estate Development, Property Management and Real Property Leasing;
- Consulting and Advisory Services Pertaining to Implementation Strategies for Sustainability Plans, including:
 - Legal expertise relevant to the analysis of existing or potential enforcement measures and/or collaboration strategies available to BPCA (any members of the Proposer’s team providing legal expertise and/or advice will be required to cooperate with both internal BPCA legal staff and, in certain instances, with BPCA outside legal counsel);
 - Means for BPCA to avail itself – on its own account and on behalf of BPCA building owners, residents and businesses – of existing or potential funding sources and strategies, as well as financial incentives to support sustainability plan implementation;
 - If considered advantageous to the expedient and effective implementation of a BPCA sustainability plan, the structure, formation, and implementation of a special purpose entity or a division/sub-entity within BPCA dedicated to the implementation of a BPCA sustainability plan.

New York State-certified Minority-Owned Business Enterprises (“MBE”), Women-Owned Business Enterprises (“WBE”) and Service-Disabled Veteran-Owned Business Enterprises (“SDVOB”) are encouraged to submit Proposals.

II. GENERAL PROVISIONS

This request for Proposals, including attachments, exhibits, and any amendments or addenda (collectively, the “RFP”) is subject to the rights reserved by BPCA, including, but not limited to BPCA’s right to:

- withdraw and/or cancel this RFP at any time before final award of the contract;
- request clarification and/or additional information from any or all Proposers;
- amend any term or requirement of this RFP at any time before award of a contract (Proposers may amend their Proposals, as directed by BPCA, if BPCA materially alters or amends the RFP after submission of Proposals);
- alter any key dates or deadlines related to this RFP;
- award the Work, in whole or in part, to one or more Proposers with or without interviews or negotiations;
- reject any Proposal that does not strictly conform to the requirements of this RFP;
- conduct an interview with any or all of the Proposers to aid the evaluation process;
- negotiate potential contract terms with any Proposer;

BPCA is not liable or responsible in any way for any expenses incurred in the preparation of a Proposal in response to this RFP. All information submitted in response to this RFP is subject to the Freedom of

Information Law, Article 6 of the New York State Public Officers Law (“FOIL”), which requires public access to certain documents possessed by BPCA, unless a specific exemption applies. Proposers are responsible for identifying any information in their respective Proposals considered to be confidential and exempt from FOIL. BPCA, however, is obligated to disclose information consistent with the requirements of FOIL, NYS Public Officers Law Section 87.

III. TIMETABLE & DESIGNATED CONTACT

A. *Key Dates*

Subject to change at BPCA’s discretion, the following are key dates for this RFP:

- RFP issued: July 19, 2019
- Pre-proposal meeting (attendance is highly recommended):
 - Date & Time: July 25, 2019 at 9 am.
 - Location: 200 Liberty St, 24th Floor, New York, NY, 10280
- Deadline to submit questions to BPCA: August 1, 2019 by 5:00 p.m. (by email only)

All questions regarding this RFP should be submitted in writing via email to the “Designated Contact”: **Michael LaMancusa**, BPCA’s Assistant Contracting Officer, at Michael.LaMancusa@bpca.ny.gov.

- BPCA’s response to substantive questions: August 8, 2019 (by email)
- PROPOSAL DUE DATE: August 16, 2019 by 3:00 p.m. (the “Due Date”)
- Contract start date: October 2019 (approximate)

B. *Anticipated Contract Term*

The anticipated term of the contract awarded pursuant to this RFP (the “Contract”) will be one (1) year. BPCA reserves the right to terminate the Contract at any time, with or without cause, in accordance with the terms of the Contract. BPCA’s sample form of contract (the “Standard Form of Contract”) is hereto attached as Exhibit C.

IV. GENERAL REQUIREMENTS

A. *Minimum Qualification Requirements*

The following are the minimum qualification requirements for this RFP. Proposals that fail to meet these requirements will be rejected.

1. Proposer must have an office in New York State (a New York City office is preferred);
2. The Proposer must be lawfully authorized to do business in the State of New York and, in the case of architects and engineers and all other professions requiring licensure or certification, be licensed or certified to practice in the State of New York.

3. The Proposer or at least one of its team members must have a minimum of five (5) years of experience in providing sustainable architectural and/or engineering consulting and design services.

B. MBE/WBE/SDVOB Participation, Joint Ventures, and Sub-contracting Goals

Contractor requirements and procedures for business participation opportunities for New York State certified MBEs/WBEs/SDVOBs and equal employment opportunity requirements relating to minority group members and women are attached as Exhibit B. For questions relating to MBE/WBE/SDVOB participation, joint ventures and sub-contracting goals, please contact the Designated Contact” Michael LaMancusa at Michael.LaMancusa@bpca.ny.gov or 212-417-4335.

C. Restricted Period

New York State’s State Finance Law sections 139-j and 139-k apply to this RFP, restricting Proposers’ contacts with BPCA. Proposers are restricted from making any contact (defined as oral, written or electronic communications with BPCA under circumstances where a reasonable person would infer that a communication was intended to influence BPCA’s conduct or decision with respect to a procurement) relating to this RFP with anyone other than the Designated Contact, as specified in Section III.A. from the time of Proposer’s receipt of notice of this RFP through the date of the Final Award as defined in BPCA’s Procurement Guidelines (the “Restricted Period”). BPCA employees must record certain contacts during the Restricted Period, including, but not limited to, any oral or written communications that could reasonably be seen as intended to influence BPCA’s conduct or award of this RFP. Upon notice of an improper contact, BPCA will make a determination regarding the Proposer’s eligibility to continue participating in this RFP.

D. Submission of Proposals

Proposals must be received by BPCA no later than 3:00 p.m. on August 16, 2019.

Each Proposer must submit three (3) paper copies and a text-searchable PDF version (via CD-ROM or flash drive) in a sealed package clearly marked “Proposal Enclosed - Sustainability Plan Services” to the Designated Contact by messenger, overnight courier or certified mail to the following address:

Michael LaMancusa
Battery Park City Authority
200 Liberty Street, 24th Floor
New York, NY 10281

BPCA is not responsible for late Proposals, no matter the cause. Proposals *must* arrive at the time and place specified herein and be time stamped by BPCA by the Due Date. Please leave ample time for building security. Late Proposals will NOT be accepted. Proposals submitted by fax or electronic transmission will NOT be accepted. A Proposer may, after submitting a Proposal, amend its Proposal by submitting an amended Proposal, clearly labeled “Amended Proposal - Sustainability Plan Services,” as long as the amended Proposal is submitted by the Due Date.

V. PROPOSAL FORMAT AND CONTENTS

A. Proposal Format

The Proposal must:

- Be printed on 8½” x 11” paper;
- Have numbered pages; and
- Be no longer than 15 (15) single-sided pages, exclusive of the Cover Letter, Cost Proposal, and Required Attachments.

B. Proposal Content

In addition to the separately sealed Cost Proposal, described in Section VIII. below, each Proposal must include the following in the order listed:

- 1) Cover Letter, signed by a person within the firm who is authorized to bind the Proposer, which includes representations that:
 - (a) Except as disclosed in the Proposal, no officer or employee of the Proposer is directly or indirectly a party to or in any other manner interested financially or otherwise in this RFP;
 - (b) Proposer satisfies all of the minimum qualification requirements in Section IV.A; and
 - (c) Proposer has reviewed BPCA’s form of contract, attached as Exhibit C to this RFP, and either has no objections or has detailed their objections in an appendix to their Proposal.
- 2) Executive Summary.
- 3) Responses to the Questions as well as all of the Information Required (Sections VI.A. and B.).
- 4) Required Attachments (Section VI. C.).

BPCA reserves the right to reject any Proposals that fail to include any required item described in this Section V. B., including Cover Letters that are unsigned or fail to include each of the above representations (including an appendix, if applicable).

VI. INFORMATION REQUIRED

A. Questions and Information Sought Relating to the Work

- 1) Describe your firm’s background, services, size, and history as these factors are relevant to the Work, with an emphasis on experience with the formulation of environmental sustainability plans and/or guidelines and strategies for communities, campuses, cities and/or other entities or geographical areas.
- 2) Describe your experience in environmentally-sustainable design, engineering and construction, including the design of new construction and infrastructure, as well as the modification or retrofitting of existing buildings and infrastructure.
- 3) Describe your experience in consulting and advisory services for high-performance, energy efficient and sustainable buildings and infrastructure.
- 4) Describe your experience in the evaluation of environmentally sustainable site, and/or building operations and management, and/or the creation of plans or guidelines therefor.

- 5) Describe your experience with New York State authority organizational structures, as well as special purpose entities, and/or special districts – analysis, formation, and implementation.
- 6) Describe your proposed approach and methodology, including a description of staffing, for executing the Project, including but not limited to:
 - Developing a sustainability plan that identifies and incorporates strategic environmental goals specific to Battery Park City;
 - Developing a companion set of sustainability guidelines to support implementation of the sustainability plan; and,
 - Developing a detailed sustainability implementation plan that includes consideration of both existing and potential enforcement tools, collaborative strategies, and incentives.

You are welcome to propose means of organizing or sequencing the elements of the Project that are different from the organization and sequencing specified in the Scope of Work; however, in either event, please be specific about your proposed approach and ensure that all required Project elements are adequately addressed.

- 9) List each key member of the team that you intend to assign to this engagement, and include for each listed individual: (a) area(s) of specialization; (b) title and/or position within your firm; (c) the services to be performed.
- 10) Identify the person who will be the lead project manager (the “Lead PM”) and primary contact in providing services to BPCA, and any other persons who will be listed as a “key person” in any contract with BPCA.
- 11) Identify any sub-consultants you intend to use for this engagement, and describe the services to be performed by each sub-consultant.
- 12) Describe your proposed team’s experience with similar work for other public entities, with an emphasis on New York State public entities.
- 13) Clearly identify any information in your Proposal that you believe to be confidential and exempt from FOIL, and state the reasons. Please note that this question is for informational purposes only, and BPCA will determine, in its sole discretion, whether requested documents are exempt from disclosure under FOIL.
- 14) Identify any and all exceptions taken to BPCA’s Standard Form of Contract, attached as Exhibit C, explaining the reasons for such exceptions. Such exceptions must be detailed in an appendix to your Proposal labeled, “Appendix: Objections to BPCA Form of Contract.” No exceptions to the Contract will be considered by BPCA after submission of the Proposals. BPCA maintains the right to reject Proposals based on non-conformance with the Standard Form of Contract.
- 15) Provide at least three (3) client references for whom your firm has performed similar work to that requested in this RFP. For each client, describe the project, the project’s date, and services performed, and provide the name, address, and telephone number for a person at the client’s firm who is familiar with such work.

B. Questions and Information Sought Relating to Proposer's Firm & Eligibility

- 1) Within the past three (3) years, have there been any significant developments in your firm such as changes in ownership or restructuring? Do you anticipate any significant changes in the near future? If so, please describe.
- 2) How does your firm identify and manage conflicts of interest?
- 3) Are there any potential conflict of interest issues posed by your firm's performance of the Work on behalf of BPCA?
- 4) Has your firm or have any of the firm's partners/employees been disciplined or censured by any regulatory body within the last five (5) years? If so, please describe the relevant facts.
- 5) Within the last five (5) years, has your firm, or a partner or employee in your firm, been involved in litigation or other legal proceedings relating to the provision of professional services? If so, please provide an explanation and the current status or disposition of the matter.
- 6) List any professional or personal relationships your firm's Principals and Project Managers may have with BPCA's Board Members and/or employees, a list of which is attached as Exhibit E.
- 7) If selected, will your firm assign any person to this engagement who was previously an employee of BPCA or BPCPC? If so, please: i) identify when (month and year) that person's employment at BPCA/BPCPC terminated, and ii) describe that person's involvement, if any, with matters related to this RFP during his/her employment at BPCA/BPCPC.
- 8) In the past five (5) years, have any public sector clients terminated their working relationship with your firm? If so, please provide a brief statement of the reasons. Provide the name of the client and provide a contact person, address and telephone number.

C. Required Attachments

- 1) Mandatory Forms:

Each Proposal must include a completed copy of all "Mandatory Forms" found at: www.bpca.ny.gov/wp-content/uploads/2015/03/Mandatory-Forms.pdf.

The Mandatory Forms include the following:

- a) NYS Standard Vendor Responsibility Questionnaire, notarized and signed by the individual(s) authorized to contractually bind the Proposer, indicating the signer's title/position within the firm.*
- b) State Finance Law § 139 Form 1, signed by the individual(s) authorized to contractually bind the Proposer.*
- c) W-9 form.
- d) Statement of Non-Collusion.

- e) MBE/WBE/SDVOB Utilization Plans. Please note that all such plans must be submitted even if Proposer is a MBE/WBE/SDVOB.

*In addition to the copy required to be included in each bound Proposal, Proposers must additionally provide one (1) unbound, completed original, with ink signatures, of the NYS Standard Vendor Responsibility Questionnaire and SFL 139 Form 1.

- 2) Response to the question regarding the use of New York State businesses set forth in Section XII.
- 3) Completed MBE/WBE and EEO Policy Statement and Diversity Practices Questionnaire (attached as part of Exhibit B).
- 4) Financial Statements:

Provide a copy of your firm's most recent Audited Financial Statements (within the last year). In the event you do not have audited financials you must provide a statement to that effect with your proposal, and summary financial information for the calendar year most recently ended.

- 5) Acknowledgement of Addenda:

Attach a completed and signed Acknowledgement of Addenda Form, attached as Exhibit D, acknowledging receipt of all addenda to this RFP, if any, issued by BPCA before the Due Date. Addenda are posted by BPCA as necessary and can be found on the BPCA website at www.bpca.ny.gov. It is the responsibility of each Proposer to check the BPCA website for addenda and to review addenda prior to submitting any proposal in response to this RFP.

- 6) Appendices:

- a) Attach professional biographies for all employees identified in your Proposal.
- b) Attach a project schedule showing completion dates for key tasks, milestones, etc. and final completion of all Work

VII. INSURANCE REQUIREMENTS

A. General Requirements

The total cost of the required insurance listed in paragraphs 2) and 3) below, must be incorporated into the Cost Proposal. The additional insured protection afforded BPCA, BPCPC, and the State of New York must be on a primary and non-contributory basis. All policies must include a waiver of subrogation in favor of BPCA, BPCPC, and the State of New York, no policies may contain any limitations / exclusions for New York Labor Law claims, and cross liability coverage must be provided for BPCA, BPCPC, and the State of New York.

All of the carriers that provide the below required insurance must be rated "A-:VII" or better by A.M. Best and must provide direct written notice of cancellation or non-renewal to BPCA, BPCPC, and the State of New York at least 30 days before such cancellation or non-renewal is effective, except for cancellations due to non-payment of premium, in which case 10 days written notice is acceptable.

B. Insurance Requirements for the Selected Proposer

The selected Proposer will be required to obtain and provide proof of the types and amounts of insurance listed below: (i) as a condition precedent to the award of the contract for the Project; and (ii) continuing throughout the entire Term. The insurance policies listed below must also conform to the applicable terms of the Contract, as shown in BPCA's sample form of contract attached.

- **Commercial General Liability Insurance**, written on ISO Form CG 00 01 or its equivalent and with no modification to the contractual liability coverage provided therein, shall be provided on an occurrence basis and limits shall not be less than:
 - \$1,000,000 per occurrence
 - \$2,000,000 general aggregate which must apply on a per location / per project basis
 - \$2,000,000 products/completed operations aggregate

BPCA, BPCPC, and the State of New York must be protected as additional insureds on ISO Form CG 2010 (11/85) or its equivalent on policies held by the selected Proposer and any of its sub-consultants. Should the Proposer's work include construction activities of any kind then the Proposer must maintain Products / Completed Operations coverage for no less than three years after the construction work is completed, and continue to include Additional Insured protection for BPCA, BPCPC & The State of New York for the prescribed timeframe. Securing the required limits via a combination of primary and umbrella/excess liability policies is allowed.

- **Automobile Liability Insurance** as applicable, with a combined single limit of not less than \$1,000,000. Coverage must apply to the Proposer's owned, hired, and non-owned vehicles and protect BPCA, BPCPC, and the State of New York as additional insured.
- **Workers' Compensation, Employer's Liability, and Disability Benefits** shall not be less than statutory limits, including United States Longshore and Harbor Workers Act coverage as applicable to the operations of the Proposer.
- **Professional Liability ("Errors & Omissions") Insurance** must be maintained at a limit of not less than \$1,000,000 each claim.

C. Insurance Requirements for all Subconsultants

Any sub-consultant(s) utilized by the selected Proposer will be required to obtain the types and amounts of insurance listed below: (i) as a condition of commencing any Work; and (ii) continuing throughout the duration of the sub-consultant's Work. The insurance policies listed below must also conform to the applicable terms of the Contract, as shown in BPCA's sample form of contract attached:

- **Commercial General Liability Insurance**, written on ISO Form CG 00 01 or its equivalent and with no modification to the contractual liability coverage provided therein, shall be provided on an occurrence basis and limits shall not be less than:
 - \$1,000,000 per occurrence
 - \$2,000,000 general aggregate which must apply on a per location / per project basis
 - \$2,000,000 products/completed operations aggregate

BPCA, BPCPC, and the State of New York must be protected as additional insureds on ISO Form CG 2010 (11/85) or its equivalent on policies held by all sub-consultants. Should the sub-consultant's work include construction activities of any kind then the sub-consultant must maintain Products / Completed Operations coverage for no less than three years after the construction work is completed and continue to include Additional Insured protection for BPCA, BPCPC & The State of New York for the prescribed timeframe. When providing evidence of insurance the sub-consultant must include a completed Acord 855 NY form. Securing the required limits via a combination of primary and umbrella/excess liability policies is allowed.

- **Automobile Liability Insurance** with a combined single limit of not less than \$1,000,000. Coverage must apply to the sub-consultant's owned, hired, and non-owned vehicles and protect BPCA, BPCPC, and the State of New York as additional insured.
- **Workers' Compensation, Employer's Liability, and Disability Benefits** shall not be less than statutory limits, including United States Longshore and Harbor Workers Act coverage as applicable to the operations of the sub-consultant.
- **Sub-consultants will also be required to obtain all other insurances listed in Section (2) unless otherwise approved in writing by BPCA prior to commencement of any Sub-consultant's work.**

VIII. COST PROPOSAL: FORMAT AND REQUIRED INCLUSIONS

Each Proposer must submit three (3) copies of its Cost Proposal, along with any alternate Cost Proposal(s), utilizing the format set forth in Exhibit H. At a minimum, the Cost Proposal(s) must include:

- 1) A total not-to-exceed fee for performance of all Services contemplated herein (not including reimbursable or out-of-pocket expenses);
- 2) Individual not-to-exceed fees for: a) Sustainability Plan and New Green Guidelines; and, b) Sustainability Implementation Plan, as delineated in Exhibit A;
- 3) Fully-loaded hourly billing rates for each personnel category Proposer proposes to utilize for completion of the Services; and
- 4) A not-to-exceed amount for all anticipated reimbursable costs associated with performance of the Services, along with a breakdown of the estimated reimbursable costs by category or item.

IX. SELECTION PROCESS

A. Evaluation

Each timely submitted Proposal will be reviewed for compliance with the form and content requirements of this RFP. A committee of BPCA employees selected by BPCA (the "Committee") will then review and evaluate the Proposals in accordance with the evaluation criteria set forth below. While only Committee members will score the evaluation criteria, the Committee may consult an outside expert for advisement on the evaluation of matters requiring technical expertise. Before final selection, BPCA must determine that the proposed selected Proposer is responsible, in accordance with applicable law and BPCA's Procurement Guidelines, which may be viewed at: www.bpca.ny.gov/public-information.

B. Interviews

BPCA reserves the right to decide whether to interview any or all of the Proposers. The Committee may conduct interviews for many reasons, including to further assess a Proposer's ability to perform the Work

or provide specific services, or to seek information related to any other evaluation criteria. The proposed Lead PM, as well all other key personnel proposed to perform the Work, must be available to participate in the interview.

C. Evaluation Criteria for Selection

Selection will be based upon the following criteria:

1) Technical Evaluation:

- | | |
|---|-----|
| a. Experience/expertise with the formulation of environmental sustainability plans and/or guidelines for communities, campuses, cities and/or other entities or geographical areas | 20% |
| b. Experience/expertise with environmentally sustainable design, engineering and construction, including the design of new construction and infrastructure, as well as the modification or retrofitting of existing buildings and infrastructure. | 20% |
| c. Experience/expertise with the evaluation of environmentally sustainable site and/or building operations and management and/or the creation of plans or guidelines therefor. | 15% |
| d. Experience/expertise with sustainability implementation strategies, including enforcement measures, collaboration opportunities, incentives and organizational structures. | 10% |
| e. Approach to the Work, staffing (including sub-consultants), and schedule | 25% |
| f. Response to Diversity Practices Questionnaire: | 10% |

2) Cost Proposal evaluation.

D. Basis for Contract Award

The Contract will be awarded to the highest technically rated Proposer whose Proposal is determined to be responsive and in the best interests of BPCA, subject to a determination that the Cost Proposal is fair, reasonable, and provides the best value to BPCA given the requirements of the project.

X. NON-COLLUSION

By submitting a Proposal, each Proposer warrants and represents that any ensuing Contract has not been solicited or secured directly or indirectly in a manner contrary to the laws of the State of New York, and that said laws have not been violated and will not be violated as they relate to the procurement or the performance of the Contract by any conduct, including the paying or giving of any fee, commission, compensation, gift, or gratuity or consideration of any kind, directly or indirectly, to any member of the board of directors, employee, officer or official of BPCA.

XI. IRAN DIVESTMENT ACT

By submitting a Proposal or by assuming the responsibility of any Contract awarded hereunder, each Proposer certifies that it is not on the “Entities Determined To Be Non-Responsive Bidders/Offerers Pursuant to The New York State Iran Divestment Act of 2012” list (“Prohibited Entities List”) posted on the New York State Office of General Services website at: <http://www.ogs.ny.gov/about/regs/docs/ListofEntities.pdf> and further certifies that it will not utilize any subcontractor/consultant that is identified on the Prohibited Entities List on this Contract. The selected Proposer agrees that should it seek to renew or extend any Contract awarded hereunder, it must provide the same certification at the time the Contract is renewed or extended. The selected Proposer also agrees that any proposed assignee of the Contract will be required to certify that it is not on the Prohibited Entities List before BPCA may approve a request for assignment of the Contract.

During the term of any Contract awarded hereunder, should BPCA receive information that a person (as defined in State Finance Law §165-a) is in violation of the above-referenced certifications, BPCA will review such information and offer the person an opportunity to respond. If the person fails to demonstrate that it has ceased its engagement in the investment activity which is in violation of the New York State Iran Divestment Act of 2012 within 90 days after the determination of such violation, then BPCA will take such action as may be appropriate and provided for by law, rule, or contract, including, but not limited to, seeking compliance, recovering damages, or declaring the selected Proposer in default of the awarded Contract.

BPCA reserves the right to reject any request for renewal, extension, or assignment for an entity that appears on the Prohibited Entities List prior to the renewal, extension, or assignment of the Contract, and to pursue a responsibility review with the selected Proposer should it appear on the Prohibited Entities List hereafter.

XII. ENCOURAGING USE OF NEW YORK STATE BUSINESSES IN CONTRACT PERFORMANCE

New York State businesses have a substantial presence in State contracts and strongly contribute to the economies of the state and the nation. In recognition of their economic activity and leadership in doing business in New York State, Proposers for this Contract for commodities, services or technology are strongly encouraged and expected to consider New York State businesses in the fulfillment of the requirements of the Contract. Such partnering may be as subcontractors, suppliers, protégés or other supporting roles.

Proposers are strongly encouraged, to the maximum extent practical and consistent with legal requirements, to use responsible and responsive New York State businesses in purchasing commodities that are of equal quality and functionality and in utilizing services and technology. Furthermore, Proposers are reminded that they must continue to utilize small, minority and women-owned businesses, consistent with current State law.

Utilizing New York State businesses in State contracts will help create more private sector jobs, rebuild New York’s infrastructure, and maximize economic activity to the mutual benefit of the contractor and its New York State business partners. New York State businesses will promote the contractor’s optimal performance under the Contract, thereby fully benefiting the public sector programs that are supported by associated procurements.

Public procurements can drive and improve the State’s economic engine through promotion of the use of New York businesses by its contractors. The State therefore expects bidders/proposers to provide maximum assistance to New York businesses in their contracts. The potential participation by all kinds of New York businesses will deliver great value to the State and its taxpayers.

Proposers can demonstrate their commitment to the use of New York State businesses by responding to the question below. Each proposer must include a response to this question with their proposal. Please note that

a “yes” response requires supporting information. If yes, identify New York State businesses that will be used and attach identifying information.

Will New York State businesses be used in the performance of this contract? ____Yes ____No

EXHIBIT A

SCOPE OF WORK

I. Background and Summary

In the early 2000's, BPCA forged new ground in environmental design and development by adopting the Residential Guidelines and Commercial Guidelines for sustainable development in BPC. These guidelines (collectively, the "Version 1 Green Guidelines") closely adhere to the U.S. Green Building Council's LEED Version 2 (released in June 2001). Because the Version 1 Green Guidelines are now outdated and were devised primarily with new construction in mind, they now need to be formally replaced with updated sustainability objectives and strategies that reflect current environmental and climatic conditions and contemporary sustainability theories, technologies, and methodologies, as well as a broader set of sustainability considerations for BPC, including operations, maintenance, retrofits, upgrades, and restorations.

BPCA seeks to create a comprehensive sustainability plan (the "Sustainability Plan") and to pair the Sustainability Plan with a new set of sustainability guidelines (the "New Green Guidelines") in order to guide BPCA's sustainability efforts and initiatives for a prospective period of ten (10) years. It is anticipated that, given the rapid pace of technological advancement and the changing nature of contemporary sustainability metrics and strategies, the Sustainability Plan and the New Green Guidelines should be updated periodically, but no less frequently than once every ten (10) years.

On May 21, 2019, the BPCA Board approved a resolution in support of the creation of the Sustainability Plan and New Green Guidelines, which will, among other things, facilitate BPCA's commitment to "achieve a carbon neutral Battery Park City by the middle of the century, along with greenhouse gas reduction and clean energy improvement targets, a strategy for achieving those targets, and a framework for ensuring BPCA lessees and business partners meet BPCA's enumerated goals."

It is acknowledged that the concept of "sustainability" is often and rightfully viewed as encompassing factors and objectives beyond those dealing solely with the physical environment and would, in this broader sense, involve considerations of economic sustainability and social equity. While there may be points at which the objectives reflected in the Sustainability Plan will be indirectly informed by, influence or intersect with these other types of sustainability considerations, the Sustainability Plan will be devised to focus upon matters of environmental sustainability. The Sustainability Plan is envisioned to create a condition within BPC, and be supportive of broader conditions throughout New York City and elsewhere, in which the demands placed upon the environment can be met without reducing its capacity to allow people to live well, both now and in the future.

It is BPCA's intention to apply the completed Sustainability Plan and New Green Guidelines, as appropriate and as possible, to:

- 1) All BPCA assets, operations, maintenance practices, and capital construction projects;
- 2) Any new construction occurring within BPC;
- 3) Any building or site use, modification, alteration, reconfiguration, upgrade, rebuilding, repair or restoration work within BPC requiring BPCA's approval.
- 4) Any new lease, ground lease, or license agreement (or amendment to such lease, ground lease or license agreement, when applicable) entered into by BPCA as lessor, ground lessor, or licensor.
- 5) To the extent possible, existing non-BPCA controlled buildings, grounds, and infrastructure:
 - a. Through existing BPCA contractual rights;
 - b. On a voluntary basis by the building owners; and/or,
 - c. Through future negotiated agreement between BPCA and the building owners (individually or collectively).

BPCA further desires to explore other potential avenues, as appropriate, for implementation of the Sustainability Plan and the New Green Guidelines. These avenues may include adaptation of the existing BPCA structure and/or the possibility and potential benefits of the formation and implementation of a new special purpose entity or a division/sub-entity within BPCA dedicated to the implementation of the sustainability plan. It is envisioned that BPCA, and/or such entity, could function as a clearinghouse for information and professional assistance for building owners and residents and the provision of opportunities to attract community-wide investments or financing opportunities at scale that would enable existing BPC buildings to more easily and/or quickly achieve adherence to the Sustainability Plan and the New Green Guidelines. All approved implementation and enforcement strategies will then be incorporated into a written implementation plan (the “Sustainability Implementation Plan”).

II. Project Objectives

- A. ***Development of Sustainability Plan and New Green Guidelines:*** The selected Proposer will create the Sustainability Plan and the New Green Guidelines, incorporating applicable global best practices in sustainability, while also articulating BPCA’s environmental sustainability objectives, as those objectives are formulated and refined during the course of the Project.
- B. ***Content of Sustainability Plan and New Green Guidelines:*** The Sustainability Plan will frame BPCA’s long-range environmental vision for Battery Park City and incorporate an overarching set of sustainability goals, objectives and milestones. The New Green Guidelines will formulate targeted means and measures, applicable in particular instances to specific types of activities, for achieving the objectives of the Sustainability Plan.

The selected Proposer will ensure that the Sustainability Plan and New Green Guidelines will, among other things:

- Establish, based upon BPCA’s guidance and approval, a strategic environmental vision and a cohesive set of sustainability goals for BPC based on global best practices.
 - Incorporate detailed regional, national, and global best practices in sustainability for the engineering, design, construction, operation, retrofitting and/or improvements of buildings, grounds, public spaces and infrastructure;
 - Promote energy and water conservation, zero waste, improved air quality (outdoor and indoor), environmental resiliency, climate change response strategies, and “green” operations and maintenance;
 - Improve energy efficiency, identify opportunities for incorporation of smart technologies, and incorporate considerations of optimized operations and maintenance, along with improved cost-effectiveness;
 - Incorporate goals that reflect the connections between environmental quality and overall public health considerations; and,
 - Establish a flexible format that allows for changing industry benchmarks, reporting, tools and metrics.
- C. ***Development of Sustainability Implementation Plan:*** Concurrent with the formulation of the Sustainability Plan and the New Green Guidelines, the selected Proposer will identify means and measures of achieving broad compliance with the Sustainability Plan and the New Green Guidelines by existing buildings within BPC in as short a time as possible. The means and measures included in the Sustainability Implementation Plan may include, but will not be limited to:
- Existing or potential legal or contractual devices available to BPCA to require compliance with the Sustainability Plan and New Green Guidelines, including the incorporation of strategies and incentives in future BPCA ground lease, lease and license agreement negotiations;

- Voluntary collaboration and/or negotiated implementation agreements between BPCA and BPC building owners, residents, and/or businesses;
- Existing programs and/or financial incentives that could be made available to owners of buildings within BPC to facilitate implementation of changes or upgrades in support of the Sustainability Plan and the New Green Guidelines;
- A strategy for potential adaptation of the existing BPCA structure and/or the potential formation and implementation of a new special purpose entity or a division/sub-entity within BPCA dedicated to the implementation of the sustainability plan (the “Sustainability Implementation Plan”); and,
- Other participation and adoption strategies appropriate for the Sustainability Plan and the New Green Guidelines.

III. General Requirements

A. The selected Proposer will:

- Attend one (1) kick-off meeting with BPCA to allow for an open exchange of information that is pertinent to the Work.
- Facilitate one (1) workshop with BPCA to develop environmental vision and goals for BPCA (the “Visioning Workshop”).
- Establish a schedule for the completion of the Scope of Work tasks, subject to BPCA’s review and approval. It is anticipated that the Work will be completed within seven (7) months of Project commencement.
- As needed and/or requested by BPCA, attend community and/or building owner/manager meetings, or otherwise communicate with community members and other relevant stakeholders (at least twelve (12) such meetings should be anticipated).
- Conduct Project site visits, as needed to perform the Work and as required by BPCA.

B. The selected Proposer will provide one (1) copy of each draft and final report in both paper and electronic formats, and all photos, renderings, and other images, in high-resolution JPG format. All deliverables shall be subject to BPCA’s review, comment, and approval.

C. Each task of the Services will require active collaboration between the selected Proposer and BPCA staff, attorneys, and/or consultants. The selected Proposer will meet with BPCA staff regularly, no less than once every two (2) weeks, through performance of the Work (meetings may, in certain instances and upon BPCA approval, be conducted via conference call or online meeting or videoconference). The selected Proposer will also meet periodically with other relevant entities and organizations BPCA determines, or the selected proposer determines (with BPCA approval), is necessary or beneficial for the Project.

IV. Sustainability Plan and New Green Guidelines Tasks

A. Data Gathering

- Conduct initial assessments of Battery Park City facilities and sustainability strategies using, among others, the following methods: Review and evaluate Existing Green Guidelines and other documentation (to be made available by BPCA) that is pertinent to the formulation of the Sustainability Plan and the New Green Guidelines, with such documentation potentially consisting of, among other things, as built-drawings of Battery Park City buildings and facilities and records of BPCA energy and water usage, and waste disposal;

- Conduct meetings (up to eight (8)) with various to-be-determined employees and groups or departments within BPCA in order to obtain detailed information regarding BPC buildings, facilities, infrastructure and operations;
- Review BPCA ground leases, leases, and license agreements to legally assess opportunities for the application and implementation of the Sustainability Plan and the New Green Guidelines (this task will be pertinent to both Section IV. Sustainability Plan and New Green Guidelines Project Tasks and Section V. Sustainability Implementation Plan Tasks);
- Review available public information regarding the energy efficiency, carbon emissions and other relevant sustainability-related information applicable to BPC buildings; and,
- Conduct interviews (up to twelve (12)) with various BPC building managers or others (in either individual or collective formats) as identified by BPCA to facilitate the compilation of existing information and historical records regarding anticipated Sustainability Plan and New Green Guidelines topics.
- **Deliverable(s)**
 - ❖ Written assessment report (the “Written Assessment Report”) and presentation to BPCA.

B. Precedent Study

Research case studies, strategies, and certification programs for sustainability plan and/or environmental guidelines precedents that may be relevant to BPC.

- Investigate best practices for similarly scaled district-, neighborhood-, campus-, or small municipality-focused sustainability programs and guidelines, with a particular focus on existing “green” buildings and neighborhoods.
- **Deliverable(s)**
 - ❖ Precedent study report (the “Precedent Study Report”) and presentation to BPCA.

C. Sustainability Plan and New Green Guidelines

- 1) Based upon the results of the Written Assessment Report and the Precedent Study Report, results from the Visioning Workshop, along with BPCA feedback and comments, prepare and subsequently present to BPCA (depending upon time availability and BPCA preference, such presentation may be made over the course of up to two (2) meetings) written recommendations for a BPCA Sustainability Plan and a set of New Green Guidelines (the “Written Recommendations”). The Written Recommendations will incorporate targeted sustainability goals particularly relevant to BPC and BPCA objectives and will incorporate the following considerations and distinctions:
 - Overall sustainability objectives and goals for Battery Park City for the next ten (10) years;
 - BPCA owned or controlled assets, buildings, facilities, parks and/or infrastructure;
 - a. Operational objectives and guidelines;
 - b. Construction, repair and restoration objectives and guidelines;
 - c. Maintenance objectives and guidelines.

- BPC buildings (both commercial and residential) and infrastructure that are not owned or controlled by BPCA (bearing in mind applicability and enforceability obstacles and opportunities):
 - a. Operational objectives and guidelines;
 - b. Construction, repair and restoration objectives and guidelines;
 - c. Maintenance objectives and guidelines.
- 2) Based upon the selected Proposer's Written Recommendations and the feedback and comments received from BPCA in response to the Written Recommendations, the selected Proposer will prepare a draft Sustainability Plan and a draft set of New Green Guidelines for BPCA review and comment. The Sustainability Plan and New Green Guidelines must each cover (with the New Green Guidelines roughly tracking the organization and nomenclature of the Sustainability Plan), among any other topics suggested by the selected Proposer and/or otherwise agreed to by BPCA:
- ❖ Built Environment / Infrastructure
 - a. Design and Engineering;
 - b. Construction;
 - c. Energy Efficiency and Greenhouse Gas Emissions;
 - d. Clean Energy;
 - e. Water Use;
 - f. Waste Management;
 - g. Buildings/Facilities Operations and Maintenance;
 - h. Construction;
 - i. Indoor Air Quality; and,
 - j. Transportation & Parking.
 - ❖ Natural Environment:
 - a. Ecosystems and Habitat;
 - b. Parks and Open Space Operations & Maintenance;
 - c. Design and Engineering;
 - d. Water Use, Conservation and Management;
 - e. Waste Management;
 - f. Air Quality; and,
 - g. Stormwater Management.
 - ❖ Renewable Energy:
 - a. Access;
 - b. Generation; and,
 - c. Storage.
 - ❖ Climate Change Response and Adaptation, including, but not limited to:
 - a. Storm Resiliency/Flood Management (selected Proposer to familiarize itself with scopes of current BPCA resiliency projects so as not to duplicate work scope);
 - b. Sea Level Rise (selected Proposer to familiarize itself with scopes of current BPCA resiliency projects so as not to duplicate work scope);
 - c. Heat Island Effect Reduction; and
 - d. Stormwater Drainage.

- ❖ General Principles
 - a. Noise and Light Pollution;
 - b. Circular Economy Principles;
 - c. Conservation of Materials & Resources; and,
 - d. Innovation.

- **Deliverable(s)**

- ❖ Final Sustainability Plan and New Green Guidelines, along with presentation materials.
- ❖ Presentations (up to seven (7)) of Sustainability Plan and New Green Guidelines.

V. Sustainability Implementation Plan Tasks

A. Data Gathering, Research and Analysis

- 1) Review BPCA ground leases, leases, and license agreements to legally assess opportunities for the application and implementation of the Sustainability Plan and the New Green Guidelines (this task will be pertinent to both Section IV. Sustainability Plan and New Green Guidelines Project Tasks and Section V. Sustainability Implementation Plan Tasks);
- 2) Research and analyze collaboration and partnering opportunities potentially available for the rapid implementation of the Green Guidelines through – among other things – access to sources of funding/capital, sharing of information, access to professional services, scale price discounting, and other scale advantages;
- 3) Identify and assess opportunities for BPCA to encourage, promote and/or incentivize voluntary adherence to the Sustainability Plan and New Green Guidelines by BPC residents, businesses, workers, and visitors;
- 4) Analyze other avenues and mechanisms as may be appropriate to assist and facilitate in the implementation of the Sustainability Plan and New Green Guidelines;
- 5) Research and analyze a range of optimal organizational structures through which facilitation, coordination, aggregation, and/or clearinghouse functions may be optimized in support of broad implementation of the Sustainability Plan and the New Green Guidelines and in furtherance of specific approaches and strategies identified as a result of the tasks above. Research and analysis of organizational structures shall focus on:
 - a. Implementation strategies and approaches that BPCA is well positioned to act upon either immediately or within a near-term (less than one year) horizon;
 - b. Limitations, if any, upon BPCA's practical ability or legal authority to efficiently and effectively pursue, due to its organizational structure, any identified implementation strategy or approach;
 - c. Any potential changes, modifications, adaptations, or adjustments to BPCA's current organization structure, or any potential creation of a new division or sub-entity within BPCA, that would allow it to enhance its ability to utilize any identified implementation strategies or approaches; and,
 - d. Other potential organizational structures or special purpose entities or districts that would provide broader or more extensive capabilities than currently exists within BPCA to utilize a range of identified strategies and approaches for the rapid implementation of the Sustainability Plan and the New Green Guidelines. This task includes detailed case study research of any existing models (preferably in New York or the broader U.S.) of such organizational structures or special purpose entities or districts that have been effectively employed to advance sustainability goals and objectives.

- **Deliverable**

- ❖ A detailed report of the research and analysis performed through the tasks detailed above and its specific relevance and applicability to BPC and more particularly to the implementation of the Sustainability Plan and the New Green Guidelines (the “Implementation Report”) and one (1) follow-up presentation to BPCA.

B. Sustainability Implementation Plan Preparation

Based upon the findings of the Implementation Report, along with BPCA’s feedback and comments, create a draft Sustainability Implementation Plan that incorporates one-year, five-year, and ten-year implementation scenarios and includes a set of detailed implementation strategies and approaches, prioritized according to projected effectiveness, ease of utilization, and cost. The draft Sustainability Implementation Plan will incorporate, but not be limited to:

- Methods of utilizing provisions in existing BPCA contractual agreements, leases, or licenses, as well as new provisions in future ground leases, leases and license agreements and/or amendments to existing agreements to enforce provisions of the Sustainability Plan and New Green Guidelines;
- Strategies for collaboration and partnering between BPCA and other entities (either public or private sector) to support the rapid implementation of the Green Guidelines through – among other things – access to sources of funding/capital, sharing of information, access to professional services, scale price discounting, and other scale advantages;
- Means for BPCA to encourage, promote, and/or incentivize voluntary adherence to the Sustainability Plan and New Green Guidelines by BPC residents, businesses, workers, and visitors;
- Other appropriate avenues and mechanisms to assist and facilitate the rapid implementation of the Sustainability Plan and New Green Guidelines;
- If applicable, changes, modifications, adaptations or adjustments to BPCA’s current organization structure, or the creation of a new division or sub-entity within BPCA, to allow for enhanced ability to utilize recommended implementation strategies or approaches for the rapid implementation of the Sustainability Plan and the New Green Guidelines; and,
- If applicable, the creation of other potential organizational structure(s) or special purpose entity(ies) or district(s) that would provide broader or more extensive capabilities than currently exist within BPCA to utilize recommended strategies and approaches for the rapid implementation of the Sustainability Plan and the New Green Guidelines.

- **Deliverable(s)**

- ❖ Draft Sustainability Implementation Plan and one (1) presentation.
- ❖ Final Sustainability Implementation Plan (based upon BPCA feedback and comments to Draft Sustainability Implementation Plan) and three (3) presentations.

EXHIBIT B

CONTRACTOR REQUIREMENTS AND PROCEDURES FOR PARTICIPATION BY NEW YORK STATE-CERTIFIED MBEs/WBEs/SDVOBs AND EQUAL EMPLOYMENT OPPORTUNITIES FOR MINORITY GROUP MEMBERS AND WOMEN

NEW YORK STATE LAW

Pursuant to New York State Executive Law Article 15-A and Parts 140-145 of Title 5 of the New York Codes, Rules and Regulations BPCA is required to promote opportunities for the maximum feasible participation of New York State-certified MBEs/WBEs (collectively, “MWBE(s)”) and the employment of minority group members and women in the performance of BPCA contracts. Pursuant to New York State Executive Law Article 17-B and 9 NYCRR §252, BPCA recognizes its obligation under the law to promote opportunities for maximum feasible participation of certified SDVOBs.

Business Participation Opportunities for MWBEs

For purposes of this solicitation, BPCA hereby establishes the following MWBE participation goals, based on the current availability of MWBEs:

Overall goal for total MWBE participation: 30%

NYS-Certified Minority-Owned Business (“MBE”) Participation: 15%

NYS-Certified Women-Owned Business (“WBE”) Participation: 15%

A contractor (“Contractor”) on any contract resulting from this procurement (“Contract”) must document its good faith efforts to provide meaningful participation by MWBEs as subcontractors and suppliers in the performance of the Contract. To that end, by submitting a response to this RFP, the Proposer agrees that BPCA may withhold payment pursuant to any Contract awarded as a result of this RFP pending receipt of the required MWBE documentation. The directory of MWBEs can be viewed at: <https://ny.newnycontracts.com>. For guidance on how BPCA will evaluate a Contractor’s “good faith efforts,” refer to 5 NYCRR § 142.8.

The Proposer understands that only sums paid to MWBEs for the performance of a commercially useful function, as that term is defined in 5 NYCRR § 140.1, may be applied towards the achievement of the applicable MWBE participation goal. The portion of a contract with an MWBE serving as a broker that will be deemed to represent the commercially useful function performed by the MWBE will be 25 percent of the total value of the contract]

In accordance with 5 NYCRR § 142.13, the Proposer further acknowledges that if it is found to have willfully and intentionally failed to comply with the MWBE participation goals set forth in a Contract resulting from this RFP, such finding constitutes a breach of contract and BPCA may withhold payment as liquidated damages.

Such liquidated damages will be calculated as an amount equaling the difference between: (1) all sums identified for payment to MWBEs had the Contractor achieved the contractual MWBE goals; and (2) all sums actually paid to MWBEs for work performed or materials supplied under the Contract.

By submitting a bid or proposal, a Proposer agrees to demonstrate its good faith efforts to achieve the applicable MWBE participation goals by submitting evidence thereof through the New York State Contract System (“NYSCS”), which can be viewed at <https://ny.newnycontracts.com>, provided, however, that a Proposer may arrange to provide such evidence via a non-electronic method by contacting Michael LaMancusa at Michael.LaMancusa@bpca.ny.gov or 212-417-4335.

. Please note that the NYSCS is a one-stop solution for all of your MBE/WBE and Article 15-A contract requirements. For additional information on the use of the NYSCS to meet the Proposer's MBE/WBE requirements, please see the attached MBE/WBE guidance from the New York State Division of Minority and Women's Business Development, "Your MWBE Utilization and Reporting Responsibilities Under Article 15-A."

Additionally, a Proposer will be required to submit the following documents and information as evidence of compliance with the foregoing:

- A. An MWBE Utilization Plan with their bid or proposal. Any modifications or changes to an accepted MWBE Utilization Plan after the Contract award and during the term of the Contract must be reported on a revised MWBE Utilization Plan and submitted to BPCA for review and approval.
- B. BPCA will review the submitted MWBE Utilization Plan and advise the Proposer of BPCA acceptance or issue a notice of deficiency within 30 days of receipt.
- C. If a notice of deficiency is issued, the Proposer will be required to respond to the notice of deficiency within seven (7) business days of receipt by submitting to Michael LaMancusa at Michael.LaMancusa@bpca.ny.gov, a written remedy in response to the notice of deficiency. If the written remedy that is submitted is not timely or is found by BPCA to be inadequate, BPCA will notify the Proposer and direct the Proposer to submit, within five (5) business days, a request for a partial or total waiver of MWBE participation goals. Failure to file the waiver form in a timely manner may be grounds for disqualification of the bid or proposal.
- D. BPCA may disqualify a Proposer as being non-responsive under the following circumstances:
 - 1) If a Proposer fails to submit an MWBE Utilization Plan;
 - 2) If a Proposer fails to submit a written remedy to a notice of deficiency;
 - 3) If a Proposer fails to submit a request for waiver; or
 - 4) If BPCA determines that the Proposer has failed to document good faith efforts.

The successful Proposer will be required to attempt to utilize, in good faith, any MBE or WBE identified within its MWBE Utilization Plan, during the performance of the Contract. Requests for a partial or total waiver of established goal requirements made subsequent to Contract Award may be made at any time during the term of the Contract to BPCA, but must be made no later than prior to the submission of a request for final payment on the Contract.

The successful Proposer will be required to submit a quarterly M/WBE Contractor Compliance & Payment Report to BPCA, by the 10th day following each end of quarter over the term of the Contract documenting the progress made toward achievement of the MWBE goals of the Contract.

Business Participation Opportunities for SDVOBs

For purposes of this solicitation, BPCA hereby establishes an overall goal of 6% for SDVOB participation. A Proposer must document good faith efforts to provide meaningful participation by SDVOBs as subcontractors or suppliers in the performance of the Contract and Proposer agrees that BPCA may withhold payment pending receipt of the required SDVOB documentation. The directory of New York State Certified SDVOBs can be viewed at: http://www.ogs.ny.gov/Core/docs/CertifiedNYS_SDVOB.pdf. For guidance on how BPCA will determine a Contractor's "good faith efforts," refer to 9 NYCRR §252.2(f)(2).

In accordance with 9 NYCRR §252.2(s), the Proposer acknowledges that if it is found to have willfully and intentionally failed to comply with the SDVOB participation goals set forth in the Contract, such finding constitutes a breach of Contract and Contractor will be liable for damages as specified in the Contract.

Such damages will be calculated based on the actual cost incurred by BPCA related to BPCA's expenses for personnel, supplies and overhead related to establishing, monitoring and reviewing certified SDVOB programmatic goals.

- A. Additionally, a Proposer agrees to submit a Utilization Plan with their bid or Proposal as evidence of compliance with the foregoing. Any modifications or changes to the Utilization Plan after the Contract award and during the term of the Contract must be reported on a revised Utilization Plan and submitted to BPCA.
- B. BPCA will review the submitted Utilization Plan and advise the Proposer of BPCA's acceptance or issue a notice of deficiency within 30 days of receipt.
- C. If a notice of deficiency is issued, Proposer agrees that it will respond to the notice of deficiency within seven (7) business days of receipt by submitting to Michael LaMancusa at BPCA, by email at Michael.LaMancusa@bpca.ny.gov, a written remedy in response to the notice of deficiency. If the written remedy that is submitted is not timely or is found by BPCA to be inadequate, BPCA will notify the Proposer and direct the Proposer to submit, within five (5) business days, a request for a partial or total waiver of SDVOB participation goals. Failure to file the waiver form in a timely manner may be grounds for disqualification of the bid or Proposal.
- D. BPCA may disqualify a Proposer as being non-responsive under the following circumstances:
 - 1) If a Proposer fails to submit a Utilization Plan;
 - 2) If a Proposer fails to submit a written remedy to a notice of deficiency;
 - 3) If a Proposer fails to submit a request for waiver; or
 - 4) If BPCA determines that the Proposer has failed to document good faith efforts.

The successful Proposer will attempt to utilize, in good faith, any SDVOB identified within its Utilization Plan, during the performance of the Contract. Requests for a partial or total waiver of established goal requirements made subsequent to the Contract award may be made at any time during the term of the Contract to BPCA, but must be made no later than prior to the submission of a request for final payment on the Contract.

The successful Proposer is required to submit a Contractor's SDVOB Contractor Compliance & Payment Report to BPCA on a monthly basis over the term of the Contract documenting the progress made toward achievement of the SDVOB goals of the Contract.

Equal Employment Opportunity Requirements

By submission of a bid or proposal in response to this solicitation, the Proposer agrees with all of the terms and conditions of the attached MWBE Equal Employment Opportunity Policy Statement. The Proposer is required to ensure that it and any subcontractors awarded a subcontract for the construction, demolition, replacement, major repair, renovation, planning or design of real property and improvements thereon (the "Work"), except where the Work is for the beneficial use of the Proposer, undertake or continue programs to ensure that minority group members and women are afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status. For these purposes, equal opportunity will apply in the areas of recruitment, employment, job assignment, promotion, upgrading, demotion, transfer, layoff, termination, and rates of pay or other forms of compensation. This requirement does not apply to: (i) work, goods, or services unrelated to the Contract; or (ii) employment outside New York State.

The Proposer will be required to submit a Minority and Women-owned Business Enterprise and Equal Employment Opportunity Policy Statement, Form # 4, to BPCA with its bid or proposal.

If awarded a Contract, Proposer will submit a Workforce Utilization Report and will require each of its Subcontractors to submit a Workforce Utilization Report, in such format as will be required by BPCA on a monthly basis during the term of the Contract.

Pursuant to Executive Order #162, contractors and subcontractors will also be required to report the gross wages paid to each of their employees for the work performed by such employees on the contract utilizing the Workforce Utilization Report on a quarterly basis.

Further, pursuant to Article 15 of the Executive Law (the "Human Rights Law"), all other State and Federal statutory and constitutional non-discrimination provisions, the Contractor and sub-contractors will not discriminate against any employee or applicant for employment because of race, creed (religion), color, sex, national origin, sexual orientation, military status, age, disability, predisposing genetic characteristic, marital status or domestic violence victim status, and will also follow the requirements of the Human Rights Law with regard to non-discrimination on the basis of prior criminal conviction and prior arrest.

Please Note: Failure to comply with the foregoing requirements may result in a finding of non-responsiveness, non-responsibility and/or a breach of the Contract, leading to the withholding of funds, suspension or termination of the Contract or such other actions or enforcement proceedings as allowed by the Contract.



Your MBE/WBE Utilization and Reporting Responsibilities Under Article 15-A

The New York State Contract System (“NYSCS”) is your one stop tool compliance with New York State’s MBE/WBE Program. It is also the platform New York State uses to monitor state contracts and MBE/WBE participation.

GETTING STARTED

To access the system, please login or create a user name and password at <https://ny.newnycontracts.com/FrontEnd/VendorSearchPublic.asp?TN=ny&XID=7562>. If you are uncertain whether you already have an account set up or still need to register, please send an email to the customer service contact listed on the Contact Us & Support page, or reach out to Michael LaMancusa at Michael.LaMancusa@bpca.ny.gov or 212-417-4335. For verification, in the email, include your business name and contact information.

VENDOR RESPONSIBILITIES

As a vendor conducting business with New York State, you have a responsibility to utilize minority- and/or women-owned businesses in the execution of your contracts, per the MBE/WBE percentage goals stated in your solicitation, incentive proposal or contract documents. NYSCS is the tool that New York State uses to monitor MBE/WBE participation in state contracting. Through the NYSCS you will submit utilization plans, request subcontractors, record payments to subcontractors, and communicate with your project manager throughout the life of your awarded contracts.

There are several reference materials available to assist you in this process, but to access them, you need to first be registered within the NYSCS. Once you log onto the website, click on the **Help & Support** >> link on the lower left hand corner of the Menu Bar to find recorded trainings and manuals on all features of the NYSCS. You may also click on the **Help & Tools** icon at the top right of your screen to find videos tailored to primes and subcontractors. There are also opportunities available to join live trainings, read up on the “Knowledge Base” through the Forum link, and submit feedback to help improve future enhancements to the system. Technical assistance is always available through the **Contact Us & Support** link on the NYSCS website (<https://ny.newnycontracts.com/FrontEnd/VendorSearchPublic.asp?TN=ny&XID=7562>).

For more information, contact Michael LaMancusa at Michael.LaMancusa@bpca.ny.gov or 212-417-4335.

MINORITY AND WOMEN-OWNED BUSINESS ENTERPRISES

EQUAL EMPLOYMENT OPPORTUNITY POLICY STATEMENT

MBE/WBE AND EEO POLICY STATEMENT

I, _____ (the "Contractor"), agree to adopt the following policies with respect to the project being developed at, or services rendered to, the Battery Park City Authority ("BPCA").

MBE/WBE

This organization will and will cause its contractors and subcontractors to take good faith actions to achieve the MBE/WBE contract participations goals set by the State for that area in which the State-funded project is located, by taking the following steps:

- (1) Actively and affirmatively soliciting bids for contracts and subcontracts from qualified State certified MBEs or WBEs, including solicitations to MBE/WBE contractor associations.
- (2) Requesting a list of State-certified MBEs/WBEs from BPCA and soliciting bids from these MBEs/WBEs directly.
- (3) Ensuring that plans, specifications, request for proposals and other documents used to secure bids will be made available in sufficient time for review by prospective MBEs/WBEs.
- (4) Where feasible, dividing the work into smaller portions to enhance participations by MBEs/WBEs and encourage the formation of joint venture and other partnerships among MBE/WBE contractors to enhance their participation.
- (5) Documenting and maintaining records of bid solicitation, including those to MBEs/WBEs and the results thereof. The Contractor will also maintain records of actions that its subcontractors have taken toward meeting MBE/WBE contract participation goals.
- (6) Ensuring that progress payments to MBEs/WBEs are made on a timely basis so that undue financial hardship is avoided, and that bonding and other credit requirements are waived or appropriate alternatives are developed to encourage MBE/WBE participation.

EEO

(a) This organization will not discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, age, disability or marital status, will undertake or continue existing diversity programs to ensure that minority group members are afforded equal employment opportunities without discrimination, and will make and document its conscientious and active efforts to employ and utilize minority group members and women in its work force on State contracts.

- (b) This organization will state in all solicitation or advertisements for employees that in the performance of the State contract all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex disability or marital status.
- (c) At the request of BPCA, this organization will request that each employment agency, labor union, or authorized representative will not discriminate on the basis of race, creed, color, national origin, sex, age, disability or marital status and that such union or representative will affirmatively cooperate in the implementation of this organization's obligations herein.
- (d) The Contractor will comply with the provisions of the Human Rights Law, all other State and Federal statutory and constitutional non-discrimination provisions. The Contractor and subcontractors will not discriminate against any employee or applicant for employment because of race, creed (religion), color, sex, national origin, sexual orientation, military status, age, disability, predisposing genetic characteristic, marital status or domestic violence victim status, and will also follow the requirements of the Human Rights Law with regard to non-discrimination on the basis of prior criminal conviction and prior arrest.
- (e) This organization will include the provisions of sections (a) through (d) of this agreement in every subcontract in such a manner that the requirements of the subdivisions will be binding upon each subcontractor as to work in connection with the State contract.

Agreed to this _____ day of _____, 20____

By _____

Print: _____ Title: _____

_____ is designated as the Consultant's Minority Business Enterprise Liaison responsible for administering the Minority and Women-Owned Business Enterprises - Equal Employment Opportunity (MBE/WBE - EEO) program.

MBE/WBE Contract Goals

30% Minority and Women's Business Enterprise Participation

____% Minority Business Enterprise Participation

____% Women's Business Enterprise Participation

EEO Contract Goals (if applicable)

____% Minority Labor Force Participation

____% Female Labor Force Participation

(Authorized Representative)

Title: _____

Date: _____

Diversity Practices Questionnaire

I, _____, as _____ (title) of _____ company (the "Company"), swear and/or affirm under penalty of perjury that the answers submitted to the following questions are complete and accurate to the best of my knowledge:

1. Does your Company have a Chief Diversity Officer or other individual who is tasked with supplier diversity initiatives? Yes or No

If Yes, provide the name, title, description of duties, and evidence of initiatives performed by this individual or individuals.

2. What percentage of your Company's gross revenues (from your prior fiscal year) was paid to New York State certified MBEs/WBEs as subcontractors, suppliers, joint-ventures, partners or other similar arrangement for the provision of goods or services to your Company's clients or customers?

3. What percentage of your Company's overhead (i.e. those expenditures that are not directly related to the provision of goods or services to your Company's clients or customers) or non-contract-related expenses (from your prior fiscal year) was paid to New York State certified MBEs/WBEs as suppliers/contractors?¹

4. Does your Company provide technical training² to MBEs/WBEs? Yes or No

If Yes, provide a description of such training which should include, but not be limited to, the date the program was initiated, the names and the number of MBEs/WBEs participating in such training, the number of years such training has been offered and the number of hours per year for which such training occurs.

5. Is your Company participating in a government approved M/WBE mentor-protégé program?

If Yes, identify the governmental mentoring program in which your Company participates and provide evidence demonstrating the extent of your Company's commitment to the governmental mentoring program.

6. Does your Company include specific quantitative goals for the utilization of MBEs/WBEs in its non-government procurements? Yes or No

If Yes, provide a description of such non-government procurements (including time period, goal, scope and dollar amount) and indicate the percentage of the goals that were attained.

7. Does your Company have a formal M/WBE supplier diversity program? Yes or No

If Yes, provide documentation of program activities and a copy of policy or program materials.

8. Does your Company plan to enter into partnering or subcontracting agreements with New York State certified MBEs/WBEs if selected as the successful Proposer? Yes or No

If Yes, complete the attached Utilization Plan

¹ Do not include onsite project overhead.

² Technical training is the process of teaching employees how to more accurately and thoroughly perform the technical components of their jobs. Training can include technology applications, products, sales and service tactics, and more. Technical skills are job-specific as opposed to soft skills, which are transferable.

Battery Park City Authority Request For Proposals

All information provided in connection with the Diversity Practices Questionnaire is subject to audit and any fraudulent statements are subject to criminal prosecution and debarment.

Signature of
Owner/Official
Printed Name of
Signatory
Title

Name of Business

Address

City, State, Zip

STATE OF _____

COUNTY OF _____) ss:

On the _____ day of _____, 20__, before me, the undersigned, a Notary Public in and for the State of _____, personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to this certification and said person executed this instrument.

Notary Public

EXHIBIT C

(BPCA Sample Form of Contract)

(attached)

CONSULTANT AGREEMENT

between

HUGH L. CAREY BATTERY PARK CITY AUTHORITY

and

[CONSULTANT]

Dated as of _____

Contract No. [CONTRACT #]

([PROJECT NAME])

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EXHIBIT A - SCOPE OF WORK

EXHIBIT B - RATES **[if applicable]**

EXHIBIT C - FORM OF TIME SHEET **[if applicable]**

EXHIBIT D - MBWE AND EEO POLICY STATEMENT

CONSULTANT AGREEMENT

AGREEMENT (the "Agreement") made as of _____ by and between BATTERY PARK CITY AUTHORITY d/b/a HUGH L. CAREY BATTERY PARK CITY AUTHORITY, (the "Owner"), a body corporate and politic, constituting a public benefit corporation, having a place of business at 200 Liberty Street, 24th Floor, New York, New York 10281, and [COMPANY], formed under the laws of the State of [INCORP. STATE], having an office at [CITY, STATE AND ZIP] (the "Consultant").

W I T N E S S E T H:

WHEREAS, Owner has fee title to certain real property located in the City, County and State of New York, generally known as Battery Park City; and

WHEREAS, Owner has developed Battery Park City, in individual parcels, with the goal of creating a richly diversified mixed use community providing residential and commercial space with related amenities such as parks, plazas, recreational areas and a waterfront esplanade; and

WHEREAS, Owner intends to retain the services of Consultant to perform [describe services to be performed] (the "Project"), and Consultant desires to perform such services for Owner.

NOW, THEREFORE, in consideration of the mutual promises herein contained, the parties hereby agree as follows:

1. Scope of Work

Consultant shall perform the services described in the Scope of Work attached hereto as Exhibit A (the "Work"). All Work shall be completed in accordance with the requirements furnished to Consultant by Owner, and shall be completed to Owner's satisfaction.

2. Time for Performance

Consultant shall perform the Work as expeditiously as is consistent with professional skill and the orderly progress of the Work, and in accordance with any schedule set forth in the attached Scope of Work. If a schedule approved by Owner is incorporated into this Agreement, said schedule shall not be exceeded by Consultant, except for reasonable cause. The term of this Agreement shall begin [DATE TERM BEGINS] (the "Commencement Date") and shall terminate not later than [DATE TERM ENDS] (the "Expiration Date") (such period from the Commencement Date to the Expiration Date is referred to herein as the "Term") unless this Agreement is otherwise terminated as hereinafter provided. Consultant shall complete the Scope of Work on or before [DATE], unless the time for performance of the Work is extended by written agreement of Consultant and Owner.

3. Compensation

(a) Owner shall pay, and Consultant agrees to accept as full compensation for all Work performed under this Agreement, the not-to-exceed amount of [\$\$\$\$\$] (the "Fee"), paid in

accordance with the rates (the “Rates”) attached hereto as Exhibit B. The Fee includes any and all reimbursable expenses, which shall not exceed [\$\$\$\$\$] (the “Reimbursable Amount”), incurred by Consultant in performing the Work.

(b) Any reimbursable expenses shall be paid in accordance with Owner’s standard policies for reasonable expenses actually incurred by Consultant in connection with the performance of the Work. Consultant shall submit copies of receipts or other supporting documentation for any qualifying expenses incurred.

(c) Consultant shall submit monthly requests for payment to Owner that shall:

(i) include the name, address, and telephone number of Consultant;

(ii) be accompanied by time sheets, in substantially the form provided in Exhibit C (“Form of Time Sheet”), attached hereto and made part hereof, containing a description of the work performed and indicating hours worked in each billing category; and

(iii) reference the project for which services were rendered.

(d) Owner shall pay Consultant no later than the 30th calendar day (excluding holidays) following Owner’s receipt of a Proper Invoice (pursuant to, and as such term is defined in Owner’s Prompt Payment Policy, a copy of which can be found at <http://bpca.ny.gov/wp-content/uploads/2018/01/BPCA-Prompt-Payment-Policy-Fiscal-Year-2017.pdf>). Any item(s) of Work indicated in any Exhibit hereto as attributable to a specific phase of the Work that is not performed during the specified phase shall not be compensated by Owner, but payment for any such items of Work shall remain available to Consultant if, with Owner’s advance approval, such Work is actually performed during a subsequent phase of the Work, subject to the provisions of this Article 3 and Owner’s approval of any request for payment. Owner may withhold from any payment an amount equal to any costs or damages incurred by Owner as a result of Consultant’s negligence or breach of this Agreement.

(e) All requests for payment should be addressed as follows:

Office of the Treasurer
Battery Park City Authority
d/b/a Hugh L. Carey Battery Park City Authority
200 Liberty Street, 24th Floor
New York, NY 10281-1097
Attn.: Accounts Payable

A duplicate copy is to be sent to the attention of [**PROJECT MANAGER, TITLE**].

4. Increase and Decrease in the Scope of Consultant’s Work

Owner shall have the right to make changes to, increase or reduce the scope of Work, or extend the Term or any date set forth in the schedule referenced in Section 2 *supra*, at any time and for any reason, upon written notice to Consultant specifying the nature and extent of such changes. If Consultant believes that any work it has been directed to perform by Owner is beyond

the scope of Work set forth in this Agreement and constitutes extra work, Consultant shall so notify Owner within ten (10) business days. Owner shall determine whether or not such work is in fact beyond the scope of the Work and is considered extra work. If Owner determines that such work constitutes extra work to Consultant or any Subconsultant (as defined in Section 25 of this Agreement), Owner will pay Consultant any additional reimbursable expenses approved pursuant to Owner's policy for reimbursable expenses, and such additional compensation only as mutually agreed in writing by Owner and Consultant at the time of such change.

5. Consultant Cooperation

(a) Consultant shall work with such firms or individuals as Owner shall designate from time to time in connection with the Work, and agrees to meet with such firms or individuals at such times as Owner may require in order to maintain an ongoing review process so as to expedite determinations and approvals required to be made in connection with the Work.

(b) Consultant shall render any assistance that Owner may require with respect to any claim or action arising from or in any way relating to Consultant's services during or subsequent to the Term of this Agreement, including, but not limited to, review of claims, preparation of technical reports and participation in negotiations, both before and after Consultant has completed performance of the Work under this Agreement and without any additional compensation therefor.

6. Termination

(a) *Termination for Convenience.* Owner, at any time, may terminate this Agreement in whole or in part. Any such termination shall be effected by mailing or delivering to Consultant a written notice of termination specifying the extent to which performance of the Work under this Agreement is terminated and the date upon which such termination becomes effective. Upon receipt of the notice of termination, Consultant shall act promptly to minimize any expenses resulting from said termination. Owner shall pay Consultant the costs actually incurred by Consultant, including any Fee for Work actually and satisfactorily performed up to the effective date of the termination, but in no event shall Consultant be entitled to compensation in excess of the total consideration of this Agreement. In the event of such a termination, Owner may take over the Work and prosecute same to completion by contract or otherwise, and may take possession of and utilize such work product, materials, appliances, and plant as may be on the site and necessary or useful to complete the Work. Except as otherwise provided herein, all of Owner's liability hereunder shall cease and terminate as of the effective date specified in such notice of termination.

(b) *Termination for Cause.* Owner may terminate this Agreement for cause if:

(i) Consultant shall fail to diligently, timely and expeditiously perform any of its obligations as set forth in the Agreement;

(ii) Any representation or warranty made or deemed to have been made under this Agreement by Consultant shall prove to be untrue in any material respect;

(iii) Consultant shall make a general assignment for the benefit of its creditors, or a receiver or trustee shall have been appointed on account of Consultant's insolvency, or Consultant otherwise shall be or become insolvent, or an order for relief shall have been entered

against Consultant under Chapter 7 or Chapter 11 of Title 11 of the United States Code;

(iv) a breach of any covenant or agreement contained in Section 16 of this Agreement or any other section of this Agreement shall occur; or

(v) Consultant otherwise shall be in default hereunder;

by serving written notice upon Consultant of Owner's intention to terminate this Agreement. Such notice shall state: (1) the reason(s) for Owner's intention to terminate the Agreement, and (2) the effective date of termination, to be not less than three (3) calendar days after the date of the notice of termination. If Consultant shall fail to cure the reason(s) for termination or make arrangements satisfactory to Owner on or before the effective date of termination, this Agreement shall terminate on the date specified by Owner in the notice of termination. In the event of any such termination, Owner may take over the Work and prosecute same to completion by contract or otherwise, for the account and at the expense of Consultant, and Consultant shall be liable to Owner for all costs incurred by Owner by reason of said termination. In the event of such termination, Owner may take possession of and utilize such work product, materials, appliances, and plant as may be on the site and necessary or useful to complete the Work. Upon Owner's completion of the Work following a termination for cause, Consultant shall be entitled to such amount of the Fee that has not theretofore been paid to Consultant and that shall compensate Consultant for all Work actually and satisfactorily performed by it up to the date of termination, provided, however, that Owner shall deduct from any amount all additional costs and expenses that Owner may incur over those which Owner would have incurred in connection with the Work if Owner had not so terminated this Agreement for cause. Nothing contained in this Agreement shall limit in any manner any and all rights or remedies otherwise available to Owner by reason of a default by Consultant under this Agreement, including, without limitation, the right to seek full reimbursement from Consultant for all costs and expenses incurred by Owner by reasons of Consultant's default hereunder and which Owner would not have otherwise incurred if Consultant had not defaulted hereunder.

(c) Upon any termination of this Agreement in accordance with the provisions of this Section 6, Consultant shall, with respect to the Work which is the subject of such termination:

(i) discontinue all its services from and after the date of the notice of termination, except to attempt to cure any reason(s) for termination or as may be required to complete any item or portion or services to a point where discontinuance will not cause unnecessary waste of duplicative work or cost;

(ii) cancel, or if so directed by Owner, transfer to Owner all commitments and agreements made by Consultant relating to the Work, to the extent same are cancelable or transferable by Consultant;

(iii) transfer to Owner in the manner, to the extent, and at the time directed by Owner, all work product, supplies, materials and other property produced as a part of, or acquired in the performance of the Work; and

(iv) take other actions as Owner may reasonably direct.

(d) In the event that Consultant, having been terminated, thereafter obtains a

determination, in a judicial or other action or proceeding, that such termination was unwarranted, without basis, or invalid for any reason, then the termination shall be deemed to have been one for the convenience of Owner and Consultant shall be entitled to be reimbursed and paid as provided in Subsection 6(b) but to no other payments or damages.

7. Suspension

Owner may, at any time and for any reason, order Consultant in writing to suspend, delay or interrupt performance of all or any part of the Work for a reasonable period of time as the Owner may determine. Upon receipt of a suspension order, Consultant shall, as soon as practicable, cease performance of the Work as ordered and take immediate affirmative measures to protect such Work from loss or damage. Consultant specifically agrees that such suspension, delay or interruption of the performance of Work pursuant to this Section 7 shall not increase the cost of performance of the Work of this Agreement. Owner may extend the Term or any date set forth in schedule referenced in Section 2 *supra*, to compensate Consultant for lost time due to suspension, delay or interruption, and such time extension shall be Consultant's sole compensation for same. Consultant shall resume performance of such Work upon the date ordered by Owner.

8. Assignment

Consultant shall not assign the Agreement in whole or in part without Owner's prior written consent; however, Owner may assign the Agreement in whole or in part without Consultant's prior written consent.

9. Ownership of Documents

(a) All material specifically prepared for the Project and excluding any intellectual property already owned by Consultant that is furnished by Consultant or any Subconsultants (including but not limited to all film, video, or digital assets, Hypertext Markup Language ("HTML") files, JavaScript files, flash files, etc.) in connection with the Work shall be deemed Works Made for Hire and become the sole property of Owner. Consultant shall provide a tangible copy of the Work to Owner in any form(s) to be specified by Owner. Such materials may be used by Owner, in whole or in part, or in modified form, for any and all purposes Owner may deem desirable without further employment of, or payment of any additional compensation to Consultant. Consultant hereby acknowledges that whatever participation Consultant has, or will have, in connection with any copyrightable subject matter that is the subject of the Work is and shall be deemed Work Made for Hire on behalf of the Owner and that the Owner shall be the sole owner of the Work, and all underlying rights therein, worldwide and in perpetuity. In the event that the Work, or any portion thereof, does not qualify or is deemed not to be Work Made for Hire, Consultant hereby irrevocably transfers and assigns to the Owner all of Consultant's right, title and interest, throughout the world, in and to the Work, including, without limitation, all of Consultant's right, title and interest in the copyrights to the Work, including the unrestricted right to make modifications, adaptations and revisions to the Work and hereby waives any so-called "moral rights" with respect to the Work. Consultant grants to Owner a royalty free, worldwide perpetual, irrevocable, nonexclusive license to reproduce, modify, and publicly display the Work.

(b) Any plans, drawings, or specifications prepared by or on behalf of Consultant for

the Project shall become property of Owner, and Consultant may not use same for any purpose not relating to the Project without Owner's prior written consent. Consultant may retain such reproductions of plans, drawings or specifications as Consultant may reasonably require. Upon completion of the Work or the termination of this Agreement, Consultant shall promptly furnish Owner with a complete set of original record prints. All such original materials shall become property of Owner who may use them, without Consultant's permission, for any proper purpose including but not limited to additions or completion of the Project.

10. Insurance

(a) Consultant shall procure and maintain all of the insurance required under this Section 10 during the Term of this Agreement, except with respect to Completed Operations coverage, as described in Section 10(g) below.

(b) Consultant shall not commence performance of the Work until Consultant has obtained, and required each Subconsultant to obtain, all the insurance required under this Section 10 and until it has furnished to Owner the certificate or certificates of insurance required by Section 10(c) hereof.

(c) Consultant shall furnish to Owner, before or upon execution of this Agreement, attention: **[name]**, a certificate or certificates of the insurance required under this Section 10 and, upon Owner's request, certified copies of the original policies of insurance, within the time period required by Owner and before commencing performance of the Work. Such certificate or certificates shall be in form satisfactory to Owner, shall list the various coverages and shall contain, in addition to any other provisions required hereby, a provision that the policy shall not be changed, canceled or reduced and that it shall be automatically renewed upon expiration and continued in force until two years after the Work is completed unless Owner is given 90 days' written notice to the contrary. Such certificates shall also include riders providing that violation of any of the terms of any policy shall not by itself invalidate such policy. Such policies and certificates must name as additional insureds Owner, Battery Park City Parks Conservancy Corporation ("BPCPC") and the State of New York.

(d) All insurance required to be procured and maintained must be procured from insurance companies that have a financial rating by A.M. Best Company as published in the most current key rating guide of A-VII or better and which are authorized to do business in the State of New York.

(e) If at any time any of the required insurance policies should be canceled, terminated or modified so that insurance is not in effect as required, then Consultant shall suspend performance of the Work. If the Work is suspended then Owner may, at Owner's option, obtain insurance affording coverage equal to that required herein and the cost of such insurance shall be payable by Consultant to Owner.

(f) All additional insured protection afforded Owner, BPCPC, and the State of New York must be on a primary and non-contributory basis and all policies must include a waiver of subrogation in favor of Owner, BPCPC, and the State of New York.

(g) Consultant and Subconsultants shall secure in a form satisfactory to Owner the following:

(i) Worker's Compensation, Employer's Liability insurance (including United States Longshoreman & Harbor Workers and Jones Act coverages) and Disability Benefits during the Term for the benefit of such employees as are required to be insured by the applicable provisions of law and voluntary compensation for employees excluded from statutory benefits.

(ii) Commercial General Liability insurance, as follows:

(A) Coverage must be written on ISO Form CG 00 001 or its equivalent and with no modification to the contractual liability coverage provided therein, and shall be provided on an occurrence basis with limits not less than:

- \$1,000,000 per occurrence
- \$2,000,000 General Aggregate, which must apply on a per project basis
- \$2,000,000 Products/Completed Operations aggregate

(B) Owner, BPCPC and the State of New York must be protected as additional insureds with coverage at least as broad as the combination of the most recent editions of ISO Forms CG 20 26 and CG 20 37 on policies held by the Consultant and any of its Subconsultants. Subconsultants may not use blanket additional insured endorsements to provide additional insured protection to Owner, BPCPC, and the State of New York "by written contract" but must use ISO Form CG 20 38 or its equivalent. The policy must provide coverage for defense and indemnification of claims and/or lawsuits, including third party actions, claims and/or lawsuits for bodily injury to the employees of Consultant or Subconsultants arising from the injured worker's employment with the Consultant or any of its Subconsultants

(C) Consultant and any of its Subconsultants must maintain Products/Completed Operations coverage for no less than three years after the Work is completed and continue to include Additional Insured protection for Owner, BPCPC & the State of New York for the prescribed timeframe and coverage shall contain, in addition to any other provisions required hereby, a provision that the policy shall not be changed, canceled or reduced. As a condition precedent to the making of final payment, Consultant shall furnish Owner with a then current certificate of insurance that confirms the Completed Operations coverage is in effect.

(D) When providing evidence of this insurance the Consultant and any of its Subconsultants must include a completed Acord 855 NY form.

(iii) Automobile Liability insurance covering the use in connection with the Work of all owned, non-owned and hired vehicles. The coverage must protect Owner, BPCPC, and the State of New York as additional insureds under such policy and shall not be less than a \$1,000,000 Combined Single Limit

(iv) Professional Liability ("Errors and Omissions") insurance must be maintained at a limit of not less than \$1,000,000 per claim.

(v) Data Breach and Privacy/Cyber Liability Insurance including coverage for

failure to protect confidential information and failure of the security of Consultant's computer systems or Owner's/BPCPC's systems due to the actions of Consultant which results in unauthorized access to Owner's and/or BPCPC's data. The limit applicable to this policy shall be no less than \$1,000,000 per occurrence, and must apply to incidents related to the cyber theft of Owner's and BPCPC's property, including but not limited to, money and securities. Owner, BPCPC, and the State of New York must be protected as additional insureds on policies held by Consultant and any of its Subconsultants.

(vi) Technology Errors and Omissions insurance with a limit of not less \$1,000,000 for damages arising from computer-related services including, but not limited to, the following:

- Consulting;
- Data processing;
- Programming;
- System integration;
- Hardware or software development;
- Installation;
- Distribution or maintenance;
- Systems analysis or design;
- Training; and
- Staffing or other support services.

The policy shall include coverage for third party fidelity including cyber theft and protect Owner, BPCPC, and the State of New York as additional insureds.

(vii) Valuable Papers insurance insuring, for the benefit of Consultant and Owner, all plans, designs, drawings, specifications, and documents used under this Agreement by Consultant in a total amount of not less than **[amount]**. Consultant may furnish full coverage under one policy, or may submit separate policies from any Subconsultant(s) for their proportionate shares of such coverage.

(viii) Comprehensive Crime/Employee Dishonesty insurance in a reasonable amount or an amount which is customary in the applicable industry, trade or profession. Coverage must extend to Third Parties.

(ix) Umbrella Liability insurance in an amount of not less than **[amount]**. Owner, BPCPC, and the State of New York must be protected as additional insureds on policies held by the Consultant and any of its Subconsultants.

(h) The insurance required under subsections 10(g)(ii) and (iii) shall provide that the insurance company or an attorney approved and retained by the insurance company shall defend any suit or proceeding against Owner or any officers, agents or employees of Owner whether or not such suit is groundless, false or fraudulent. Notwithstanding the foregoing, Owner shall have the right to engage its own attorneys for the purpose of defending any suit or proceeding against it or its respective officers, agents or employees, and, in such event, Consultant shall, indemnify Owner for all attorneys' fees and disbursements and other costs incurred by it arising out of, or incurred in connection with, any such defense.

(i) Owner, at Owner's cost and expense, may, at its sole option, procure and maintain such insurance as shall in the opinion of Owner, protect Owner from contingent liability of Owner to others for damages arising from bodily injury, including death and property damages which may arise from operations under this Agreement. The procurement and maintenance of such insurance by Owner shall not in any way be construed or be deemed to relieve Consultant from, or to be a limitation on the nature or extent of, such obligations and risk.

11. Authority of Owner

The Work shall be subject to the general supervision, direction, control and approval of Owner or its authorized representative(s), whose decision shall be final and binding upon Consultant as to all matters arising in connection with or relating to this Agreement. Owner shall determine all matters relative to the fulfillment of this Agreement on the part of Consultant and such determination shall be final and binding on Consultant.

12. Entire Agreement

This Agreement, including all Exhibits hereto, constitutes the entire Agreement between Owner and Consultant, and any prior agreements or understandings between Owner and Consultant with respect to any portion of the Work are hereby merged into and with this Agreement.

13. Consultant as Independent Contractor

Notwithstanding any other provision of this Agreement, Consultant's status shall be that of an independent contractor and not that of a servant, agent or employee of Owner. Accordingly, Consultant shall not hold itself out as, nor claim to be acting in the capacity of, an officer, agent, employee or servant of Owner.

14. Maintenance, Audit and Examination of Accounts

Consultant shall, until the earlier of six (6) years after completion of the performance of the Work or six (6) years after termination of this Agreement, maintain, and require all Subconsultants to maintain, complete and correct books and records relating to all aspects of Consultant's obligations hereunder, including without limitation, accurate cost and accounting records specifically identifying the costs incurred in performing their respective obligations, and shall make such books and records available to Owner or its authorized representatives for review and audit at all such reasonable times as Owner may request. In the event that Consultant and/or any Subconsultants shall fail to comply with the provisions of this Section 14, and as a result thereof shall be unable to provide reasonable evidence of such compliance, Owner shall not be required to pay any portion of the Fee and Reimbursable Expenses then due or next becoming due, as the case may be, with respect to such items, and if such compensation has already been paid, Owner may require Consultant to refund any such payment made. Any excessive audit costs incurred by Owner due to Consultant's or any Subconsultant's failure to maintain adequate records shall be borne by Consultant.

15. Acceptance of Final Payment; Release and Discharge

Final payment shall be made to Consultant upon satisfactory completion and acceptance by Owner of the Work required under this Agreement, or all Work performed prior to the termination of this Agreement if terminated pursuant to Section 6 hereof, and upon submission of a certification that all Subconsultants have been paid their full and agreed compensation. The acceptance by Consultant of the final payment under this Agreement, or any final payment due upon termination of this Agreement under Section 6 hereof, shall constitute a full and complete waiver and release of Owner from any and all claims, demands and causes of action whatsoever that Consultant, and/or its successors and assigns have, or may have, against Owner under the provisions of this Agreement, unless a detailed and verified statement of claim is served upon Owner prior to the date final payment is tendered by Owner. It is expressly understood and agreed that Owner's or Consultant's termination of this Agreement pursuant to Section 6 hereof shall not give rise to any claim against Owner for damages, compensation or otherwise as a result of such termination, and that under such circumstances Owner's liability to make payments to Consultant on account of any and all Work shall be limited to the payments set forth in Section 6 hereof.

16. Covenants, Representations and Warranties

(a) Consultant represents and warrants to Owner that:

(i) no public official is directly or indirectly interested in this Agreement, or in the supplies, materials, equipment, work, labor or services to which it relates or in any of the profits thereof;

(ii) except as set forth in this Agreement, Consultant has, and shall have, no interest, direct or indirect, in the Project to which the Work relates; and

(iii) to the best of its knowledge, upon due inquiry, no officer, member, partner or employee of Consultant has, prior to the date of this Agreement, been called before a grand jury, head of a state agency, head of a city department or other city agency to testify in an investigation concerning any transaction or contract had with the State of New York, any political subdivision thereof, a public authority, or with any public department, agency or official of the State of New York or of any political subdivision thereof, and refused to sign a waiver of immunity against subsequent criminal prosecution or to answer any relevant question concerning such transaction or contract.

(b) Consultant covenants and agrees that:

(i) recognizing that time for completion of the Work is of the essence, Consultant shall perform all of its obligations hereunder in a prompt and workmanlike manner and in accordance with the time periods for the Work set forth herein;

(ii) the personnel assigned and any Subconsultant(s) used by Consultant in the performance of the Work hereunder shall be qualified in all respects for such assignment, employment and use;

(iii) Consultant, in the performance of the Work, shall utilize the most efficient available methodology and technology for the purpose of reducing the cost and time of such performance;

(iv) Consultant shall comply with the provisions of all Federal, State and local statutes, laws, rules, ordinances and regulations that are applicable to the performance of this Agreement;

(v) should any claim be made or any action be brought against the Owner that is in any way related to the Work, Consultant shall diligently render to Owner any and all assistance specified in Section 5 of this Agreement that may be required by Owner as a result thereof; and

(vi) Consultant shall not commit its personnel to, nor engage in, any other projects during the term of this Agreement to the extent that such projects may adversely affect the quality or efficiency of the Work or would otherwise be detrimental to the conduct and completion of the Work, and Consultant shall provide sufficient numbers of qualified personnel as shall be required to perform the Work in the time requested by Owner. Consultant shall comply with any reasonable request by Owner to remove and/or replace any of Consultant's personnel from the Project.

(c) The parties make mutual representations that to the best of their knowledge that any materials provided by either party for inclusion in the Work shall not infringe upon the copyright or trademark of any third party.

17. Indemnity

To the fullest extent allowed by law:

(a) Consultant shall be liable to, and shall indemnify Owner, each Member, officer, agent and employee of Owner for, and shall hold each of the foregoing harmless from and against, any and all claims, losses, damages, expense, penalties, costs or other liabilities, including, without limitation, attorneys' fees, costs, disbursements and interest, arising out of the performance of the Work or Consultant's breach of this Agreement, including but not limited to any of the provisions set forth in Section 16 hereof, and Consultant agrees that it shall defend any suit or action brought against Owner or any Member, officer, agent or employees of Owner that is based on any loss or liability or alleged loss or liability indemnified herein.

(b) Consultant shall be liable to, and shall indemnify Owner and each of the Members, officers, agents and employees of Owner for, and shall hold each of the foregoing harmless from and against, any and all claims made against any of the foregoing for infringement of any copyright, trademark or patent arising out of the use of any plans, designs and specifications furnished by Consultant in the performance of this Agreement.

18. Confidentiality

Consultant hereby agrees that data, recommendations, reports and other materials developed in the course of the Work are strictly confidential between Consultant and Owner and except as specifically provided herein, Consultant may not at any time reveal or disclose such data, recommendations or reports in whole or in part to any third party without first obtaining written approval from Owner.

19. Modification

No modification, amendment, change, termination or attempted waiver of any of the provisions of this Agreement shall be binding unless in writing and signed by the party to be bound.

20. Waiver

Except as otherwise provided in Section 15 of this Agreement, the parties may waive any of their rights hereunder without invalidating this Agreement or waiving any other rights hereunder, provided, however, that no waiver of, or failure to enforce or exercise any provision of this Agreement shall affect the right of any party thereafter to enforce such provisions or to exercise any right or remedy in the event of any other breach or default, whether or not similar.

21. Severability

If any term or provision of this Agreement or the application thereof to any person or entity, or circumstance shall, to any extent, be determined to be invalid or unenforceable, the remaining provisions of this Agreement, or the application of such terms or provisions to persons, entities or circumstances other than those as to which it is held to be invalid or unenforceable, shall in no way be affected thereby and each term or provision of this Agreement shall be valid and binding upon the parties, and enforced to the fullest extent permitted by law.

22. New York Law/Forum Selection/Jurisdiction

This Agreement shall be construed under, and be governed by, the laws of the State of New York. All actions or proceedings relating, directly or indirectly, to this Agreement shall be litigated only in courts located within the County of New York. Consultant, any guarantor of the performance of its obligations hereunder (“Guarantor”) and their successors and assigns hereby subject themselves to the jurisdiction of any state or federal court located within such county, waive the personal service of any process upon them in any action or proceeding therein and consent that such process be served by certified or registered mail, return receipt requested, directed to the Consultant and any successor at Consultant’s address hereinabove set forth, to Guarantor and any successor at the address set forth in the instrument of guaranty, and to any assignee at the address set forth in the instrument of assignment. Such service shall be deemed made two days after such process is so mailed.

23. Provisions Required by Law

Each and every provision of law and clause required by law to be included in this Agreement shall be deemed to be included herein, and this Agreement shall read and shall be enforced as though such provision(s) and/or clause(s) were so included.

24. Notices

Any notice, approval, consent, acceptance, request, bill, demand or statement required or permitted to be given hereunder (a “Notice”) from either party to the other shall be in writing and shall be deemed given when received by overnight mail or when deposited with the United States Postal Service in a postage prepaid envelope, certified or registered mail, addressed to the other

party at the addresses set forth above. If to Owner, Notices shall be sent to the attention of **[HEAD OF DEPARTMENT]**, with copies to the **[the General Counsel]** and if to Consultant, Notices shall be sent to the attention of **[NAME]**, **[TITLE]**. Either party may at any time change such address or add additional parties to receive a Notice by mailing, as aforesaid, to the other party a Notice thereof.

25. Approval and Use of Subconsultants

(a) Except as specifically provided herein, Consultant shall not employ, contract with or use the services of any consultants, contractors or other third parties (collectively, “Subconsultants”) in connection with the performance of its obligations hereunder without the prior written consent of Owner to the use of each such Subconsultant, and to the agreement to be entered into between Consultant and any such Subconsultant. Consultant shall inform Owner in writing of any interest it may have in a proposed Subconsultant. No such consent by Owner, or employment, contract, or use by Consultant, shall relieve Consultant of any of its obligations hereunder.

(b) Consultant shall be responsible for the performance of the Work of any Subconsultants engaged, including the maintenance of schedules, coordination of their Work and resolutions of all differences between or among Consultant and any Subconsultants. It is expressly understood and agreed that any and all Subconsultants engaged by Consultant hereunder shall at all times be deemed engaged by Consultant and not by Owner.

(c) The fees of any Subconsultant retained by Consultant to perform any part of the Work required under this Agreement shall be deemed covered by the compensation stipulated in Section 3 above. Consultant shall pay its Subconsultants in full the amount due them from the proportionate share of each requisition for payment submitted by Consultant and paid by Owner. Consultant shall make payment to its Subconsultants no later than seven (7) calendar days after receipt of payment from Owner. Consultant shall indemnify, defend and hold Owner harmless with respect to any claims against Owner based upon Consultant’s alleged failure to make payments to Subconsultants for Work under this Agreement.

(d) Upon the request of Owner, Consultant shall cause any Subconsultant employed by the Consultant in connection with this Agreement to execute a copy of this Agreement, wherein such Subconsultant shall acknowledge that it has read and is fully familiar with the terms and provisions hereof and agrees to be bound thereby as such terms and provisions are or may be applicable to such Subconsultants.

26. Employment and Diversity

26.1 *Participation by Minority and Women-Owned Business Enterprises*

(a) General Provisions

(i) Owner is required to implement the provisions of New York State Executive Law Article 15-A and Parts 140-145 of Title 5 of the New York Codes, Rules and Regulations (“NYCRR”) for all contracts, as defined therein, with a value (1) in excess of \$25,000 for labor,

services, equipment, materials, or any combination of the foregoing or (2) in excess of \$100,000 for real property renovations and construction.

(ii) Consultant agrees, in addition to any other nondiscrimination provision herein and at no additional cost to Owner, to fully comply and cooperate with Owner in the implementation of New York State Executive Law Article 15-A and the regulations promulgated thereunder. These requirements include equal employment opportunities for minority group members and women (“EEO”) and contracting opportunities for New York State-certified minority and women-owned business enterprises (“MWBEs”). Consultant’s demonstration of “good faith efforts” pursuant to 5 NYCRR § 142.8 shall be a part of these requirements. These provisions shall be deemed supplementary to, and not in lieu of, the nondiscrimination provisions required by New York State Executive Law Article 15 (the “Human Rights Law”) and other applicable federal, state, and local laws.

(iii) Failure to comply with all of the requirements herein may result in a finding of non-responsiveness, non-responsibility and/or a breach of contract, leading to the assessment of liquidated damages pursuant to Section 26.1(g) and such other remedies as are available to Owner.

(b) Contract Goals

(i) For purposes of this Contract, Owner hereby establishes an overall goal of XX% for MWBE participation, XX% for New York State-certified minority-owned business enterprise (“MBE”) participation and XX% for New York State-certified women-owned business enterprise (“WBE”) participation (collectively, “MWBE Contract Goals”) based on the current availability of MBEs and WBEs.

(ii) For purposes of providing meaningful participation by MWBEs on the Agreement and achieving the MWBE Contract Goals established in Section 26.1(b)(i) hereof, Consultant should reference the directory of MWBEs at the following internet address: <https://ny.newnycontracts.com>.

(iii) Additionally, Consultant is encouraged to contact the Division of Minority and Women’s Business Development at (212) 803-2414 to discuss additional methods of maximizing participation by MWBEs on this Agreement.

(iv) Consultant understands that only sums paid to MWBEs for the performance of a commercially useful function, as that term is defined in 5 NYCRR § 140.1, may be applied towards the achievement of the applicable MWBE participation goal. [FOR CONSTRUCTION CONTRACTS – The portion of a contract with an MWBE serving as a supplier that shall be deemed to represent the commercially useful function performed by the MWBE shall be 60% of the total value of the contract. The portion of a contract with an MWBE serving as a broker that shall be deemed to represent the commercially useful function performed by the MWBE shall be the monetary value for fees, or the markup percentage, charged by the MWBE]. [FOR ALL OTHER CONTRACTS - The portion of a contract with an MWBE serving as a broker that shall be deemed to represent the commercially useful function performed by the MWBE shall be 25% of the total value of the contract.]

(v) Consultant must document “good faith efforts,” pursuant to 5 NYCRR § 142.8, to provide meaningful participation by MWBEs as Subconsultants and suppliers in the performance of this Agreement. Such documentation shall include, but not necessarily be limited to:

- (A) Evidence of outreach to MWBEs;
- (B) Any responses by MWBEs to Consultant’s outreach;
- (C) Copies of advertisements for participation by MWBEs in appropriate general circulation, trade, and minority or women-oriented publications;
- (D) The dates of attendance at any pre-bid, pre-award, or other meetings, if any, scheduled by Owner with MWBEs; and,
- (E) Information describing specific steps undertaken by Consultant to reasonably structure the Work to maximize opportunities for MWBE participation.

(c) Equal Employment Opportunity (“EEO”)

(i) The provisions of Article 15-A of the Executive Law and the rules and regulations promulgated thereunder pertaining to equal employment opportunities for minority group members and women shall apply to this Agreement.

(ii) In performing the Agreement, Consultant shall:

(A) Ensure that each Consultant and Subconsultant performing work on the Agreement shall undertake or continue existing EEO programs to ensure that minority group members and women are afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status. For these purposes, EEO shall apply in the areas of recruitment, employment, job assignment, promotion, upgrading, demotion, transfer, layoff, or termination and rates of pay or other forms of compensation.

(B) Consultant shall submit an EEO policy statement to Owner within seventy-two (72) hours after the date of the notice by Owner to award the Agreement to Consultant.

(C) If Consultant, or any of its Subconsultants, does not have an existing EEO policy statement, Owner may require Consultant or Subconsultant to adopt a model statement (see Exhibit D – Equal Employment Opportunity Policy Statement).

(D) Consultant’s EEO policy statement shall include the following language:

(1) Consultant will not discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, age, disability, or marital status, will undertake or continue existing EEO programs to ensure that minority group members and women are afforded equal employment opportunities without discrimination, and shall make and document its conscientious and active efforts to employ and utilize minority group members and women in its work force.

(2) Consultant shall state in all solicitations or advertisements for employees that, in the performance of the contract, all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status.

(3) Consultant shall request each employment agency, labor union, or authorized representative of workers with which it has a collective bargaining or other agreement or understanding, to furnish a written statement that such employment agency, labor union, or representative will not discriminate on the basis of race, creed, color, national origin, sex age, disability or marital status and that such union or representative will affirmatively cooperate in the implementation of Consultant's obligations herein.

(4) Consultant will include the provisions of Sections 26.1(c)(ii)(D)(1) through (3), which provides for relevant provisions of the Human Rights Law, in every subcontract in such a manner that the requirements of the subdivisions will be binding upon each Subconsultant as to the Work.

[PLEASE NOTE THAT THIS REQUIREMENT “C” IS ONLY APPLICABLE WHERE A STATE AGENCY EXPECTS TO ENTER INTO A STATE CONTRACT WITH A TOTAL EXPENDITURE IN EXCESS OF \$250,000. NOTE: THIS LANGUAGE SHOULD BE DELETED FROM THE FINAL CONTRACT]

(iii) Staffing Plan. To ensure compliance with this Section, Consultant shall submit a staffing plan to document the composition of the proposed workforce to be utilized in the performance of the Agreement by the specified categories listed, including ethnic background, gender, and Federal occupational categories. Consultant shall complete the staffing plan form (<https://www.ogs.ny.gov/MWBE/Docs/EEO100.docx>) and submit it as part of their bid or proposal or within a reasonable time, as directed by Owner.

WORKFORCE UTILIZATION REPORTS SHALL BE COLLECTED ON A MONTHLY BASIS FOR CONSTRUCTION CONTRACTS AND A QUARTERLY BASIS FOR ALL OTHER CONTRACTS. NOTE: THIS LANGUAGE SHOULD BE DELETED FROM THE FINAL CONTRACT]

(iv) Workforce Utilization Report

(A) Consultant shall submit a Workforce Utilization Report (https://its.ny.gov/sites/default/files/documents/eeo_workforce_utilization_report.xlsx) and shall require each of its Subconsultants to submit a Workforce Utilization Report, in such form as shall be required by Owner on a quarterly basis during the term of this Agreement.

(B) Separate forms shall be completed by Consultant and any Subconsultants.

(C) Pursuant to Executive Order #162, Consultants and Subconsultants are also required to report the gross wages paid to each of their employees for the work performed by such employees on the contract on a quarterly basis.

(v) Consultant shall comply with the provisions of the Human Rights Law, and all other State and Federal statutory and constitutional non-discrimination provisions. Consultant and its Subconsultants shall not discriminate against any employee or applicant for employment because of race, creed (religion), color, sex, national origin, sexual orientation, military status, age, disability, predisposing genetic characteristic, marital status or domestic violence victim status, and shall also follow the requirements of the Human Rights Law with regard to non-discrimination on the basis of prior criminal conviction and prior arrest.

(d) MWBE Utilization Plan

(i) Consultant represents and warrants that Consultant has submitted an MWBE Utilization Plan, or shall submit an MWBE Utilization Plan at such time as shall be required by Owner, through the New York State Contract System (“NYSCS”), which can be viewed at <https://ny.newnycontracts.com>, provided, however, that Consultant may arrange to provide such evidence via a non-electronic method to Owner, either prior to, or at the time of, the execution of the contract.

(ii) Consultant agrees to adhere to such MWBE Utilization Plan in the performance of the Work.

(iii) Consultant further agrees that failure to submit and/or adhere to such MWBE Utilization Plan shall constitute a material breach of the terms of the Agreement. Upon the occurrence of such a material breach, Owner shall be entitled to any remedy provided herein, including but not limited to, a finding that Consultant is non-responsive.

(e) Waivers

(i) If Consultant, after making good faith efforts, is unable to achieve the MWBE Contract Goals stated herein, Consultant may submit a request for a waiver through the NYSCS, or a non-electronic method provided by Owner. Such waiver request must be supported by evidence of Consultant’s good faith efforts to achieve the maximum feasible MWBE participation towards the applicable MWBE Contract Goals. If the documentation included with the waiver request is complete, Owner shall evaluate the request and issue a written notice of approval or denial within twenty (20) business days of receipt.

(ii) If Owner, upon review of the MWBE Utilization Plan, quarterly MWBE Consultant Compliance Reports described in Section 26.1(c)(iv)(C), or any other relevant information, determines that Consultant is failing or refusing to comply with the MWBE Contract Goals, and no waiver has been issued in regards to such non-compliance, Owner may issue a notice of deficiency to Consultant. Consultant must respond to the notice of deficiency within seven (7) business days of receipt. Such response may include a request for partial or total waiver of MWBE Contract Goals.

(f) Consultant is required to submit a quarterly MWBE Consultant Compliance Report through the NYSCS, provided, however, that Consultant may arrange to provide such report via a non-electronic method to Owner by the 10th day following the end of each quarter during the term of the Agreement.

(g) Liquidated Damages - MWBE Participation

(i) Where Owner determines that Consultant is not in compliance with the requirements of this Section 26.1 and Consultant refuses to comply with such requirements, or if Consultant is found to have willfully and intentionally failed to comply with the MWBE participation goals, Consultant shall be obligated to pay to Owner liquidated damages.

(ii) Such liquidated damages shall be calculated as an amount equaling the difference between:

(A) All sums identified for payment to MWBEs had Consultant achieved the contractual MWBE goals; and

(B) All sums actually paid to MWBEs for work performed or materials supplied under the Agreement.

(iii) In the event a determination has been made which requires the payment of liquidated damages and such identified sums have not been withheld by Owner, Consultant shall pay such liquidated damages to Owner within sixty (60) days after they are assessed. Provided, however, that if Consultant has filed a complaint with the Director of the Division of Minority and Women's Business Development pursuant to 5 NYCRR § 142.12, liquidated damages shall be payable only in the event of a determination adverse to Consultant following the complaint process.

26.2 *Participation by Service-Disabled Veteran-Owned Businesses*

(a) General Provisions

Article 17-B of the New York State Executive Law provides for more meaningful participation in public procurement by New York State-certified Service-Disabled Veteran-Owned Businesses ("SDVOB"), thereby further integrating such businesses into New York State's economy. Owner recognizes the need to promote the employment of service-disabled veterans and to ensure that certified service-disabled veteran-owned businesses have opportunities for maximum feasible participation in the performance of Owner contracts.

In recognition of the service and sacrifices made by service-disabled veterans and in recognition of their economic activity in doing business in New York State, Consultants are expected to consider SDVOBs in the fulfillment of the requirements of the Agreement. Such participation may be as Subconsultants or suppliers, as protégés, or in other partnering or supporting roles.

(b) Contract Goals

(i) Owner hereby establishes an overall goal of ___% for SDVOB participation, based on the current availability of qualified SDVOBs. For purposes of providing meaningful participation by SDVOBs, the Consultant should reference the directory of New York State Certified SDVOBs found at: http://ogs.ny.gov/Core/docs/CertifiedNYS_SDVOB.pdf. Questions regarding compliance with SDVOB participation goals should be directed to Shinay Stewart at

shinay.stewart@bpca.ny.gov or (212) 336-9353. Additionally, following execution of this Agreement, Consultant is encouraged to contact the Office of General Services' Division of Service-Disabled Veterans' Business Development at 518-474-2015 or VeteransDevelopment@ogs.ny.gov to discuss additional methods of maximizing participation by SDVOBs on the Agreement.

(ii) Consultant must document "good faith efforts" to provide meaningful participation by SDVOBs as subcontractors or suppliers in the performance of the Contract (see Section 26.2(d) below).

(c) SDVOB Utilization Plan

(i) In accordance with 9 NYCRR § 252.2(i), Consultants are required to submit a completed SDVOB Utilization Plan on Form SDVOB 100 (https://ogs.ny.gov/Veterans/Docs/2016/SDVOB_100_Utilization_Plan.docx) with their bid.

(ii) The Utilization Plan shall list the SDVOBs that Consultant intends to use to perform the Work, a description of the Work that Consultant intends the SDVOB to perform to meet the goals on the Agreement, the estimated dollar amounts to be paid to an SDVOB, or, if not known, an estimate of the percentage of Work the SDVOB will perform. By signing the Utilization Plan, Consultant acknowledges that making false representations or providing information that shows a lack of good faith as part of, or in conjunction with, the submission of a Utilization Plan is prohibited by law and may result in penalties including, but not limited to, termination of a contract for cause, loss of eligibility to submit future bids, and/or withholding of payments. Any modifications or changes to the agreed participation by SDVOBs after the contract award and during the term of the Agreement must be reported on a revised SDVOB Utilization Plan and submitted to Owner.

(iii) Owner will review the submitted SDVOB Utilization Plan and advise the Consultant of Owner acceptance or issue a notice of deficiency within 20 days of receipt.

(iv) If a notice of deficiency is issued, Consultant agrees that it shall respond to the notice of deficiency, within seven business days of receipt, by submitting to Owner a written remedy in response to the notice of deficiency. If the written remedy that is submitted is not timely or is found by Owner to be inadequate, Owner shall notify Consultant and direct the Consultant to submit, within five business days of notification by Owner, a request for a partial or total waiver of SDVOB participation goals on Form SDVOB 200 (https://ogs.ny.gov/Veterans/Docs/2016/SDVOB_200_Waiver_Form.docx). Failure to file the waiver form in a timely manner may be grounds for disqualification of the bid or proposal.

(v) Owner may disqualify a Consultant's bid or proposal as being non-responsive under the following circumstances:

- (A) If Consultant fails to submit an SDVOB Utilization Plan;
- (B) If Consultant fails to submit a written remedy to a notice of deficiency;
- (C) If Consultant fails to submit a request for waiver; or

(D) If Owner determines that Consultant has failed to document good faith efforts.

(vi) Consultant certifies that it will follow the submitted SDVOB Utilization Plan for the performance of SDVOBs on the Agreement pursuant to the prescribed SDVOB contract goals set forth above.

(vii) Consultant further agrees that a failure to use SDVOBs as agreed in the Utilization Plan shall constitute a material breach of the terms of the Contract. Upon the occurrence of such a material breach, Owner shall be entitled to any remedy provided herein, including but not limited to, a finding of Consultant non-responsibility.

(d) Waivers

(i) Prior to submission of a request for a partial or total waiver, Consultant shall speak to Shinay Stewart at shinay.stewart@bpca.ny.gov or (212) 336-9353 for guidance.

(ii) In accordance with 9 NYCRR § 252.2(m), a Consultant that is able to document good faith efforts to meet the goal requirements, as set forth in Section 26.2(e) below, may submit a request for a partial or total waiver on Form SDVOB 200 (https://ogs.ny.gov/Veterans/Docs/2016/SDVOB_200_Waiver_Form.docx), accompanied by supporting documentation. Consultant may submit the request for waiver at the same time it submits its SDVOB Utilization Plan. If a request for waiver is submitted with the SDVOB Utilization Plan and is not accepted by Owner at that time, the provisions of Section 26.2(c)(iii), (iv) and (v) will apply. If the documentation included with the Consultant's waiver request is complete, Owner shall evaluate the request and issue a written notice of acceptance or denial within 20 days of receipt.

(iii) Consultant shall attempt to utilize, in good faith, the SDVOBs identified within its SDVOB Utilization Plan, during the performance of the Work. Requests for a partial or total waiver of established goal requirements made subsequent to award of the Agreement may be made at any time during the term of the Agreement to Owner, but must be made no later than prior to the submission of a request for final payment.

(iv) If Owner, upon review of the SDVOB Utilization Plan and Monthly SDVOB Compliance Report determines that Consultant is failing or refusing to comply with the contract goals and no waiver has been issued in regards to such non-compliance, Owner may issue a notice of deficiency to the Consultant. The Consultant must respond to the notice of deficiency within seven business days of receipt. Such response may include a request for partial or total waiver of SDVOB contract goals. Waiver requests should be sent to Owner.

(e) Required Good Faith Efforts. In accordance with 9 NYCRR § 252.2(n), Consultants must document their good faith efforts toward utilizing SDVOBs on the Agreement. Evidence of required good faith efforts shall include, but not be limited to, the following:

(i) Copies of solicitations to SDVOBs and any responses thereto.

(ii) Explanation of the specific reasons each SDVOB that responded to Consultants' solicitation was not selected.

(iii) Dates of any pre-bid, pre-award or other meetings attended by Consultant, if any, scheduled by Owner with certified SDVOBs whom Owner determined were capable of fulfilling the SDVOB goals set in the Agreement.

(iv) Information describing the specific steps undertaken to reasonably structure the Work for the purpose of subcontracting with, or obtaining supplies from, certified SDVOBs.

(v) Other information deemed relevant to the waiver request.

(f) Monthly SDVOB Consultant Compliance Report

In accordance with 9 NYCRR § 252.2(q), Consultant is required to report Monthly SDVOB Consultant Compliance to Owner during the term of the Agreement for the preceding month's activity, documenting progress made towards achieving the SDVOB goals. This information must be submitted using form SDVOB 101 available at https://ogs.ny.gov/Veterans/Docs/2016/SDVOB_101_Monthly_Compliance%20Report.docx and should be completed by the Consultant and submitted to Owner, by the 10th day of each month during the term of the Contract, for the preceding month's activity to: Shinay Stewart at shinay.stewart@bpca.ny.gov.

(g) Breach of Contract and Damages

In accordance with 9 NYCRR § 252.2(s), any Consultant found to have willfully and intentionally failed to comply with the SDVOB participation goals set forth in this Agreement, shall be found to have breached the Agreement and Consultant shall pay damages as set forth therein.

27. Responsibility

(a) Consultant shall at all times during the Term of this Agreement remain responsible. Consultant agrees, if requested by Owner or Owner's designee, to present evidence of its continuing legal authority to do business in New York State, integrity, experience, ability, prior performance, and organizational and financial capacity.

(b) Owner or Owner's designee, in its sole discretion, reserves the right to suspend any or all activities under this Agreement, at any time, when it discovers information that calls into question Consultant's responsibility. In the event of such suspension, Consultant will be given written notice outlining the particulars of such suspension. Upon issuance of such notice, Consultant must comply with the terms of the suspension order. Activity under the Agreement may resume at such time as Owner or its designee issues a written notice authorizing a resumption of performance under the Agreement.

(c) Upon written notice to Consultant, and a reasonable opportunity to be heard with appropriate officials or staff of Owner, this Agreement may be terminated by Owner or Owner's designee at Consultant's expense where Consultant is determined by Owner or its designee to be

non-responsible. In such event, Owner or its designee may complete the contractual requirements in any manner it deems advisable, and pursue available legal or equitable remedies for breach.

28. Interest of Others

Nothing in this Agreement shall be construed to give any person other than Owner and Consultant any legal or equitable right, remedy or claim. This Agreement shall be held to be for the sole and exclusive benefit of Owner and Consultant.

29. Executory Contract

It is understood by and between the parties hereto that this Agreement shall be deemed executory to the extent of the monies available to Owner and no liability on account thereof shall be incurred by Owner beyond monies available for the purpose thereof. In no event shall any claim be asserted under this Agreement by Consultant or any Subconsultant against any member, officer, employee, lessee, consultant or agent of Owner or the State of New York. By execution of this Agreement, Consultant agrees to look solely to Owner with respect to any claim that may arise.

30. Participation in International Boycott Prohibited

Consultant agrees, as a material condition of this Agreement, that neither Consultant nor any substantially owned or affiliated person, firm, partnership or corporation has participated or is participating or shall participate in an international boycott in violation of the provisions of the United States Export Administration Act of 1969, as amended, or the United States Export Administration Act of 1979, as amended, or the Regulations of the United States Department of Commerce promulgated thereunder. This Agreement shall be rendered forfeited and void by the Comptroller of the State of New York if, subsequent to execution, such person, firm, partnership or corporation has been convicted of a violation of the provisions of either of such federal acts or such Regulations or has been found upon the final determination of the United States Commerce Department or any other appropriate agency of the United States to have violated the provisions of either of such federal acts or such Regulations.

31. MacBride Fair Employment Principles

If the amount payable to Consultant under this Agreement is greater than \$15,000, Consultant hereby certifies that it and/or any individual or legal entity in which it holds a 10% or greater ownership interest, and any individual or legal entity that holds a 10% or greater ownership interest in it, either have no business operations in Northern Ireland, or shall take lawful steps in good faith to conduct any business operations they have in Northern Ireland in accordance with the MacBride Fair Employment Principles relating to nondiscrimination in employment and freedom of workplace opportunity regarding such operations in Northern Ireland, as set forth in Section 165(5) of the New York State Finance Law, and shall permit independent monitoring of their compliance with such Principles.

32. Limitation Periods

Any legal action or proceeding against Owner must be commenced no later than one (1) year after the earlier of: (a) the termination of this Agreement, or (b) the last day Consultant

performed work physically at the site of the Work.

33. Iran Divestment Act

By signing this Agreement, each person and each person signing on behalf of any other party certifies, and in the case of a joint bid or partnership each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief that each person is not on the list created pursuant to paragraph (b) of subdivision 3 of Section 165-a of the State Finance Law.

34. Termination for Failure to Disclose Under NYS Finance Law §139k

Owner reserves the right to terminate this Agreement in the event it is found that the certification filed by Consultant pursuant to New York State Finance Law §139-k was intentionally false or intentionally incomplete. Upon such finding, Owner may exercise its termination right by providing written notification to the Consultant in accordance with the written notification terms of this contract.

35. Comptroller's Approval

If this contract is considered an eligible contract as defined by Title 2 of NYCRR Part 206, it is subject to the New York State Comptroller's approval, and therefore shall not be valid and enforceable until that approval has been obtained. A contract is considered "eligible" as defined by Title 2 of NYCRR Part 206, if it is not a specifically exempt contract, is executed by a state authority on or after March 1, 2010 where the aggregate consideration under the contract may reasonably be valued in excess of one million dollars, AND the contract is either (1) awarded on a single-source basis, sole-source basis or pursuant to any other method of procurement that is not a competitive procurement OR (2) supported in whole or part with funds appropriated from the Community Projects Fund (007).

36. Binding Contract

A binding contract between the parties shall exist only if and at such time as both parties have executed this document.

37. Counterparts

This Agreement may be executed in any number of counterparts, all of which taken together shall constitute one instrument, but the Agreement shall not be deemed effective unless signed by all parties.

38. Section Headings

Section headings contained in this Agreement are for convenience only and shall not be considered for any purpose in governing, limiting, modifying, construing or affecting the provisions of this Agreement and shall not otherwise be given legal effect.

39. Subordination of Terms in the Exhibits

In the event of a conflict of terms, the terms stated in Sections 1-39 herein, shall take precedence over and shall prevail over any printed, typed, or handwritten terms located in the Exhibits.

(SIGNATURE PAGE FOLLOWS)

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date first above written.

HUGH L. CAREY BATTERY PARK CITY AUTHORITY

By: _____

Name: _____

Title: _____

[COMPANY]

By: _____

Name: _____

Title: _____

FEIN# [???

EXHIBIT A
SCOPE OF WORK

EXHIBIT B

RATES

EXHIBIT C

FORM OF TIME SHEET

| Employee Name/Title | Date of Work | Time Work Began | Time Work Ended | # of Hours | Rate of Pay Per Contract | Summary of Work Performed* | Employee Signature |
|--------------------------------|-------------------------|--------------------------------|--------------------------------|-----------------------|---|---|-------------------------------|
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| | | | | | | | |

Total:

*For services and/or additional hours that are
extraordinary to scope

Supervisors Signature _____

Title _____

EXHIBIT D

M/WBE AND EEO POLICY STATEMENT

Consultant agrees to adopt the following policies with respect to the Work:

MBWE

Consultant will and will cause its Subconsultants to take good faith actions to achieve the M/WBE contract participations goals set by the Owner for that area in which the Owner-funded project is located, by taking the following steps:

(a) Actively and affirmatively solicit bids for contracts and subcontracts from qualified State-certified MBEs or WBEs, including solicitations to M/WBE consultant associations.

(b) Request a list of State-certified M/WBEs from Owner and solicit bids from them directly.

(c) Ensure that plans, specifications, request for proposals and other documents used to secure bids will be made available in sufficient time for review by prospective M/WBEs.

(d) Where feasible, divide the work into smaller portions to enhance participation by M/WBEs and encourage the formation of joint ventures and other partnerships among M/WBE consultants to enhance their participation.

(e) Document and maintain records of bid solicitation, including those to M/WBEs and the results thereof. Consultant will also maintain records of actions that its Subconsultants have taken toward meeting M/WBE contract participation goals.

(f) Ensure that progress payments to M/WBEs are made on a timely basis so that undue financial hardship is avoided, and that bonding and other credit requirements are waived or appropriate alternatives developed to encourage M/WBE participation.

EEO

(a) This organization will not discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, age, disability or marital status, will undertake or continue existing programs of affirmative action to ensure that minority group members are afforded equal employment opportunities without discrimination, and shall make and document its conscientious and active efforts to employ and utilize minority group members and women in its work force on Owner contracts.

(b) Consultant shall state in all solicitation or advertisements for employees that in the performance of the Owner contract all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex disability or marital status.

(c) At the request of Owner, Consultant shall request each employment agency, labor union, or authorized representative will not discriminate on the basis of race, creed, color, national origin, sex, age, disability or marital status and that such union or representative will affirmatively cooperate in the implementation of Consultant's obligations herein.

(d) Consultant shall comply with the provisions of the Human Rights Law, all other State and Federal statutory and constitutional non-discrimination provisions. Consultant and Subconsultants shall not discriminate against any employee or applicant for employment because of race, creed (religion), color, sex, national origin, sexual orientation, military status, age, disability, predisposing genetic characteristic, marital status or domestic violence victim status, and shall also follow the requirements of the Human Rights Law with regard to non-discrimination on the basis of prior criminal conviction and prior arrest.

(e) Consultant will include the provisions of sections (a) through (d) above in every subcontract in such a manner that the requirements of the subdivisions will be binding upon each Subconsultant as to work in connection with Owner's contract.

Agreed to this _____ day of _____, _____

By: _____

Print: _____ Title: _____

EXHIBIT D

(Acknowledgement of Addenda)

RFP TITLE: _____

| |
|--|
| Complete Part I <u>or</u> Part II, whichever is applicable, and sign your name in Part III. |
|--|

Part I

Listed below are the dates of issue for each Addendum received in connection with this RFP:

Addendum # 1, Dated _____, ____

Addendum # 2, Dated _____, ____

Addendum # 3, Dated _____, ____

Addendum # 4, Dated _____, ____

Addendum # 5, Dated _____, ____

Addendum # 6, Dated _____, ____

Part II Acknowledgement of No Receipt

_____ No Addendum was received in connection with this RFP

Part III

Proposer's Name: _____

Proposer's Authorized Representative:

Name: _____

Title: _____

EXHIBIT E

List of BPCA & BPCPC Board Members and Employees

(attached)

LIST OF BOARD MEMBERS

George J. Tsunis

Donald Capoccia

Lester Petracca

Louis J. Bevilacqua

Catherine McVay Hughes

Martha J. Gallo

Anthony Kendall

Employees:

Betzayda Abreu
Deborah Addison
Curtis Afzal
Elsa Alvarez
Dana Anders
Anthony Andriano
Stephen Arciold
Sharmila Baichu
Marie Baptiste
Brett Beecham
Freddy Belliard
Marieke Bender
Marcus Billups
Emily Birdseye
Nidia Blake-Reeder
LaToya Brooks-Jones
Nancy Buivid
Anthony Buquicchio
Peter Campbell
Frances Caperchi
Monica Centeno
Julissa Cooke
Sarah Fisher Curtin
Gwen Dawson
Nicole Dawson
Gilbert DePadua
Paul Diaz-Larui
Tonasia Dopson
Jennifer Dudgeon
Abigail Ehrlich
Maria Ellison
Richard Faraino
Anitra Fauntleroy
Claudia Filomena
Tamara Flores
Pamela Frederick
James Gallagher
Abigail Goldenberg
Anastasia Gonzalez
Lenron Goode
Neresa Gordon
Sakina Graves
Ned Greenberg
Evelyn Gregg
Jonathan Gross
Robert Hansen

Nicole Heater
Sankar Heerah
Robert Hinkelman
Craig Hudson
Jake Jacevicius
Amy Jogie
William John
Jasmine Johnson
Benjamin Jones
Roland Kemp
Ann Ketrang
Susie Kim
Karl Koenig
Leandro Lafuente
Michael LaMancusa
Della Lee
Rene Lopcy
Janira Lopez
Robert Maggi
Evelin Maisonet
Jonathan McCain
Princess McNeill
Brian Meikle
Vanessa Mesine
Ronnie Mohammed
Dana Morgera
Eric Munson
Lauren Murtha
Bertha Narcisse
Jahmeliah Nathan
Robert Nesmith
Siu May Ng
Yoshihiro Nishida
Anne O'Neill
Maril Ortiz
Bienvenido Osorio
Kevin O'Toole
Hector Oyola
Willem Paillant
Jonathan Parker
Nimisha Haribaran Patel
Gladys Pearlman
Dahlia Pena
Bruno Pomponio

Katherine Powell
Sandra Power
Robert Quon
Jason Rachnowitz
Madelin Ramirez
Aline Reynolds
Chad Rimer
Manual Rivera
Anthony Robinson
Kim Robledo
Nelson Rogers
Jose Rosado
Holly Ross
Carlos Santiago
Nicholas Sbordone
Jean Schwartz
Rekha Sewraj
Sean Simon
Kemnarine Singh
Sarah Smedley
Bruce Spierer
Shinay Stewart
Jerome Sturiano
Lance Super
John Tam
Alexis Torres
Ryan Torres
Douglas Van Horn
Noe Velasquez
Evangelio Villalobos
Jeffrey Vixamar
Sharon Wade
David Wallace
Annalise Warren
Eric White
Angela Whitehead
Dwight Williams
Kenneth Windman
Al Wright
Erin Yokoi
Nishida Yoshihiro
Alaura Zayas


EXHIBIT F

BPCA Residential Environmental Guidelines (2005)

(attached)


Hugh L. Carey Battery Park City Authority Residential Environmental Guidelines

May 2005



The original Hugh L. Carey Battery Park City Authority Residential Environmental Guidelines were written in 1999 and published in January 2000. They were sponsored by the Hugh L. Carey Battery Park City Authority, the New York State Energy Research and Development Authority, and the Carrier Corporation and written by Fox & Fowle Architects, Flack + Kurtz, Green October, the Rocky Mountain Institute, the Carrier Corporation, Barney Skanska USA, the Hugh L. Carey Battery Park City Authority, and the New York State Energy Research and Development Authority.

The current version incorporates what we have learned from *The Solaire*, the first building developed under these guidelines, and is a response to the evolving technology, philosophy, and feasibility of green development.



The revised guidelines were a result of the efforts of the following professionals:

Cook + Fox Architects, LLP

Robert F. Fox Jr.
Mark Rusitzky
Amy Coffman
Lisa Storer

Flack + Kurtz

David Cooper
Daniel Nall
Gary Pomerantz

Steven Winter Associates

Adrian Tuluca

Atelier Ten

Paul Stoller

Sustainable Energy Partnerships

Adam W. Hinge

Camroden Associates

Terry Brennan

Hugh L. Carey Battery Park City Authority

Timothy S. Carey
James Cavanaugh
Kevin Finnegan
Stephanie Gelb
Susan Kaplan
Peter McCourt
Antony Woo

NYSERDA

Craig Kneeland

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Mission Statement

The purpose of these guidelines is to establish a process for the creation of environmentally responsible residential buildings that are appreciably ahead of current standards and practices for development. The residential buildings created by this effort will become the model for healthy, ecologically responsible environments where occupants collectively enjoy the benefits of living in a “green” community.

Introduction

Sustainable Design

Sustainable design is “meeting the needs of the present without compromising the ability of future generations to meet their own needs.” In most instances, this is a “common sense” approach to development that prevents further depletion of natural resources, air pollution, and global warming. This approach decreases dependency on non-renewable resources while improving opportunities for more efficient and economical alternatives that are self-sustaining. Selecting proper materials in conjunction with providing increased mechanical ventilation and a filtered fresh air system fosters healthier living, benefiting the building’s residents and ultimately, the environment at large.

Market Strategy

The following guidelines adhere to the most current thinking with respect to sustainable design strategies and are a vehicle for the development of residential buildings that are both environmentally and financially rewarding. The guidelines have been tailored specifically for the Hugh L. Carey Battery Park City Authority (BPCA), an established leader in urban development. The guidelines respond to increased public awareness of environmental conservation and increased demand for healthier, high quality living environments. Incorporating sustainable principles in the development of the residential buildings serves to enhance the current marketing strategies that continue to make Battery Park City a successful endeavor.

Total System Approach

A “total system approach” is the backbone of the guidelines and the best approach to achieving the desired result in a cost effective manner over a building’s lifetime. Therefore, the guidelines are grouped into five major categories – each comprised of requirements that share a common environmental goal. One of the financial goals of a total system approach is to minimize the impact on initial costs (construction costs) by offsetting increases from some requirements with decreases from others. For example, the cost of improving the performance of the exterior envelope of the building may be offset by a reduction in the size and subsequent cost of mechanical equipment. Initial cost is further offset by the annual financial and environmental costs over the life of the building.

LEED™

In creating the Residential Environmental Guidelines, the Hugh L. Carey Battery Park City Authority is indebted to the United States Green Building Council (USGBC) for its development of the Leadership in Energy and Environmental Design (LEED™) Green Building Rating System, which has provided a national standard for “green building” practices.

Introduction (cont.)

Execution

Successful execution of the guidelines depends on developers, design professionals, and contractors beginning their dialogue at the earliest stages of design to ensure the proper and cost effective realization of sustainable solutions. These guidelines do not represent a complete resource, but rather a framework of concepts that may be interpreted and refined by the individual design and construction teams to achieve the desired result. While some of the requirements are prescriptive, most are deliberately goal-oriented to provide for creative solutions that take advantage of rapidly changing technologies or evolving policies, regulations, and building codes.

The guidelines contain basic requirements that must be followed. Additionally, the development team is presented with a series of suggestions that they may elect to include in the project to raise the standards to a higher level [see Suggested Additional Measures]. Additional options are not limited to the suggestions and creativity is encouraged. The intent is to move technology and sustainability forward and create the most sustainable building possible for tenants and all those who look at these buildings as models that can be emulated beyond Battery Park City. Choosing additional alternates is encouraged and using more than the minimum will add points toward the green evaluation of the developer's proposal.

The developer is to employ a LEED[™] Accredited Professional (LEED[™] AP) as Green Team Leader to manage the green program, including record keeping and educational mandates set forth in these guidelines. Additionally, the design team is to employ a LEED[™] AP with expertise in green building materials and technologies to review all specifications and drawings for conformance with these guidelines.

The developer is required to attain a LEED NC Gold certification at minimum, and to obtain a LEED EB certification every five years post-occupancy. BPCA will attain LEED CI Gold certification for the community space in the base of the building.

Funding Sources

Various organizations offer financial incentives to foster green buildings and sustainable energy sources, most notably the New York State Green Building Tax Credit and the New York State Energy Research and Development Authority. For more information, please refer to the List of Resources.

1.0 Energy Efficiency

General Provisions

Intent:

Improve whole building energy performance, reduce operating costs, and reduce the environmental impact associated with energy consumption. Maximize energy efficiency and use available technologies to evaluate energy performance throughout the design process. Maximize opportunities for on-site power generation from high efficiency cogeneration plants and renewable sources. Purchase “green power” from energy providers whenever possible.

Assumptions:

Buildings will be designed to exceed the requirements of the 2002 Energy Conservation Construction Code of New York State (ECCCNYS).

An integrated architectural/engineering design approach to the whole building is required to meet the goals set for energy efficiency.

1.0 Energy Efficiency (cont.)

1.1 Maximizing Energy Efficiency

Intent:

Increase energy performance, reduce operating costs, and reduce the environmental impact associated with energy consumption.

Requirements:

- .1 Increase energy efficiency by 30% over the 2002 ECCCNY, measured in terms of energy cost. This percentage improvement refers to regulated energy, as defined by the New York State Green Building Tax Credit regulations. Specifically, the regulated energy excludes elevators, escalators, plug loads, appliances, kitchen equipment, other process equipment (e.g., garbage compacting), exterior lighting and tenant-installed lighting. The regulated energy specifically includes permanent lighting installed by the developer in apartments.
- .2 "Right-size" mechanical equipment for each apartment according to apartment size, layout, location within building, and occupancy needs. The methodology for right-sizing must consider both the expected peak individual loads and peak coincident loads for central systems, minimizing energy use and building total peak loads. (see § 1.2.1).
- .3 Provide motion sensors in stairwells, corridors, mechanical rooms (where operationally feasible), garages, and storage rooms to reduce lighting loads.
- .4 In all apartments, provide a "master switch," located adjacent to the front door, which controls all ambient lighting and switched outlets. Clearly identify outlets connected to the master switch.
- .5 The minimum standard for all windows and exterior glazing assemblies will be double-glazed units with Low-E glass (U-factor of 0.33 or less and solar heat-gain coefficient of 0.37 or less) with thermally broken frames and insulated spacers.
- .6 Install a double layer of insulation, backer rods, and caulking at top of masonry walls and wall/slab junctions.
- .7 Optimize insulation of cavity wall construction. Consider installing rigid or semi-rigid insulation against the winter/cold CMU surface and limiting infiltration through walls by providing an exterior air/water barrier applied to the winter/cold surface of the CMU.

1.0 Energy Efficiency (cont.)

1.1 Maximizing Energy Efficiency (cont.)

Requirements (cont.):

- .8 Conduct continuity tests for air, thermal, and water barriers. Perform pressure-assisted smoke tests to detect and remedy pathways for air leakage in exterior walls. Alternatively, perform blower door tests where portions of the exterior wall are covered/uncovered in sequence to detect and remedy the zones of excessive leakage. Other procedures may be accepted by BPCA at its discretion.
- .9 Use only "Energy Star" or equivalent equipment, appliances, lighting, and fixtures (refer to www.energystar.gov and www.aceee.org for latest list of energy-efficient appliances).
- .10 In all apartments, provide only natural gas cook tops, ovens, and ranges in lieu of electric.
- .11 Provide thermal energy recovery systems to utilize residual heat from all building systems (i.e. from cooling tower, exhaust air vents, boiler or chiller systems, etc.)
- .12 Design the building's electrical distribution system to allow for maximum utilization of electric demand reduction and demand response technologies and strategies.
- .13 Use alternatives to the electric resistance humidification system to increase energy efficiency. See also §2.1.7 for humidification requirements.

Technologies/Strategies:

- Use spectrally-selective glazing to minimize solar heat gain coefficients, retain high visible light transmittance, and maximize insulating qualities.
- Use window treatments (solar shades, curtains, brise-soleils, light-shelves, etc.) to maximize natural light and minimize heat gain.
- Use energy efficient heating and cooling mechanical systems, such as condensing boilers, absorption chillers, individual water-cooled heat pumps with EERs (Energy Efficient Ratings) that are 10-15% more efficient than those required by code, and cooling to ground or cooling towers with wetbulb reset control and variable speed drives on fans.
- Strongly consider variable-speed drives (VSDs) for all fans, pumps, and motors to increase energy efficiency.

1.0 Energy Efficiency (cont.)

1.1 Maximizing Energy Efficiency (cont.)

Cost Implications:

- By “right-sizing” the mechanical equipment serving the apartments and the base building, there should be some initial cost savings in equipment, piping, and wiring. This savings can be used for higher quality exterior envelope components, more efficient lighting, and advanced controls.
- Substantial energy savings.
- Decrease in life-cycle and operating costs.

1.0 Energy Efficiency

1.2 Modeling for Energy Performance

Intent:

Use the DOE-2.X, Energy Plus, or eQuest (using BPCA stated assumptions and implemented by consultant reporting directly to the Owner) computer modeling to forecast energy performance, reduce operating costs, to subsequently reduce the environmental impact associated with energy consumption, and to help “right-size” mechanical systems.

Requirements:

- .1 The developer shall prepare the initial energy model based on BPCA’s list of base case assumptions to establish a standard for the project. The developer’s engineering consultant will utilize this model as the design progresses to assess the energy efficiency of the building and evaluate systems and design alternatives at appropriate milestones (DD, CD).
- .2 In the first Annual Building Report (see § 4.4.3, Submittals), the developer shall provide a section comparing the energy performance data projected by the model during the design phase with actual building performance data collected after reaching 90% occupancy.
- .3 The developer shall install dedicated meters to provide data sufficient to evaluate individual EEMs and specialized building systems (i.e. HVAC, lighting, central plant, and green cogeneration equipment), as well as overall building performance. (Exact number of metering points and specific EEMs metered to be agreed upon with BPCA; for additional guidelines regarding performance reports, see § 4.4.3).

Specific monitoring requirements:

- .a Chillers (each chiller)
 - Energy input
 - Energy extracted
- .b Boilers for heating and DHW (each boiler)
 - Energy input
 - Energy supplied
- .c Heat pumps (5 apartments)
 - Electricity input
 - Heat extracted or supplied
- .d Pumps with VSD (all)
 - Electricity input
- .e Pumps for cooling towers (all)
 - Electricity input
- .f Fans with VSD (all)
 - Electricity input

1.0 Energy Efficiency (cont.)

1.2 Modeling for Energy Performance (cont.)

Requirements (cont.):

- .g Fans for cooling towers
 - Electricity input
- .h Fans actuated with CO sensors (all)
 - Electricity input or periods of operation
 - Electricity input
- .i Thermostats (5 apartments)
 - Temperature settings
- .j Combined heat & power (CHP)
 - Energy input
 - Electricity output
 - Heat recovered
- .k Heat recovery other than CHP
 - Btu
- .l Geothermal heat pumps system
 - Heat extracted from/rejected to ground
 - Electricity used by heat pumps
 - Electricity use by well & water loop pumps
- .m Corridor lighting (3 floors)
 - Lighting electric use or functioning of occupancy sensors
- .n Stair lighting (1)
 - Same as corridors
- .o Water use by cooling tower
 - Potable
 - Black or gray
 - Storm (if separated from black/gray water)
- .p Storm water use
 - All uses combined
- .q Black water
 - Recovered
 - Used (need not be separately accounted from storm)
- .r Photovoltaics (PV)
 - Electricity produced
- .s DC & AC Wind
 - Same as PV
 - Wind speed

1.0 Energy Efficiency (cont.)

1.2 Modeling for Energy Performance (cont.)

Technologies/Strategies:

- Utilize computer modeling to facilitate an interactive process by which the developer, architect, engineer, and contractor team can adequately explore opportunities for energy conservation.

Cost Implications:

- Substantial energy savings.
- Potential increase in professional fees.

1.0 Energy Efficiency

1.3 Renewable Energy & Green Power Sources

Intent:

Employ the use of on-site, non-polluting, green, and source-renewable technologies to reduce pollutants in the atmosphere, reduce operating costs, and reduce the environmental impact associated with energy consumption. Purchase from energy providers that utilize water, wind, solar, and fuel cell sources to generate power. The goal would be to generate in the next 10 years, 15% of the electrical energy needs of the building on-site.

Requirements:

- .1 Provide clean combined heat and power technologies: microturbines, fuel cell and/or bio fuel cogeneration equipment. Provide a cogeneration system that demonstrates a total energy efficiency (electric generation + recovered heat)/ (total fuel input) of at least 75% with an electrical conversion ratio of at least 25% (net) and with emissions compliant with 40CFR 60, Regulation 10, Subpart GG, and Bay Area Air Quality Management District Regulation 9-9-301.
- .2 Provide on-site renewable energy generation systems such as building integrated photovoltaics (BIPVs), and/or wind power that contribute a minimum of 0.75% of the energy (kWh) of the base building. This production usually requires the equivalent of a photovoltaic array with a rated capacity of approximately 5% of the base building's regulated equivalent peak demand.
- .3 Specify adaptable equipment that can accept multiple fuel sources when available (i.e. bio fuels versus natural gas).
- .4 Use best efforts to enter into a 5-year contract to purchase 25% of the base building's power from energy providers that utilize water, wind, solar, and/or fuel cell sources to generate power.

1.0 Energy Efficiency (cont.)

1.3 Renewable Energy & Green Power Sources (cont.)

Technologies/Strategies:

- Green energy technology is advancing rapidly. By providing space and infrastructure (natural gas supply, electrical connection to switchgear room) it will be possible to utilize this technology at a later date without increased cost.
- Where appropriate, strongly consider using BIPVs in locations that are highly visible to the public. Use best efforts to incorporate other renewable energy technologies (e.g., wind turbines).
- Negotiate power agreements with local renewable energy providers.

Cost Implications:

- Increase to initial costs with long-term payback.
- It is expected that in the future, fuel cells will be able to produce electricity at approximately 25-30% of today's cost.
- Possible increase in central-source rates due to reduced usage.

2.0 Enhanced Indoor Environment Quality (IEQ)

General Provisions

Intent:

Employ architectural and HVAC design strategies that will provide a superior overall indoor environment that supports the health and well-being of occupants.

Assumptions:

The ideal building solution will integrate architecture and engineering to create healthy environments that engender increased comfort and productivity. Tenants will be encouraged, by means of developer-prepared documentation and instruction, to participate and strengthen the goal of achieving enhanced indoor environment quality.

2.0 Enhanced Indoor Environment Quality (IEQ) (cont.)

2.1 Indoor Air Quality (IAQ)

Intent:

Provide an interior environment whose air quality is superior to that of the exterior environment.

Requirements:

- .1 Ventilation rates: Use ASHRAE 62.2 as the reference standard for indoor air quality performance. After adoption of the International Building Code by New York City or by existing waiver, currently in place, between the Department of Buildings and the BPCA via a Memorandum of Understanding, the following ventilation rates are recommended:

| Unit Type | CFM Exhaust | CFM Supply |
|--|-------------|------------|
| Studio | 80 | 80 |
| 1br + 1bath | 80 | 80 |
| 1br + 2bath | 100 | 100 |
| 2br + 1bath | 80 | 80 |
| 2br + 2bath | 100 | 100 |
| 3br + 2bath | 100 | 100 |
| 3br + 3bath | 120 | 120 |
| * 60 cfm from each kitchen + 20 cfm from each toilet | | |
| ** add 70 CFM exhaust and supply for each dryer | | |

- .2 Ventilation distribution:
 - .a Provide a dedicated (24 hours-a-day/7 days-a-week) central outside air system, individually ducted to each apartment, that delivers tempered air (min. 68° F, humidified) air during heating conditions and cooled (max. 76° F, dehumidified) air during cooling conditions. The fans supplying outside air shall have variable speed drives.
 - .b Provide ducted ventilation supply air within each apartment so that fresh air is evenly distributed to each room, except the kitchen and the bathrooms.
 - .c Provide ventilation supply air to corridors as per applicable codes, with no exhaust, to maintain positive pressurization relative to apartments and thus prevent odor and smoke migration from apartments to corridors.

2.0 Enhanced Indoor Environment Quality (IEQ) (cont.)

2.1 Indoor Air Quality (IAQ) (cont.)

Requirements (cont.):

- .3 Filtration of air: Provide a filtering system to filter particle and ozone from the outdoor air. Particle filtration to be provided using filters with Minimum Efficiency Reporting Value (MERV) of at least 13 for exterior air and MERV of at least 10 for interior recirculation units; provide a separate filtration system to remove ozone from outdoor air.
- .4 Airtightness of each apartment: Air seal all six sides of each apartment to 1.25 sq. inches ELA (4 pascals) per 100 square feet of enclosure (e.g. exterior walls, walls between apartments, walls between apartment and chases, walls between apartment and corridor, floors/ceilings). Test each apartment via unguarded fan pressurization test (windows open in surrounding units). Figure to be obtained from an average of one pressurization and one depressurization test. Air seal parking garage, boiler room, trash rooms and similar spaces with dedicated ventilation from all other building spaces.
- .5 Exhaust ventilation: Provide fan powered exhaust for each apartment to equal total outdoor supply air.
 - .a Provide each bathroom with a minimum of 20 cfm continuously running exhaust.
 - .b In addition to the bathroom and general exhaust, provide exhaust hoods for all kitchens in accordance with ASHRAE 62. Use condensing dryers, or, if ducted dryers are used, include controls to limit energy usage of exhaust such as by utilizing variable volume outside air to space to provide dryer makeup only when dryer is in operation.
 - .c Duct all exhaust (toilet, kitchen, laundry) with full sheet metal linings.

2.0 Enhanced Indoor Environment Quality (IEQ) (cont.)

2.1 Indoor Air Quality (IAQ) (cont.)

Requirements (cont.):

- .6 Provide walk-off grilles, capable of being easily removed for maintenance, at the interior of all building entrances to capture potential contaminants and dirt, and to decrease maintenance requirements.
- .7 Provide humidity stabilization throughout the year to all occupied building spaces. Provide a benchmark 68° F 30% RH in winter and 76° F 50% RH in summer. Humidification during heating periods may be reduced when ambient conditions fall below ASHRAE 97.5% design conditions (i.e. below 15° F in NYC).
- .8 Thru-wall heating/cooling systems are prohibited.
- .9 Do not locate outside air intake ducts in the garage, boiler room, trash room, or similar spaces with dedicated ventilation.

Technologies/Strategies:

- Provide a thermally comfortable environment with humidity levels that are responsive to the local climate conditions and reduce health related issues for occupants.
- Advise tenants of the exterior air quality to reduce the potential introduction of pollutants from unfiltered air.
- Locate the building's outside air intakes away from loading areas, building exhaust fans, cooling towers, and other sources of contamination.
- Locate building maintenance areas away from residential floors and provide ducted exhaust to the roof.
- Use best practices for interior pest management (see § 2.5).
- Ensure proper and periodic monitoring of hazardous chemicals (VOCs, solvents, etc.) and particulate levels during regular building operation (see § 4.3.2).

Cost Implications:

- Increase in initial costs to HVAC systems.
- Increase in maintenance costs for air filter replacement.

2.0 Enhanced Indoor Environment Quality (IEQ) (cont.)

2.2 Low-Emitting Materials

Intent:

Specify materials and finishes (including flooring and furniture) that contain no known carcinogens, have low levels of volatile organic compounds (VOCs), and are non-toxic and chemically inert to reduce the amount of indoor air contaminants that are odorous, irritating, and unhealthy to occupants.

Requirements:

- .1 “Products applied in the field” (see Glossary definition) shall meet the VOC and chemical component limits of Green Seal (www.greenseal.org) requirements or (if no certification criteria are available through Green Seal) the levels set forth in the *South Coast Air Quality Management District Rule #1168* (www.aqmd.gov/rules/html/r1168.html) and the *Bay Area Air Quality Management District Regulation 8, Rule 51* (www.baaqmd.gov/dst/regs/rq0851.pdf).
- .2 Carpet systems installed by the developer must meet or exceed the Carpet & Rug Institute Green Label Plus Indoor Air Quality Test Program.
- .3 Prohibit the use of added urea-formaldehyde in composite and wood-based products.

Technologies/Strategies:

- Select only products and adhesive compounds with VOC levels that comply with the requirements of this section, thus providing a health benefit to construction workers and tenants.
- Strongly discourage the use of products with environmentally disruptive life-cycles and encourage their substitution with safer, less disruptive products.

Cost Implications:

- No or nominal increase in cost for all items, except composite wood. Most major manufacturers of paints, adhesives, carpets, and rugs have product lines which meet the requirements of this section.
- Some items, especially wood products, may add to initial cost.

2.0 Enhanced Indoor Environment Quality (IEQ) (cont.)

2.3 Controllability of Systems

Intent:

Increase occupant and operator control of HVAC and natural ventilation systems to support optimum health and comfort within the building.

Requirements:

- .1 Provide all apartments with programmable controls for HVAC systems based on a 7-day programmable thermostat with a copy function and four (4) separate programmable periods per day.
- .2 Provide computerized Building Management Systems (BMS) or equivalent controls for base building operation and monitoring. See §4.3 for Building Systems Monitoring Requirements.

Technologies/Strategies:

- Programmable controls will allow occupants to save energy by regulating air-conditioning/heating times of operation and temperature settings.
- Consider installing wall-mounted thermostats/controls, instead of HVAC-mounted units, to better represent room temperature and minimize exposure to factors that may have an undesirable effect, such as direct solar radiation.
- Consider thermostats that may be accessed remotely via phone or Internet.

Cost Implications:

- Increased initial costs for electronic HVAC controls.

2.0 Enhanced Indoor Environment Quality (IEQ) (cont.)

2.4 Lighting & Daylighting

Intent:

Implement design strategies to maximize access to daylight and outdoor views in a glare-free way to improve IEQ for building occupants.

Requirements:

- .1 In all apartments, increase natural light in habitable rooms by 30% over NYC Building Code requirements.
- .2 Maintain a minimum floor-to-ceiling height in habitable rooms of 8'-6".

Technologies/Strategies:

- Increase minimum size of habitable rooms
- Increase floor-to-ceiling heights and decrease distance of habitable spaces from windows.
- Design ground floor elevator lobbies to be visible from the street.
- Maximize window size as appropriate and consider incorporating light-shelves into windows to increase the amount of natural light in interior spaces.

Cost Implications:

- Increased initial costs.
- Decreased operating costs.

2.0 Enhanced Indoor Environment Quality (IEQ) (cont.)

2.5 Indoor Pest Control

Intent:

Pests (such as cockroaches, mice, and rats) and their excrement may be a source for asthma, allergies, and other health concerns for building occupants. In addition, the use of toxic chemicals to rid buildings of these pests can have an adverse affect on Indoor Environment Quality. Rather than relying on extermination practices, responsible pest management relies primarily on the proper and thorough sealing of passages, feeding areas, and breeding grounds that enable vermin to reproduce and move throughout a building.

Requirements:

- .1 The developer shall prepare and implement an Integrated Pest Management Plan (IPMP) that abides by the requirements outlined in this section and § 2.1 (IAQ).
- .2 Properly seal, caulk, and repair points of entry, habitation, and breeding areas to mitigate against pest occurrences within the building. Use metal sheeting or mesh whenever possible.
- .3 In all apartment kitchens, provide an in-sink garbage disposal unit that is compatible with the building's water reclamation system.

2.0 Enhanced Indoor Environment Quality (IEQ) (cont.)

2.5 Indoor Pest Control (cont.)

Technologies/Strategies:

- Properly seal all penetrations (i.e. around water pipes, steam risers, electrical conduits, etc.) with copper mesh, metal sheeting, or concrete. Use caulking and plaster only as a last resort.
- Properly assemble trash chute sections so that garbage bags do not catch and rip on their way down.
- Encourage tenants to properly seal and bag garbage in the Tenant Guide.
- Caulk every joint within and between cabinets, over exposed screw heads, and within the cabinet structure. Properly seal cracks and joints at tile floor/wall joints and cavities, baseboard/wall interfaces, and window frame/wall interfaces.
- Provide properly fitting door sweeps at all exterior doors and hallway doors – undercut exterior doors with less than ¼ inch clearance and provide vinyl or brush sweeps.
- Cover all ventilation portals with insect mesh (metal window screen) and ¼ inch wire mesh (hardware cloth). Ensure easy access to portals and frequent cleaning.
- Encourage prompt repair of leaky faucets, condensation on pipes, or other unwanted sources of water.
- Use boric acid powder for insect control (as opposed to using other toxic chemicals) in the base building; recommend same to tenants and include in Tenant Guide.
- Refer to the following sources when preparing the Integrated Pest Management Plan:
 - .a IPM Institute of North America, Inc.
(<http://www.ipminstitute.org>)
 - .b EPA's Region 9 IPM in Schools guidelines
(<http://www.epa.gov/pesticides/ipm/index.htm>)
 - .c Beyond Pesticides
(<http://beyondpesticides.org/main.html>)
 - .d (<http://beyondpesticides.org/main.html>)
 - .e *Common Sense Pest Control* (see Publications in List of Resources)
 - .f *Ecology and Management of Food Industry Pests* (see Publications in List of Resources)

Cost Implications:

- None at this time.

2.0 Enhanced Indoor Environment Quality (IEQ) (cont.)

2.6 Construction IAQ Management

Intent:

Prevent indoor air quality problems stemming from the construction/renovation process in order to help sustain the health and well-being of construction workers and building occupants.

Requirement:

- .1 Develop and implement an Indoor Air Quality (IAQ) Management Plan for the construction and pre-occupancy phases of the building that meets or exceeds the recommended *Design Approaches of the Sheet Metal and Air Conditioning National Contractors Association (SMACNA) IAQ Guideline for Occupied Buildings Under Construction, 1995, Chapter 3*. The plan shall include the following requirements:
- .2 Protection of stored on-site or installed absorptive materials from moisture damage, pests, and other forms of contamination.
 - .a Protection of all ductwork during construction and replacement of all filtration media immediately prior to occupancy (see § 2.1.4).
 - .b Monitoring of IAQ during construction as per SMACNA criteria identified above.
 - .c Implementation of site sanitation and pest-management to be enforced from pre-construction through the end of construction.

Technologies/Strategies:

- Adopt an IAQ Management Plan to protect the HVAC system during construction, control pollutant sources, and interrupt contamination pathways.
- Sequence the installation of materials to avoid contamination of absorptive materials such as insulation, carpeting, ceiling tile, and gypsum wall board.
- Follow appropriate protocols for waste disposal and storage during construction.

Cost Implications:

- Increased initial costs to HVAC systems.
- Decreased operating costs.
- Decreased emergency spending to resolve unexpected problems.

3.0 Conserving Materials & Resources

General Provisions

Intent:

Reduce waste, preserve natural resources and minimize the environmental impact from materials, extraction, manufacturing, and transport. Protect the environment from biodiversity loss, air quality impacts, and further depletion by seeking out renewable bio-based resources, eliminating the use of vinyl and PVC where alternatives exist, and eliminating the use of chlorofluorocarbons (CFCs).

Assumptions:

An integrated architectural approach will be required for the design of the base building and the tenant interiors. Tenants will be encouraged by developer-prepared documentation and instructional sessions to comply with the goals of this section and meet the BPCA mandate to protect the environment and improve the health and well-being of building occupants.

3.0 Conserving Materials & Resources (cont.)

3.1 Storage & Collection of Recyclables

Intent:

Facilitate the reduction of waste and the diversion of materials, congruent with markets for recycling within the community, that otherwise would be hauled and dumped into landfills.

Requirements:

- .1 On each residential floor, provide a centralized and easily accessible "Trash & Recycling" room dedicated to the collection, separation, and temporary storage of conventional trash, paper, cardboard, glass, plastics, and metals.
- .2 Trash & Recycling rooms shall contain either separate waste and recycling disposal chutes, or sorting bins for recycled materials to be managed by the building's recycling plan.
- .3 Centralized trash/recycling holding areas (with minimum dimensions of 5'x5' and min. volume of 2.9 CF/dwelling unit) will be air conditioned, sealed to pests (see § 2.5.2), and maintained within the building for residential and all other building uses. At ground and/or basement levels, these areas shall have convenient access to designated collection points at street.

Technologies/Strategies:

- The easier it is to recycle, the more people will participate.

Cost Implications:

- Increased space for trash/recycling operations.
- Reduced waste disposal costs.
- Potential for income from recycling.

3.0 Conserving Materials & Resources (cont.)

3.2 Construction Waste & Resource Reuse

Intent:

Reduce the amount of construction waste and conserve energy and resources through the recycling and reuse of existing building materials.

Requirements:

- .1 Before construction commences, develop a Waste Management Plan to be implemented during construction that will divert and recycle a minimum of 80% of waste material by weight.
- .2 Maintain and submit monthly a Waste Management Log accounting for recycled, diverted, and reused material quantities by weight.

Technologies/Strategies:

- Identify licensed haulers and processors of recyclables.
- Identify opportunities to integrate salvaged materials into the building design.
- Whenever on-site reuse is not possible, recycle cardboard, metals, concrete, brick, asphalt, clean dimensional wood, plastic, glass, gypsum board, carpet, ceiling tile, etc.
- Designate a specific area on the construction site for recycling and track recycling efforts throughout the construction process.
- Evaluate the cost-effectiveness of recycling rigid insulation, engineered wood products, and other materials.
- Require contractors to reuse pallets or return them to providers during construction.

Cost Implications:

- Potential income generation/decrease in material costs.
- Increased cost of construction management (overseer).

3.0 Conserving Materials & Resources (cont.)

3.3 Recycled Content

Intent:

Reduce the use of raw materials by replacing them with recycled materials or materials with recycled content.

Requirements:

- .1 Use materials with recycled content such that the sum of post-consumer recycled content plus one-half of the pre-consumer content constitutes at least 12% of the total value of the materials in the project, excluding mechanical, electrical, and plumbing. The value of the recycled content portion of a material or furnishing shall be determined by dividing the weight of recycled content in the item by the total weight of all material in the item, then multiplying the resulting percentage by the total value of the item. Recycled content materials shall be defined in accordance with the *International Organization for Standardization document, ISO 14021 – Environmental labels and declarations – Self-declared environmental claims (Type II environmental labeling)*.
- .2 Sum total of recycled content is to include fly ash to replace a minimum of 15% of cement and granulated blast slag to replace a minimum of 25% of cement.

Technologies/Strategies:

- Use of recycled materials or materials with recycled content will reduce the burden on already over-harvested building products.

Cost Implications:

- None at this time.

3.0 Conserving Materials & Resources (cont.)

3.4 Local/Regional Materials

Intent:

Reduce the impact of building materials transport and support the local economy.

Requirement:

- .1 Use a minimum of 50% of all building materials (based on cost), excluding mechanical, electrical, and plumbing, that are extracted, processed, AND manufactured within a 500-mile (air) radius of the project site or 1,000 miles of project site and shipped by rail or water.

Technologies/Strategies:

- Strengthening a local supply chain will reduce costs and transportation-related pollution while contributing to local building technology and infrastructure.
- Credit may be given by BPCA for creative use of rail or water transportation as an alternative.

Cost Implications:

- None at this time.

3.0 Conserving Materials & Resources (cont.)

3.5 Renewable & Rapidly Renewable Materials

Intent:

Reduce the use of finite raw materials by replacing them with rapidly renewable materials.

Requirement:

- .1 Use best efforts to specify products made with renewable or rapidly renewable materials.

Technologies/Strategies:

- Rather than using oak or mahogany flooring, which frequently originate from non-sustainable sources, consider using bamboo, cork, or recycled composite materials as alternatives for the same purpose.

Cost Implications:

- Increase in costs for certain materials.

3.0 Conserving Materials & Resources (cont.)

3.6 CFC Elimination

Intent:

Reduce ozone depletion by prohibiting the use of CFC-based refrigerants in HVAC systems, as well as solvents, insulation materials, or other building components that contain CFCs or use them during production. Ensure support of early compliance with the Montreal Protocol.

Requirements:

- .1 Prohibit use of CFC-based equipment.
- .2 Avoid the use of insulation materials that utilize chlorine-based gases in the production process.

Technologies/Strategies:

- Demonstrate zero-tolerance for CFCs and CFC-based equipment.

Cost Implications:

- Reduced energy efficiency.

3.0 Conserving Materials & Resources (cont.)

3.7 Alternative Transportation

Intent:

Limit contributions to pollution and the use of non-renewable energy sources for transportation by encouraging the use of bicycles, high-performance hybrid vehicles, and shared vehicles.

Requirements:

- .1 Provide enclosed bicycle storage at no additional charge to the tenant for a minimum of 0.75 bicycles per apartment.
- .2 If parking is to be provided, provide preferred parking spots for 5% of the total parking capacity for high-performance hybrid (low-emitting and fuel efficient models), electric, cars with a minimum fuel efficiency of 44 mpg (as referenced in the American Council for an Energy-Efficient Economy Report, <http://www.aceee.org/energy/cafe.htm>), and/or shared vehicles.
or
In lieu of preferred parking, provide car-sharing program, such as FlexCar, ZipCar, or equivalent within the building.
- .3 Submit plan defining the scope of proposed compliance with alternative transportation goals.

Technologies/Strategies:

- If bicycle storage is available and easily accessible, residents will be more likely to own and use bicycles for recreational and commuting needs.
- When bicycle storage is not adequately provided and bicycles are stored in inappropriate places, there is an increase in maintenance expenses and a negative effect on the quality of the indoor environment.

Cost Implications:

- Cost of storage space.
- Decrease in maintenance costs.
- Increased longevity of building finishes.

3.0 Conserving Materials & Resources (cont.)

3.8 Certified Wood

Intent:

Encourage responsible forest management to protect forest habitats and wood species.

Requirements:

- .1 For all wood-based building components installed by the developer, use a minimum of 35% of the total value of all wood-based materials and products certified in accordance with guidelines and criteria decreed by the Forest Stewardship Council (FSC), the Forest Stewardship Program (FSP), the Sustainable Forestry Initiative (FSI), or Green Tag Forestry. Components include, but are not limited to, flooring, finishes, furnishings, and non-rented temporary construction applications (concrete form-work need not be incorporated into this calculation).
- .2 Encourage tenants, by incorporation of appropriate literature into the Tenant Guide, to utilize wood and wood products certified by the above-mentioned organizations.

Technologies/Strategies:

- Incorporate the requirements of the Forest Stewardship Guidelines in the building construction specifications and general conditions.

Cost Implications:

- Increase in wood costs.

3.0 Conserving Materials & Resources (cont.)

3.9 Low-Pollution Fuels

Intent:

Decrease the amount of SO_x, CO, and other pollutants that are released into the atmosphere from construction vehicles.

Requirements:

- .1 Use ultra-low sulfur diesel fuel or compressed natural gas (CNG) for all construction vehicles with a carrying capacity in excess of 5 tons and for all portable generators, consistent with Local Law 77 for Lower Manhattan.
- .2 Equip the above vehicles with high performance engines and diesel oxidation catalyst (DOC) filters or another previously demonstrated advanced retrofit technology, consistent with NYC Local Law 77 for Lower Manhattan.

Technologies/Strategies:

- Incorporate the above requirement in construction specifications and general conditions.

Cost Implications:

- Potential for slight increase in fuel costs.

4.0 Education, Operations & Maintenance

General Provisions

Intent:

Provide information to tenants, construction personnel and maintenance personnel to educate them on green building features and their role in maintaining a more sustainable environment. Provide proper construction, maintenance, and controls to ensure that building systems operate as designed in order to achieve and maintain high energy performance and IEQ standards.

Assumptions:

Tenants, construction personnel, and building management staff will be encouraged, by means of developer-prepared documentation and instructional sessions, to comply with the goals of this section and meet the BPCA mandate to protect the environment, save energy, and improve the health and well-being of building occupants.

4.0 Education, Operations & Maintenance (cont.)

4.1 Education

Intent:

Proper training and educational resources will ensure that construction and maintenance staff understand green building practices. Keeping tenants well informed about the building's features and their role with regards to its performance will help them save energy and improve their health and well-being.

Requirements:

- .1 The developer shall provide "green construction practices" training to key on-site construction management, sub-contractors, and personnel. Submit course outline to BPCA for review and provide visible recognition for those who participate, such as stickers on hard hats. If a member of personnel has been previously trained in a similar project, provide proof to BPCA of course scope and completion.
- .2 The developer shall employ a Green Team Leader to manage recordkeeping and educational mandates set forth in these guidelines.
- .3 The developer shall develop and maintain a comprehensive Tenant Guide and make it available to tenants in print form at lease signing and on-line for continuous updating. The Guide will:
 - .a Describe design features and systems utilized in the apartments.
 - .b Provide a list of efficient lighting fixtures, dimming controls, and lamps (compact fluorescents).
 - .c Provide a list of recommended Energy Star appliances with high EER ratings.
 - .d Provide information on parking, bicycle storage, and on car-sharing (if applicable).
 - .e Provide description of green maintenance practices for apartments.
 - .f Outline general protocols regarding pest management practices.
 - .g Outline emergency procedures.
 - .h Provide criteria for the proper selection and use of cleaning products.
 - .i Provide recommendations for the selection of furnishings, carpeting, paints, and sustainable wood products (see § 3.8.1).
 - .j Provide guidelines for recycling and waste disposal.

4.0 Education, Operations & Maintenance (cont.)

4.1 Education (cont.)

Requirements (cont.):

- .4 The building operations manager and other key staff responsible for operating building systems shall attend a minimum five-day training course on building systems operation such as that provided by NEEP (see below).
- .5 In the lobby area, a bulletin board or web screen (minimum 2'x3') shall be prominently located for posting energy/environmental education information, including yearly (and, if possible, monthly) building energy performance reports comparing to benchmarks/peers. This information shall also be displayed on-line.

Technologies/Strategies:

- Use Internet communication technologies to monitor systems and inform tenants about the building's features and protocols.
- The BPCA strongly encourages all staff responsible for the maintenance and operation of equipment and systems in the building to attend the Northeast Energy Efficiency Partnership's (NEEP) Building Operations & Maintenance Certification (BOC) Program (<http://www.neep.org/boc/index.html>). The BOC course provides competency-based training and certification for building operators designed to improve the energy efficiency of commercial and large residential buildings. Operators earn certification by attending training sessions and completing project assignments in their facilities. The certification provides a credential for their professional development while offering employers a way to identify skilled operators

Cost Implications:

- Increased initial costs to HVAC system.
- Minimal cost to perform Air Quality Profile.
- Decrease in occupant complaints.

4.0 Education, Operations & Maintenance (cont.)

4.2 Commissioning

Intent:

Test and calibrate building systems to be certain they can be operated as designed in order to achieve and maintain energy performance and IEQ requirements. Typically, fans, pumps, motors, and other equipment are installed that do not meet design specifications. The result is inferior performance, reduced IAQ, and increased energy consumption.

Requirements:

- .1 Engage a commissioning team that does not include individuals directly responsible for project design or construction management. This team shall include a commissioning authority independent of the design team (the Independent Commissioning Authority, or ICA).
- .2 Develop and utilize a Commissioning Plan for all operating equipment, including HVAC equipment and systems including base building heating, cooling, and ventilation systems, apartment HVAC systems, heat recovery, building management system (BMS), plumbing systems including waste water reclamation system and storm water systems, electrical systems including lighting controls and occupancy sensors, photovoltaics, supply and exhaust air, and any other green system or equipment.
- .3 Incorporate commissioning requirements into the construction documents.
- .4 The ICA shall:
 - a. Conduct a review of the design prior to the Construction Documents phase, including review of the design intent and the basis of design documentation.
 - b. Conduct a review of the construction documents near completion of the construction document development and prior to issuing the contract documents for bidding.
 - c. Review the contractor submittals relative to systems being commissioned and verify installation, functional performance, training, operation, and maintenance documentation.
 - d. Complete and provide the developer with a Commissioning Report, including a single manual that contains the information required for re-commissioning building systems.
 - e. Review building operation with O&M staff, including a plan for resolution of outstanding commissioning-related issues within one year after construction completion or 90% rent-up date.

4.0 Education, Operations & Maintenance (cont.)

4.2 Commissioning (cont.)

Technologies/Strategies:

- Introduce standards and design strategies early in the design process.
- Incorporate and clearly state design intentions and requirements in the project construction documents.
- Tie contractor final payments to documented system performance.
- Engage the ICA early in the design stage.

Cost Implications:

- Increase in professional fees.
- Substantial energy savings.
- Decrease in life-cycle and operating costs.
- Increase in equipment costs (Energy Management System).
- Decrease in change orders.
- Decrease in project delays.
- Decrease in equipment callback.

4.0 Education, Operations & Maintenance (cont.)

4.3 Building Systems Monitoring

Intent:

Design and specify equipment to be installed in the base building and individual apartment systems to provide feedback for comparison, management, and optimization of actual vs. estimated energy performance and Indoor Environment Quality.

Requirements:

- .1 Install and maintain a permanent monitoring system or equivalent regular testing protocol that tracks IEQ, measures energy performance of the base building systems and total building energy consumption, and allows operators to make adjustments to maintain targets and confirm the energy model conclusions. See §1.2.3 for details. Provide capacity for ventilation system monitoring to help sustain long-term occupant comfort and well-being. .
- .2 Submit an air quality testing protocol. Provide an Air Quality Profile, prepared by a licensed engineer or certified industrial hygienist, for a sample of 10% of evenly distributed units at time of initial occupancy that meets the following criteria:
 - .a < 50 ppb of Formaldehyde
 - .b < 200 µg/m³ total Volatile Organic Compounds

Technologies/Strategies:

- Use Internet communication technologies to monitor building systems.

Cost Implications:

- Increased initial costs to HVAC system.
- Increased maintenance costs for periodic testing.
- Decrease in occupant complaints.

4.0 Education, Operations & Maintenance (cont.)

4.4 Maintenance Accountability

Intent:

Provide for maintenance and operational continuity by establishing an ownership system that guarantees accountability for maintaining performance standards.

Requirements:

- .1 The developer shall prepare, submit and maintain a written and online Maintenance Manual to the BPCA for review, which will be made available to all maintenance staff for all long- and short-term maintenance of the building, prior to the first TCO and linked to the BMS system. This manual will be used as research data for future building standards and will also serve as a valuable resource for building design teams on future development projects. The Maintenance Manual shall:
 - .a Provide descriptions, details, and schedules of installed building services, plants, systems, and controls.
 - .b Provide specific manuals and additional manufacturer's literature, model numbers, methods of operation, and maintenance practices (including preventative maintenance) for installed building equipment, plants, systems, and controls.
 - .c Provide details on the various metering systems and mechanisms that collectively enable energy consumption to be monitored and controlled.
 - .d Outline best practices for maintenance and housekeeping.
 - .e Outline best practices for pest management and mold prevention/control.
 - .f Incorporate materials substitutions and method variations.
 - .g Compile field data, contractor's affidavits, and construction log information.
 - .h Include a complete As-Built Drawing Set.
- .2 Persons responsible for maintaining building systems, including the expected building superintendent and boiler/chiller plant operators from other buildings in the developer's portfolio, should participate in project team meetings that involve the design, selection, and commissioning of all building systems and equipment.

4.0 Education, Operations & Maintenance (cont.)

4.4 Maintenance Accountability (cont.)

Requirements (cont.):

- .3 The developer shall prepare an Annual Building Performance Report, including actual energy consumption with comparisons to benchmarks, and any changes to O&M arrangements/procedures or major energy consuming equipment. (Specific systems metered and Report structure to be determined by the developer and BPCA on a case-by-case basis. See § 1.2.3).
- .4 The building must achieve LEED-EB certification every five years.

Technologies/Strategies:

- Maintain rigorous standards for the upkeep of building equipment and infrastructure, interior and exterior finishes, public spaces, and structural systems.
- Educate maintenance personnel.

Cost Implications:

- Decreased maintenance labor costs.
- Increased product life.

5.0 Water Conservation & Site Management

General Provisions

Intent:

Minimize water consumption by simultaneously reducing the inflow of city-supplied potable water and the outflow of waste water. Conserve potable water by reducing demands for water use including domestic water, landscaping, irrigation, cooling tower, laundry, maintenance and other non-potable uses.

Assumptions:

Projects developed in Battery Park City are responding to land-use and water consumption concerns by incorporating high efficiency water management technologies into new buildings, and by participating in a conscious and managed plan for sustainable landscaping practices (i.e. organic maintenance practices, use of native and adaptive plantings, etc.) and irrigation systems that employ recycled water.

5.0 Water Conservation & Site Management (cont.)

5.1 Storm Water Management

Intent:

Minimize the impact of storm water on New York City's sewer system and minimize the use of potable water for maintenance and landscaping purposes by treating and recycling water on-site.

Requirements:

- .1 Provide for 2.4 in. of rainwater falling on all building roofs and setbacks to be collected, treated, and stored on-site for reuse. Uses for this water must include cooling tower, irrigation, and building and sidewalk maintenance, and laundry, if allowed by municipal codes. Due to its lower treatment requirements, storm water is to be used before reclaimed water. Other uses may be proposed by developer. Non-summer uses must be accounted for as well.
- .2 Adopt Best Management Practices (BMP, as published by the Office of Wastewater, Environmental Protection Agency (EPA) and available at www.epa.gov/owm/mtb/runoff.pdf) for harvesting rain water and using it on-site.
- .3 Provide clearly labeled "Reclaimed Water" taps at the exterior of the building for building maintenance, sidewalk washing, and landscaping needs (reclaimed water shall be appropriately filtered and treated for these and other types of uses).
- .4 Design a site-specific Sediment and Erosion Control Plan that conforms to the United States Environmental Protection Agency (EPA) Document No. EPA 832/R-92-005 (September 1992), Storm Water Management for Construction Activities, Chapter 3, or local erosion and sedimentation control standards and codes (whichever is more stringent). The plan shall meet the following objectives:
 - .a Prevent loss of soil during construction by storm water runoff and/or wind erosion, including protecting topsoil by stockpiling for reuse.
 - .b Prevent sedimentation of storm sewer or receiving streams and/or air pollution with dust and particulate matter.
 - .c Prevent construction contaminants from entering the storm sewers, including but not limited to high-pH concrete slurry and chemicals associated with machinery operations

5.0 Water Conservation & Site Management (cont.)

5.1 Storm Water Management (cont)

Technologies/Strategies:

- By collecting and reusing rainwater on-site and runoff during construction, less water will be consumed and less waste water will need to be treated.
- Enforce conservation methods.

Cost Implications:

- Increased initial costs to plumbing infrastructure.
- Savings on water and sewage costs.
- Future water cost avoidance.
- Decreased demand on city infrastructure.
- Water available during drought conditions.

5.0 Water Conservation & Site Management (cont.)

5.2 Water Use Reduction

Intent:

Minimize the use of potable water by reducing water needs.

Requirements:

- .1 Install fixtures that in aggregate use 10% less potable water than the water usage requirements in the Energy Policy Act of 1992, including dishwashers and clothes washers. When performing the calculation, do not include fixtures which are using reclaimed water.
- .2 Specify low water volume/conserving fixtures and dishwashers, dual flush or 1.6 gallon toilets, and only front-loading laundry facilities with a water factor of 7.5 or less.
- .3 Utilize non-potable drip irrigation systems (if applicable).

Technologies/Strategies:

- Horizontal axis or “front loading” clothes washers are more efficient than conventional top loading machines.
- Install timers on irrigation systems.
- Consider individual apartment water metering.
- In non-apartment uses, consider installing waterless urinals.

Cost Implications:

- Nominal increase in initial costs.
- Savings on water and sewage costs.
- Savings on water heating and pumping.
- Increased energy savings (pumping).

5.0 Water Conservation & Site Management (cont.)

5.3 Innovative Water Technologies

Intent:

Minimize the impact on New York City's sewer system and reduce the use of potable water by treating and reclaiming water from lavatories, toilets, showers, sinks, laundry, and dishwashing facilities.

Requirements:

- .1 Treat all wastewater and reuse to maximum extent possible with an on-site Reclaimed Water Treatment System.
- .2 Use ecology-based treatment processes (i.e., ultrafiltration), as opposed to a chemical treatment system, for reclaimed water treatment.
- .3 Use reclaimed water for toilet flushing, cooling tower make-up, irrigation, laundry (to the extent allowed), building and sidewalk maintenance management uses (in all cases, if applicable and properly treated). Provide clearly labeled "Reclaimed Water" taps wherever treated water is made available to tenants and/or staff. Address the issue of excessive chloride build-up in cooling tower system.
- .4 Use best efforts to minimize use of chemicals in the maintenance of cooling towers.

Technologies/Strategies:

- Provide appropriate water recovery, treatment, and delivery infrastructure.

Cost Implications:

- Increased initial costs to plumbing infrastructure.
- Savings on water and sewage costs.
- Decreased demand on infrastructure.
- Water available during drought conditions.

5.0 Water Conservation & Site Management (cont.)

5.4 Water Efficient & Responsible Landscaping Practices

Intent:

Minimize the use of potable water for building and grounds maintenance, and avoid using pesticides, herbicides, or fertilizers that may pollute the environment.

Requirements:

- .1 Specify 100% of plantings to be those that are native/indigenous/adapted and that require low amounts of water and are pest- and disease-resistant. Plant material subject to review and approval by the Battery Park City Authority (BPCA) and Battery Park City Parks Conservancy (BPCPC).
- .2 Use proper topsoil medium that allows for the implementation of organic maintenance practices (i.e., non-toxic pesticides, herbicides, and fertilizers) as per BPCA/BPCPC requirements.
- .3 Develop a landscape maintenance plan of sustainable landscape practices for all landscaped areas.

Technologies/Strategies:

- Employ sustainable landscape development practices by selecting only plantings suitable to the microclimate that require minimal water and maintenance, and using topsoil's able to support organic fertilization and integrated pest management practices as per BPCPC requirements.

Cost Implications:

- No initial cost implications.
- Decrease in maintenance and operating costs.
- Future water cost avoidance.
- Extended life of plantings.

5.0 Water Conservation & Site Management (cont.)

5.5 Landscape and Roof Design to Reduce “Heat Islands”

Intent:

Minimize contribution to “heat islands” and reduce the amount of heat gain/loss through the roof(s).

Requirements:

- .1 75% of all roof area, over conditioned space, including terraces, not used for mechanical equipment or skylights) to be planted as a “green” roof garden and, except for private terraces, open to all residents.
- .2 Remaining roof areas to use light-colored/high-albedo materials with an SRI (solar reflectance index) of 78 for roofs less than 2:12.
- .3 Provide street trees as per BPCA/BPCPC requirements.

Technologies/Strategies:

- Provide vegetated surfaces such as green roofs and/or grass paving systems that are water efficient.
- Provide trees to shade exposed surfaces.

Cost Implications:

- Increased initial cost to structure, drainage, and waterproofing systems.
- Reduced energy consumption due to reduced heat gains/losses.
- Potential for longer roof life due to diminished wear from thermal expansion and contraction.

5.0 Water Conservation & Site Management (cont.)

5.6 Light Pollution Reduction

Intent:

Eliminate light trespass from the building and site, improve night sky access and reduce development impact on nocturnal environments.

Requirements:

- .1 Design interior lighting so that the angle of maximum candela from each interior luminaire as located in the building shall intersect opaque building interior surfaces and not exit out through the windows.
- .2 Design exterior lighting so that all site and building mounted luminaires produce a maximum initial illuminance value of no greater than 0.60 horizontal and vertical footcandles at the site boundary and must drop off to 0.01 footcandles within 15 feet beyond the site. Document that no more than 10% of the total initial designed fixture lumens are emitted at an angle of 90 degrees or higher from the nadir (straight down). For site boundaries that abut public rights-of-way, light trespass requirements may be met relative to the curb line instead of the site boundary. Use daylight sensors in combination with astronomical time clocks to minimize exterior light usage.

5.0 Water Conservation & Site Management (cont.)

5.6 Light Pollution Reduction (cont.)

Technologies/Strategies:

- Adopt site lighting criteria to maintain safe light levels while avoiding off-site lighting and night sky pollution.
- Consider using daylight sensors to regulate developer-installed outdoor luminaires as an energy-conserving strategy.
- Minimize site lighting where possible and configure the site lighting using a computer model.
- Technologies to reduce light pollution include full cutoff luminaires, low-reflectance surfaces and low-angle spotlights.

Cost Implications:

- No or nominal initial cost implication. Requirements can be incorporated into design.
- Decreased running costs, both in energy and replacement costs, as this requirement essentially eliminates extravagant external lighting of the building.

Suggested Additional Measures

The development team is presented with a series of suggestions that they may elect to include in the project to raise the standards to a higher level. Additional options are not limited to the suggestions and creativity is encouraged. The intent is to move technology and sustainability forward and create the most sustainable building possible, for tenants and all those who look at these buildings as models that can be emulated beyond Battery Park City.

Suggested Additional Measures (cont.)

| | | |
|---------------------------|---|---|
| EE Add 1.1 | Additional Energy Efficiency | <p><i>Requirement:</i> Increase energy efficiency by 35% over 2002 ECCCNYs, measured in terms of energy cost.</p> |
| EE Add 1.2 | Enthalpy Wheel | <p><i>Requirement:</i> Use enthalpy heat wheel technology for year-round conditioning of air for 75% of apartments. (Measure results in significant energy savings and will greatly aid in achieving EE Alt 1.)</p> |
| EE Add 1.3 | Geothermal | <p><i>Requirement:</i> Provide a minimum of 30 tons cooling and heating using geothermal technology.</p> |
| EE Add 1.4 | Additional Metering | <p><i>Requirement:</i> If not using a heat pump system, meter and bill each apartment for heating and cooling use. Heating and cooling can be aggregated with other uses in the apartment (e.g., cooling electricity use can be aggregated with other electricity uses in the apartment).</p> |
| MR Add 3.1 | Composting | <p><i>Requirement:</i></p> <ul style="list-style-type: none"> .1 Provide area for composting collection on each apartment floor or provide separate waste line for garbage disposals to a central point for composting. Provide additional area on site for storage. .2 Provide proof of 5-year agreement within building or via outside party showing use of compost produced. |
| MR Add 3.2 | Additional Recycled Content | <p><i>Requirement:</i></p> <ul style="list-style-type: none"> .1 Use recycled content materials for 20% of the total value of the materials in the project, as defined in § 3.3. |
| MR Add 3.3 | Renewable Materials | <p><i>Requirement:</i></p> <ul style="list-style-type: none"> .1 Utilize 2% renewable bio-based materials as defined in the Glossary, for example wheat board, straw board, wool carpet, and bamboo. |

Suggested Additional Measures (cont.)

**OP
Add
4.1** **Life Cycle
Analysis**

Requirement:

Conduct a full Environmental Impact Assessment of the proposed building, showing the overall life cycle analysis of the building. The analysis/assessment should be done using the Athena Institute's Environmental Impact Estimator system, or an equivalent methodology approved in advance by BPCA.

**WC
Add
5.1** **Intensive
Green Roof**

Requirement:

Intensive green roof to cover 75% of all roof area, over conditioned space and including terraces, not used for mechanical equipment or skylights. Remaining roof areas as per credit 5.5.

**WC
Add
5.2** **Additional
Green Roof**

Requirement:

Provide additional green roofing to cover 90% of all roof area, over conditioned space and including terraces, not used for mechanical equipment or skylights. System to be intensive for at least 50% of green roof.

List of Resources

Publications:

American Institute of Architects. *AIA Environmental Resource Guide*. New York: McGraw-Hill, 1999.

American Society of Heating Refrigeration and Air-Conditioning Engineers. *ANSI/ASHRAE/IESNA Standard 90.1: Energy Standard for Buildings Except Low-Rise Residential Buildings; Standard 62-99: Ventilation for Acceptable Indoor Air Quality; ASHRAE Green Guide, 2003*

Barnett, Dianna Lopez and Browning, William. *Primer on Sustainable Building*. Rocky Mountain Institute, 1995.

Battery Park City Authority and Lerner, Ralph. *Battery Park City: Design Guidelines for The North Residential Neighborhood*. 1994.

Bay Area Air Quality Management District Regulation. 9-9-301

Carmody, John, Selkowitz, Stephen, Lee, Eleanor S., Arasteh, Dariush and Willmert, Todd, *Window Performance Systems for High Performance Buildings*, W.W. Norton Company, New York, 2004

Carpet and Rug Institute. *Green Label Plus Indoor Air Quality Test Program*.

Flack + Kurtz. *Queens West Report*. 1995.

Gorham, Richard J. *Ecology and Management of Food-Industry Pests*. Virginia: Association of Official Analytical Chemists, 1991.

Hays, Steve et al. *Indoor Air Quality: Solutions and Strategies*. New York: McGraw-Hill, 1995.

Illuminating Engineering Society of North America (IESNA). *Recommended Practice Manual: Lighting for Exterior Environments* (IESNA RP-33-99); *IESNA Lighting Handbook (Ninth Edition, 2000)*. New York: IESNA.

International Organization for Standardization document. *ISO 14021 – Environmental labels and declarations – Self-declared environmental claims (Type II environmental labeling)*.

Kundsin, Ruth B. *Architectural Design and Indoor Microbial Pollution*. New York: Oxford University Press, 1988.

List of Resources (cont.)

- Lawrence Berkeley National Laboratory. *A Pilot Study of Energy Efficient Air Cleaning for Ozone*. Berkeley, California. 2002.
- New Buildings Institute, *Advanced Buildings Reference Guide; Benchmark, Energy Benchmark for High Performance Buildings; Benefits Guide*; White Salmon, Washington, 2004-2005.
- Mendler, Sandra F. and Odell, William. *HOK Guidebook to Sustainable Design*. John Wiley & Sons, 2000.
- NYSGBTC: *New York State Green Building Tax Credit*. Article 19, May 2000
- Olgyay, Victor. *Design With Climate*. Princeton: Princeton University Press, 1973.
- Olkowski, Helga et al. *Common Sense Pest Control*. Connecticut: The Taunton Press, 1991.
- Rocky Mountain Institute. *Green Development: Integrating Ecology And Real Estate*. New York: John Wiley & Sons, Inc., 1998.
- Sheet Metal and Air Conditioning National Contractors Association (SMACNA). *IAQ Guideline for Occupied Buildings Under Construction, Chapter 3*. 1995.
- State of New York. *Energy Conservation Construction Code of New York State*. 2002.
- State of New York. *Multiple Dwelling Law of New York State*. 2003.
- State of New York. *Executive Order No. 111 - "Green and Clean" State Buildings and Vehicles*. July 2003.
- The City of New York and The Department of Buildings. *New York City Building Code*. 2003.
- The City of New York and The City Planning Commission. *New York City Zoning Resolution*. 2002.
- The City of New York Department of Design and Construction. *High Performance Building Guidelines*. 1999.
- The City of New York Department of Design and Construction. *Implementing the High Performance Building Guidelines*. 2002.
- The City of New York. *Local Law 77*. December 2003.

List of Resources (cont.)

Triangle J Council of Governments. *Waste Spec: Model Specifications for Construction Waste Reduction, Reuse and Recycling*. Research Triangle Park, NC: TJCG, 1995.
Tuluca, Adrian (Steven Winter Associates, Inc.). *Energy Efficient Design and Construction for Commercial Buildings*. New York: McGraw-Hill, 1997.

United States Environmental Protection Agency. *Storm Water Management for Construction Activities*. Chapter 3. (Document 832/R-92005) Washington: EPA, 1992.

US Green Building Council. *Leadership in Energy and Environmental Design Green Building Rating System, Version 2.2 (LEED™)*.
[Public Comment Draft December 2004]

US Green Building Council. *LEED™ Reference Guide for New Construction and Major Renovations*, 2nd Edition May 2003, version 2.1

US Green Building Council. *LEED™ Existing Buildings Reference Guide, version 2.0*.

US Green Building Council and US Department of Energy. *Sustainable Building Technical Manual*. 1996.

List of Resources (cont.)

Websites:

American Council for an Energy-Efficient Economy
<http://www.aceee.org/>

ASHRAE: American Society of Heating Refrigeration and Air-
Conditioning Engineers
<http://www.ashrae.org>

Bay Area Air Quality Management District Regulation 8, Rule 51.
<http://www.baaqmd.gov/dst/regs/rq0851.pdf>

National Coalition Against the Misuse of Pesticides
<http://www.beyondpesticides.org>

Energy Efficiency and Renewable Energy Network (EREN)
<http://www.eere.energy.gov/>

Energy Star Program (U.S. EPA)
<http://www.energystar.gov/>

Environmental Building News
<http://www.buildinggreen.com/>

Environmental Defense
<http://www.environmentaldefense.org>

Environmental Protection Agency Region 9 IPM Manual
<http://www.epa.gov/pesticides/ipm/schoolipm/index.html>

Environmental Protection Agency Office of Wastewater Best
Management Practices
www.epa.gov/owm/mtb/runoff.pdf

Forest Stewardship Council
<http://www.fscus.org/>

Greener Buildings.com
<http://www.greenerbuildings.com>

Green Tag Forestry
<http://www.woodlandowners.org/>

IBEAM – EPA Guidance on Design and Operations for IAQ
http://www.epa.gov/iaq/largebldgs/ibeam_page.htm

Integrated Pest Management Institute of North America
<http://www.ipminstitute.org/>

List of Resources (cont.)

Iris Communications – Resource for Environmental Design Index
<http://www.oikos.com/>

Lawrence Berkeley National Laboratory, Environmental Energy
Technologies Division
<http://eetd.lbl.gov/>

Natural Resources Defense Council
<http://www.nrdc.org/>

New York State Department of Environmental Protection
www.nyc.gov/dep

New York State Energy Research and Development Authority
<http://www.nyserda.org/>

Northeast Energy Efficiency Partnerships
<http://www.neep.org/>

Rocky Mountain Institute
<http://www.rmi.org/>

Scientific Certification Systems
<http://www.scs1.com/>

Southface Energy Institute
<http://www.southface.org/>

South Coast Air Quality Management District Rule #1168
<http://www.aqmd.gov/rules/html/r1168.html>

US Department of Energy
<http://www.doe.gov/>

US DOE Whole Building Design Guide
<http://www.wbdg.org/>

US Environmental Protection Agency
<http://www.epa.gov/>

US Green Building Council
<http://www.usgbc.org/>

USDA Forest Stewardship Program
<http://www.fs.fed.us/spf/coop/programs/loa/fsp.shtml>

Funding Sources

New York State Green Building Tax Credit

[New York State Department of Taxation and Finance](#)

(tax related questions)

Business Tax Hotline:

1-800-972-1233

General Tax Information Hotline:

1-800-225-5829

New York State Energy Research and Development Authority

For more information about NYSERDA's building programs, contact:

[New York State Energy Research and Development Authority](#)

(building-related questions)

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United States Department of Energy

For more information about USDOE building programs, contact:

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[\[http://www.doe.gov/\]](http://www.doe.gov/)

Glossary

The following is a partial glossary of terms from the City of New York Department of Design And Construction's (DDC) *High Performance Building Guidelines*.

Albedo: The ratio of reflected light to the total amount falling on a surface. A high albedo indicates high reflectance properties.

Bio-Based Fuels: Cellulosic plant matter (biomass) used as a source of renewable carbon and as a raw material for fuel.

Bio-Based Material: An engineering material made from substances derived from living tissues. Qualifying materials must be either residues from the processing of renewable, bio-based materials or grown or harvested under a recognized sustainable management system. Excluded from the calculation are materials such as formwork, shoring, temporary partitions and other elements that are not a permanent part of the finished building. Examples of management systems meeting the credit requirements include the Canadian Standards Association (<http://www.csa.ca>), the Sustainable Forestry Initiative (<http://www.aboutsfi.org/>), and the Sustainable Agricultural Program.

Building Commissioning: A systematic process beginning in the design phase, lasting at least one year after construction, and including the preparation of operating staff to ensure, through documented verification, that all building systems perform interactively according to the documented design intent and the developer's operational needs.

Chlorofluorocarbons (CFCs): CFCs are a family of chemicals used in refrigeration, air conditioning, packaging, insulation, or as solvents and aerosol propellants. Because CFCs are not destroyed in the lower atmosphere, they drift into the upper atmosphere where their chlorine molecules destroy the earth's protective ozone layer.

Combined Heat and Power Plants: Energy plants able to convert waste heat from electricity generation into steam, which is then used to produce chilled water or additional electricity.

Fuel Cell: A technology that uses an electromagnetic process to convert natural gas into electrical power. Fuel cell power is cleaner than grid-connected power sources. In addition, hot water is produced as a byproduct that can be utilized as a thermal resource for the building.

Blackwater: Waste water from toilets and kitchen sinks that contains organic materials.

Glossary (cont.)

Hydrochlorofluorocarbons (HCFCs): HCFCs are generally less detrimental to depletion of stratospheric ozone than related chlorofluorocarbons. HCFCs are generally used to replace CFCs where mandates require CFCs to be eliminated. A total ban on CFCs and HCFCs is scheduled effective 2030.

Integrated Pest Management: A coordinated approach to pest control that is intended to prevent unacceptable levels of pests by the most cost-effective means with the least possible hazard to building occupants, workers, and the environment.

Life-Cycle Cost: The amortized annual cost of a product, including capital costs, installation costs, operating costs, maintenance costs, and disposal costs discounted over the lifetime of the product.

Low-E Glass: “Low-E” (low-emissivity) Significantly reduces heat loss in winter and, to a small degree, also reduces heat gain in summer. Spectrally-selective low-e glass significantly reduces both heat loss in winter and heat gain in summer, while retaining a high visible transmittance. Most low-e glass has $U=0.29$ to 0.33 . Low-e glass that does not have a spectrally-selective coating has a ratio (visible transmittance) / (shading coefficient) = approx 1.0. Spectrally-selective low-e glass has the ratio (visible transmittance) / (shading coefficient) = approx 1.3 to 1.8. Thus, spectrally-selective low-e glass admits more solar light than solar heat

Operations & Maintenance: Operations refer to how equipment or systems are run (e.g. when a system should be turned on, temperature ranges, set points for boiler pressures and temperatures, thermostat set points, etc.). Maintenance refers to servicing or repair of equipment and systems. “Preventive maintenance” performed on a periodic basis to ensure optimum life and performance is designed to prevent breakdown and unanticipated loss of production or performance. “Corrective” or “unscheduled” maintenance refers to repairs on a system to bring it back “on-line.” “Predictive” maintenance is performed on equipment monitored for signs of wear or degradation (e.g., through thermography, oil analysis, vibration analysis, and maintenance history evaluation).

Photovoltaic Panels (PVs): PV devices use silicone semiconductor material to directly convert sunlight into electricity. Power is produced when sunlight strikes the semiconductor material and creates an electric current.

Products Applied in the Field: All adhesives, sealants (used as “filler” as opposed to a “coating”), paints, solvents, finishes, coatings, flooring and fabrics installed by the developer in the interior and exterior of the building.

Glossary (cont.)

Rapidly-Renewable Resources: Building materials and products made from plants that are typically harvested within a ten year cycle or shorter.

Recycling: The series of activities, including collection, separation, and processing, by which products or other materials are recovered from the solid waste stream for use in the manufacture of new products.

Renewable Energy: Energy resources such as wind power or solar energy that can keep producing indefinitely without being depleted.

Shading Coefficient (SC): The ratio of solar heat gain through a specific type of glass that is relative to the solar heat gain through an 18" (3 mm) pane of clear glass under identical conditions. As the shading coefficient decreases, heat gain is reduced, which enhances the performance of a product.

Solar Heat Gain Coefficient: (SHGC): An increasingly utilized measure of the solar heat gain through glass. $SHGC = \text{approx } SC * 0.86$.

Urban Heat Island Effect: The additional heating of air over a city as the result of the replacement of vegetated surfaces with those composed of asphalt, concrete, rooftops, and other man-made materials. These materials store much of the sun's energy, producing a dome of elevated air temperatures up to 10°F greater over city compared to air temperatures over adjacent rural areas. Light colored rooftops and lighter colored pavement can help to dissipate heat by reflecting sunlight, and tree planting can further help modify the city's temperature through shading and evapotranspiration.

U-Factor: A measure of heat gain or heat loss through glass due to the differences between indoor and outdoor air temperatures. The U-factor is the inverse of R-value. A lower U-factor indicates lower heat loss during winter.

Volatile Organic Compounds: VOCs are chemicals that contain carbon molecules and are volatile enough to evaporate from materials' surfaces into indoor air at normal room temperatures (a process otherwise referred to as off-gassing). Examples of building materials that may contain VOCs include, but are not limited to: solvents, paints, adhesives, carpeting, and particleboard. Signs and symptoms of VOC exposure may include eye and upper respiratory system irritation, nasal congestion, headache, and dizziness.

List of Acronyms

| | |
|----------|---|
| ASHRAE | American Society of Heating, Refrigerating & Air-conditioning Engineers |
| BIPVs | Building integrated photovoltaics |
| BMP | Best Management Practices |
| BMS | Building Management System |
| BOC | Building Operator Certification |
| CFCs | Chlorofluorocarbons |
| CFM | Cubic feet per minute |
| CO | Carbon Monoxide |
| CD | Construction Documents |
| CMU | Concrete Masonry Unit |
| CNG | Compressed natural gas |
| DD | Design Documents |
| DDC | Department of Design & Construction (NY City) |
| DOE | Department of Energy |
| ECCCNYS | Energy Conservation Construction Code of New York State |
| EEMs | Energy Efficient Measures |
| EPA | Environmental Protection Agency |
| FSC | Forest Stewardship Council |
| FSP | Forest Stewardship Program |
| HLCBPCA | Hugh L. Carey Battery Park City Authority |
| HLCBPCPC | Hugh L. Carey Battery Park City Parks Conservancy |
| HVAC | Heating, Ventilating & Air-conditioning |
| IAQ | Indoor Air Quality |
| ICA | Independent Commissioning Authority |
| IEQ | Indoor Environment Quality |
| IESNA | Illuminating Engineering Society of North America |
| IPMP | Integrated Pest Management Plan |
| LEED | Leadership in Energy and Environmental Design |
| MERV | Minimum Efficiency Reporting Value |
| NEEP | Northeast Energy Efficiency Partnerships |
| NYSERDA | New York State Energy Research & Development Authority |
| O&M | Operations & Maintenance |
| PIR | Passive Infrared |
| PV | Photovoltaics |
| RH | Relative Humidity |
| SFI | Sustainable Forestry Initiative |
| SMACNA | Sheet Metal and Air Conditioning Contractors National Association |
| SOx | Sulfur Oxides |
| TCO | Temporary Certificate of Occupancy |
| USGBC | United States Green Building Council |
| VSDs | Variable-speed drives |
| VOCs | Volatile Organic Compounds |

Submittals

Cost Analysis

The developer will be required to prepare and submit a cost analysis of all green features as part of the proposal, Schematic Design, Design Development, Construction Document submissions, and upon building completion or buy-out. Format shall be as per the Residential Environmental Guidelines Independent Cost Impact Study of 2003, prepared by Skanska USA Building Inc.

Submittal Requirements

The following schedule is a summary of the guidelines' requirements with specific compliance submissions for each requirement. The developer shall assemble this information into a complete, single resource to be submitted following project completion, and submit (3) copies of a progress submission as part of the Schematic Design, Design Development, Construction Documents, and As-Built submissions to the BPCA as follows:

- Bound 8½ x 11 formats (11 x 17 fan fold inserts acceptable).
- Include a table of contents and a list of all applicable team participants and consultants.
- Each of the five environmental categories from the guidelines will be a separate section (i.e. Energy Efficiency).
- Within each of these sections, the requirements are to be referenced by section number (i.e. §1.3.2).
- For each requirement, include a narrative that describes the developer's actions and strategies for compliance with the guidelines followed by the requested information from the compliance requirements. The Schematic Design submission must include the DOE-2.1E analysis, but may only include the written narratives for all other requirements.
- Developer may submit a half-size set of drawings and a set of specifications in lieu of including individual drawings that respond to individual requirements. However, reference must be very specific - page and detail number and specification section and page(s) must be clearly identified.
- Required "guides" (Tenant Guide and Maintenance Manual) are to be separately bound and included as appendix items. Finished tenant guides will be required before initial occupancy. Maintenance guides will be required as part of the As-Built or final submission.
- The final version of both the As-Built submission and the Maintenance Manual shall be submitted in an electronic format (i.e. CD-ROM; CAD and text file formats to be determined) and as a hard copy.
- For each submission, statement of any requested variation from guidelines, both above and below requirements, along with back-up and substantiation, where necessary must be included.

Submittals (cont.)

- The following is a list of documents required at the completion of the project as part of the As-built submission:
 - Copies of all agency approvals
 - As-built drawings and specifications
 - USGBC LEED NC submission and any CIR or follow-up information
 - Outline of Annual Building Report and submittal after one year of occupancy
 - Format for LEED EB submission with subsequent full document submission at 5 year intervals.
 - Commissioning Report
 - Maintenance Manual
 - Tenants Manual
 - Submission to GBTC if applicable

The intent is to demonstrate compliance with these guidelines. Therefore, for each and every submission, a written narrative must be included for each requirement.

The BPCA will review all submissions in a prompt and timely manner. Furthermore, the BPCA will maintain field personnel to observe construction methods and technologies and to verify that construction is proceeding in accordance with the official documents.

| SCHEDULE OF SUBMISSION REQUIREMENTS | | | | | | | | | | | 1 |
|-------------------------------------|--|--|---|----|---|----|----|-----|--|--|---|
| Project: | | | | | | | | | | | |
| <u>Submission Phase:</u> | | | | | | | | | | | |
| <u>Date:</u> | | | | | | | | | | | |
| | | | DD Design Development CD Construction Documentation C Construction PO Pre-Occupancy PC Post Construction ALL All Submissions | | | | | | | | |
| Section | Requirements | BPCA Comments | Submission Completed | | | | | | | | |
| | | | DD | CD | C | PO | PC | ALL | | | |
| 1.0 Energy Efficiency | | | | | | | | | | | |
| 1.1 | Maximize Energy Efficiency | | | | | | | | | | |
| 1.1.1 | Increase Energy Efficiency by 30% | DD - Submit list of EE measures to be employed and confirm they result in 30% overall reduction in regulated energy cost. After project is completed, perform on-site measurement (see § 4.3.1). | | | | | | | | | |
| | | CD - Submit finalized list of EE measures and confirmation of overall reduction in regulated energy cost. | | | | | | | | | |
| | | PC - Confirmation of EE overall. Annual submission of confirmation of EEs as part of Annual Building Performance Report (see § 4.4.3). | | | | | | | | | |
| 1.1.2 | Right-Size Equipment | DD - Submit, in concert with the ICA, design calculations and building loads. | | | | | | | | | |
| | | CD - Update DD submission. Submit Equipment Schedule with plan layouts. | | | | | | | | | |
| 1.1.3 | Provide Motion Sensors | DD - Submit schematic of Motion Sensor Schedule. | | | | | | | | | |
| | | CD - Update DD submission. Submit plan layouts highlighting motion sensor/PIR switches. | | | | | | | | | |
| 1.1.4 | Provide Master Switches and Identify Outlets | DD - Submit schematic of Master Switch Schedule, typical apartment schematics, and details. | | | | | | | | | |
| | | CD - Update DD submission. Submit typical apartment schematics and details. | | | | | | | | | |

| SCHEDULE OF SUBMISSION REQUIREMENTS (cont.) | | | | | | | | | | 2 |
|---|--|---------------|----|----|---|----|----|-----|--|---|
| Section | Requirements | BPCA Comments | DD | CD | C | PO | PC | ALL | | |
| 1.1.5 Use High-Performance Glazing | DD - Submit Glass and Window Schedules. | | | | | | | | | |
| | CD - Update DD Submission. Submit window assembly details and specifications. | | | | | | | | | |
| 1.1.6 Install Double Insulation, Backer Rods, and Caulking at Key Junctures | CD - Submit two-dimensional sections (where two elements of the enclosure meet) and three-dimensional sections (where three or more elements of the enclosure meet) through wall/slab junctions and masonry walls. Show continuity of rainwater control materials (water impermeable materials or air gaps), continuity of thermal barrier, and continuity of air barrier. | | | | | | | | | |
| | C - Submit photographs of a representative sample of the above-mentioned wall conditions during construction to demonstrate that design sections were followed properly. | | | | | | | | | |
| 1.1.7 Optimize Insulation of Cavity Wall Construction | CD - Submit sections indicating details of placement of insulation. | | | | | | | | | |
| | C - Submit photographs of a representative sample of the above-mentioned wall conditions during construction to demonstrate that design sections were followed properly. | | | | | | | | | |
| 1.1.8 Conduct Continuity Tests for Air, Thermal, and Water Barriers | C - Submit Test Results certifying the continuity of air, thermal, and water barriers. | | | | | | | | | |
| 1.1.9 Use only Energy-Star or Equivalent Equipment, Appliances, Lighting, and Fixtures | DD - Submit Schedules that include energy efficiency ratings for the Energy Star equipment, appliances, lighting, and fixtures to be installed in the base building. | | | | | | | | | |
| | CD - Update DD Submission. Submit typical plan(s) indicating use of Energy Star equipment. | | | | | | | | | |
| 1.1.10 Provide only Natural Gas Cook Tops, Ovens, and Ranges | DD - Submit Equipment Schedule. | | | | | | | | | |
| | CD - Update DD Submission. | | | | | | | | | |
| 1.1.11 Provide Thermal Energy Recovery Systems | DD - Submit calculations of thermal recovery realized and reuse. | | | | | | | | | |
| | CD - Update DD Submission. Submit Equipment Schedule and schematics showing heat recovery systems as part of building ventilation. | | | | | | | | | |
| 1.1.12 Design Building's Electrical Distribution System for Maximum Utilization of Electric Demand Reduction. | DD - Submit schematics and description of demand reduction measures. | | | | | | | | | |
| | CD - Update DD Submission. Submit Equipment Schedule. | | | | | | | | | |

| SCHEDULE OF SUBMISSION REQUIREMENTS (cont.) | | | | | | | | | | 3 |
|---|--|---------------|----|----|---|----|----|-----|--|---|
| Section | Requirements | BPCA Comments | DD | CD | C | PO | PC | ALL | | |
| 1.1.13 Electric Resistance Humidification Alternatives | DD - Submit schematics and description of humidification measures. | | | | | | | | | |
| | CD - Update DD Submission. Submit Equipment Schedule. | | | | | | | | | |
| 1.2 Modeling for Energy Performance | | | | | | | | | | |
| 1.2.1 Provide Initial Energy Model | DD - Submit initial energy model results prior to beginning design, using BPCA stated assumptions. Place special emphasis on base case and provide descriptions of any assumptions made beyond those of the BPCA and how they vary from NYC and NYS codes. | | | | | | | | | |
| | CD - Update DD Submission. | | | | | | | | | |
| 1.2.2 Provide Comparative Energy Analysis in Annual Building Report | CD - Submit outline to indicate data to be included and structure of Annual Energy Report. | | | | | | | | | |
| | PC - Submit a data comparison between the energy model results projected during the design process and actual building performance data collected after reaching 90% occupancy (see Annual Building Report). | | | | | | | | | |
| 1.2.3 Install Dedicated Meters | DD - Submit list of meters to be installed plan layout and schematics, showing incorporation of specific monitoring requirements. | | | | | | | | | |
| | CD - Update DD Submission. Submit Metering Equipment Schedule | | | | | | | | | |
| 1.3.1 Green Energy Equipment Incorporation and Feasibility Studies | DD - Submit description of clean combined heat and power technologies and/or cogeneration technologies incorporated with load calculations | | | | | | | | | |
| | CD - Submit Equipment Schedule, schematics and specifications. | | | | | | | | | |
| 1.3.2 Provide Renewable Energy Generation Systems | DD - Submit elevation layout, schematics, and load calculations. Submit additional drawings describing layout of PVs on façade and/or bulkhead. | | | | | | | | | |
| | CD - Update DD Submission. | | | | | | | | | |
| 1.3.3 Adaptable Equipment | PC - Submit confirmation of actual electricity provided. | | | | | | | | | |
| | DD - Submit Equipment Schedule and schematics with description of acceptance with multiple fuel sources utilized. | | | | | | | | | |
| 1.3.4 Renewable Energy from Green Power Providers | CD - Update DD Submission. | | | | | | | | | |
| | CD - If renewable energy power provider contracted, submit agreement from energy provider(s) or letter describing efforts prior to beginning construction. | | | | | | | | | |

| SCHEDULE OF SUBMISSION REQUIREMENTS (cont.) | | | | | | | | | | 4 |
|---|---|---|----|----|---|----|----|-----|--|---|
| Section | Requirements | BPCA Comments | DD | CD | C | PO | PC | ALL | | |
| 1.3.4 | Renewable Energy from Green Power Providers (cont.) | PO - Submit confirmation of agreement | | | | | | | | |
| 2.0 Enhanced Indoor Environment Quality (IEQ) | | | | | | | | | | |
| 2.1 | Indoor Air Quality (IAQ) | | | | | | | | | |
| 2.1.1 | Ventilation Rates | DD - Use ASHRAE 62.2 as IAQ performance standard. Submit schematics and design calculations, using accepted ventilation rates. | | | | | | | | |
| | | CD - Update DD Submission. Submit Equipment Schedule | | | | | | | | |
| | | PO - Update CD Submission. Submit confirmation of achievement of rates. | | | | | | | | |
| | | PC - Update PO Submission. | | | | | | | | |
| 2.1.2 | Ventilation Distribution | | | | | | | | | |
| 2.1.2.a | Central Outside Air System Requirements | PO - Submit analysis, performed by the ICA or a certified third party, confirming target air temperature and humidification rates upon reaching 50% and 100% occupancy. | | | | | | | | |
| 2.1.2.b | Ventilation in Apartments | DD - Submit schematics and design calculations | | | | | | | | |
| | | CD - Update DD Submission. Submit Equipment Schedule | | | | | | | | |
| | | PC - Submit analysis, performed by the ICA or a certified third party, confirming distribution of outside air (cfm). | | | | | | | | |
| 2.1.2.c | Ventilation in Corridors | DD - Submit schematics and design calculations. | | | | | | | | |
| | | CD - Update DD Submission. Submit Equipment Schedule | | | | | | | | |
| | | C - Submit analysis, performed by the ICA or a certified third party, confirming positive pressurization of corridors relative to apartments. | | | | | | | | |
| | | PO - Update C submission. | | | | | | | | |
| 2.1.3 | Filtration of Air | DD - Submit design calculations. Include maintenance schedule in Maintenance Manual. | | | | | | | | |

| SCHEDULE OF SUBMISSION REQUIREMENTS (cont.) | | | | | | | | | 5 |
|--|---|---------------|----|----|---|----|----|-----|---|
| Section | Requirements | BPCA Comments | DD | CD | C | PO | PC | ALL | |
| 2.1.3 Filtration of Air (cont.) | CD - Update DD Submission. Submit Filtering Equipment Schedule | | | | | | | | |
| | PO - Update CD Submission. Submit analysis, performed by the ICA or a certified third party, confirming benchmark filtering values throughout building (see Submittals, § 4.3.2). | | | | | | | | |
| | DD - Submit proposed Air Infiltration Parameters to the BPCA for review and approval during the Design Development phase. | | | | | | | | |
| 2.1.4 Airtightness of Each Apartment | | | | | | | | | |
| 2.1.5 Exhaust Ventilation | DD - Submit specifications, schematics, and design calculations, and typical plan(s) indicating ducted exhaust system components | | | | | | | | |
| | CD - Update DD Submission. | | | | | | | | |
| 2.1.6 Provide Walk-off Grilles or Mats at Building Entrances | DD - Submit plan layout and details. | | | | | | | | |
| | CD - Update DD Submission. | | | | | | | | |
| 2.1.7 Provide Humidity Stabilization Throughout the Year | DD - Submit schematics and design calculations. | | | | | | | | |
| | CD - Update DD Submission. Submit Equipment Schedule | | | | | | | | |
| | C - Update CD Submission. | | | | | | | | |
| 2.1.8 Prohibit Thru-Wall Heating and Cooling Systems | PC - With As-Built submittals, provide testing results for representative units showing that the required conditions can be met year-round. | | | | | | | | |
| | DD - Submit confirmation that no thru-wall units are used. | | | | | | | | |
| 2.1.9 Air Duct Location Restrictions | DD - Submit plan layout and details of location of air ducts. | | | | | | | | |
| | CD - Update DD Submission. | | | | | | | | |
| 2.2 Low-Emitting Materials | | | | | | | | | |
| 2.2.1 Requirements for “Products Applied in the Field” | DD - Submit a Schedule of Products Applied in the Field stipulating compliance with the VOC/chemical component limits outlined in § 2.2.1. | | | | | | | | |
| | CD - Update DD Submission. | | | | | | | | |
| | C - Submit backup certification confirming compliance of each material to requirement during construction. | | | | | | | | |

| SCHEDULE OF SUBMISSION REQUIREMENTS (cont.) | | | | | | | | | 6 |
|---|--|---------------|----|----|---|----|----|-----|---|
| Section | Requirements | BPCA Comments | DD | CD | C | PO | PC | ALL | |
| 2.2.2 Requirements for Carpeting | DD - Submit a Carpeting Schedule and backup confirming compliance with requirement. | | | | | | | | |
| | CD - Update DD Submission. | | | | | | | | |
| | C - Submit backup certification confirming compliance of each material to requirement during construction. | | | | | | | | |
| 2.2.3 Prohibit the use of Added Urea-Formaldehyde in Wood Products | DD - Submit a Wood Products Schedule (see Submittals, § 3.8.1). | | | | | | | | |
| | CD - Update DD Submission. | | | | | | | | |
| | C - Submit backup certification confirming materials' compliance with requirement during construction. | | | | | | | | |
| 2.3 Controllability of Systems | | | | | | | | | |
| 2.3.1 Provide Programmable HVAC Controls | DD - Submit plan layout and specifications. | | | | | | | | |
| | CD - Update DD Submission. Submit Equipment Schedule, cuts and specification. | | | | | | | | |
| | PO - Include instructions for programming and operating HVAC controls in the Tenant Guide (see § 4.1.1). | | | | | | | | |
| 2.3.2 Provide Computerized Base Building BMS Systems or Equivalent Controls | DD - Submit description of system components Include in Maintenance Manual (see § 4.4.1). | | | | | | | | |
| | CD - Submit Equipment Schedule and specifications. | | | | | | | | |
| 2.4 Lighting & Daylighting | | | | | | | | | |
| 2.4.1 Increase Natural Light in Habitable Rooms by 30% over NYC Code | DD - Submit design calculations, plan layout, elevations, sections, and comparison to NYC code. | | | | | | | | |
| 2.4.2 Maintain Minimum Floor-to-Ceiling Heights of 8'-6" | DD - Submit plan layouts, elevations, and sections and include any areas being considered for heights inferior to 8'-6" | | | | | | | | |
| 2.5 Indoor Pest Control | | | | | | | | | |
| 2.5.1 Prepare and Implement an Integrated Pest Management Plan | CD - Submit an Integrated Pest Management Plan prior to beginning construction including all design measures to be incorporated into the building. | | | | | | | | |

| SCHEDULE OF SUBMISSION REQUIREMENTS (cont.) | | | | | | | | | | 7 |
|---|--|---------------|----|----|---|----|----|-----|--|---|
| Section | Requirements | BPCA Comments | DD | CD | C | PO | PC | ALL | | |
| 2.5.1 Prepare and Implement an Integrated Pest Management Plan (cont.) | C - Submit logs and post-occupancy report confirming implementation of IPMP. | | | | | | | | | |
| 2.5.2 Properly Seal, Caulk, and Repair Points of Entry, Habitation, and Breeding Areas to Mitigate Against Pest Occurrences | DD - Submit specifications and details. | | | | | | | | | |
| | CD - Update DD Submission. | | | | | | | | | |
| 2.5.3 Provide In-Sink Garbage Disposal Units | DD - Submit specifications and details. | | | | | | | | | |
| | CD - Update DD Submission. | | | | | | | | | |
| 2.6 Construction IAQ Management | | | | | | | | | | |
| 2.6.1 Develop and Implement an Indoor Air Quality Management Plan | DD - Submit outline of IAQ Management Plan | | | | | | | | | |
| | CD - Submit an IAQ Management Plan and specifications. | | | | | | | | | |
| | C - Submit proof of compliance with IAQ requirements outlined in § 2.6.1. | | | | | | | | | |
| 2.6.1.a Protect Absorptive Materials On-Site | C - Submit proof of compliance with IAQ requirements outlined in § 2.6.1. | | | | | | | | | |
| 2.6.1.b Protect Ductwork During Construction | PO - Submit log of filtration media replaced. | | | | | | | | | |
| 2.6.1.c Monitor IAQ During Construction | C - Submit monitoring logs showing IAQ data on a mutually agreeable basis. | | | | | | | | | |
| 2.6.1.d Implement Pest Management and Sanitation Procedures During Construction | CD - Prepare a pest-management plan and specification to be implemented during the pre-construction and construction phases. Follow the guidelines stipulated in the DDC's High Performance Building Guidelines, Appendix H, 1999 (http://www.ci.nyc.ny.us/html/ddc/home.html). | | | | | | | | | |
| | C - Submit proof of compliance. | | | | | | | | | |
| 3.0 Conserving Materials & Resources | | | | | | | | | | |
| 3.1 Storage & Collection of Recyclables | | | | | | | | | | |

| SCHEDULE OF SUBMISSION REQUIREMENTS (cont.) | | | | | | | | | 8 |
|--|--|---------------|----|----|---|----|----|-----|---|
| Section | Requirements | BPCA Comments | DD | CD | C | PO | PC | ALL | |
| 3.1.1 Provide Centralized and Accessible "Trash & Recycling" Rooms | DD - Submit plan layout, area calculations, and specifications | | | | | | | | |
| | CD - Update DD Submission. | | | | | | | | |
| | DD - Submit layout. | | | | | | | | |
| 3.1.2 Trash & Recycling Rooms | CD - Submit specifications/cuts of system. | | | | | | | | |
| | PO - Submit maintenance procedures. | | | | | | | | |
| | DD - Submit plan layout and area calculations. | | | | | | | | |
| 3.1.3 Centralized Trash & Recycling Holding Areas | CD - Update DD Submission. Submit details and specifications. | | | | | | | | |
| | | | | | | | | | |
| 3.2 Construction Waste & Resource Reuse | | | | | | | | | |
| 3.2.2 Develop a Waste Management Plan | CD - Submit Waste Management Plan during the Design Development phase for review and approval. Plan to include tabulation of total waste material, quantities diverted, and the means by which diverted. | | | | | | | | |
| 3.2.2 Maintain and Submit a Waste Management Log | C - Submit Waste Management Log Reports and affidavits from contractor stipulating compliance with the Waste Management Plan. Reports shall be submitted during construction on a monthly basis. Submit a calculated fractional percentage based on weight of recycled diverted materials divided by weight of total diverted materials. | | | | | | | | |
| | C - Submit a calculated fractional percentage based on weight of recycled diverted materials divided by weight of total diverted materials. | | | | | | | | |
| 3.3 Recycled Content | | | | | | | | | |
| 3.3.1 Use Materials with Recycled Content | DD - Submit Building Material Schedule identifying materials with recycled content and percentages of total materials | | | | | | | | |
| | CD - Submit a Recycled Materials Log as per the current USGBC's LEED matrix and formulas tracking content in the building. | | | | | | | | |
| | C - Update Recycled Materials Log. | | | | | | | | |
| 3.3.2 Fly Ash/Blast Slag | PC - Submit completed log and certification report. | | | | | | | | |
| | DD - Submit concrete mixes. | | | | | | | | |

| SCHEDULE OF SUBMISSION REQUIREMENTS (cont.) | | | | | | | | | 9 |
|--|--|---------------|----|----|---|----|----|-----|---|
| Section | Requirements | BPCA Comments | DD | CD | C | PO | PC | ALL | |
| 3.3.2 Fly Ash/Blast Slag (cont.) | CD - Submit calculated fractional percentages of recycled material | | | | | | | | |
| | C - Submit log on a monthly basis. Submit pertinent certifications from concrete/cement suppliers. | | | | | | | | |
| | PC - Submit completed Log and Certification Report. | | | | | | | | |
| 3.4 Local/Regional Materials | | | | | | | | | |
| 3.4.1 Use a Minimum of 50% Local/Regional Materials | DD - Submit Building Material Schedule indicating local materials as percentage of total materials. | | | | | | | | |
| | CD - Submit a Building Materials Provenance Schedule as per the current USGBC's LEED matrix and formulas tracking provenance of all materials in the building. Indicate evidence of transportation service by rail or water if applicable. | | | | | | | | |
| | C - Update Building Materials Provenance Schedule on a monthly basis. Submit all pertinent certifications of compliance and evidence of transportation service by rail or water if applicable. | | | | | | | | |
| | PC - Submit completed Log and Certification Report. | | | | | | | | |
| 3.5 Renewable & Rapidly Renewable Materials | | | | | | | | | |
| 3.5.1 Use Best Efforts to Specify Products with Renewable or Rapidly-Renewable Materials | DD - Submit Building Materials Schedule indicating renewable or rapidly renewable materials and quantity. | | | | | | | | |
| | CD - Submit a Memorandum delineating efforts made. | | | | | | | | |
| | C - Submit certification of renewable/rapidly renewable materials used during construction. Submit all pertinent certifications of compliance. | | | | | | | | |
| 3.6 CFC Elimination | | | | | | | | | |
| 3.6.1 Prohibit use of CFCs and CFC-Based Equipment | DD - Submit an HVAC Equipment Schedule confirming compliance with the BPCA's CFC policy. | | | | | | | | |
| | CD - Update DD Submission. Submit specification or cut sheets indicating no use of CFC based equipment. | | | | | | | | |

| SCHEDULE OF SUBMISSION REQUIREMENTS (cont.) | | | | | | | | | | 10 |
|--|---|---------------|----|----|---|----|----|-----|--|----|
| Section | Requirements | BPCA Comments | DD | CD | C | PO | PC | ALL | | |
| 3.6.2 Avoid Materials Manufactured with CFCs | DD - Submit Building Materials Schedule. | | | | | | | | | |
| | CD - Update DD Submission. | | | | | | | | | |
| | C - Submit specifications and confirmation (MSDS or otherwise) from manufacturer. | | | | | | | | | |
| 3.7 Alternative Transportation | | | | | | | | | | |
| 3.7.1 Bicycle Storage | DD - Submit plan layout/configuration and equipment for bicycle storage space. Submit calculation on quantity of bicycles. | | | | | | | | | |
| | CD - Update DD Submission. Submit specification on bicycle storage system. | | | | | | | | | |
| | PO - Include information about bicycle storage in Tenant Guide (see § 4.1.1). | | | | | | | | | |
| 3.7.2 Preferred Parking | DD - Submit plan layout showing area of preferred parking and indication of method to confirm high-performance. | | | | | | | | | |
| | CD - Update DD Submission. | | | | | | | | | |
| | PO - Submit copy of pertinent sections of agreement with parking provider. Include information about preferred parking spots in Tenant Guide (see § 4.1.1). | | | | | | | | | |
| 3.8 Certified Wood | | | | | | | | | | |
| 3.8.1 Use Certified Wood Products | DD - Submit Wood Products Schedule. | | | | | | | | | |
| | CD - Submit log on a monthly basis, including certification. | | | | | | | | | |
| | PC - Submit completed log and certification report. | | | | | | | | | |
| 3.8.2 Encourage Tenants to Use Certified Wood Products | PO - Include sustainable wood product information in Tenant Guide (see § 4.1.1). | | | | | | | | | |
| 3.9 Low-Pollution Fuels | | | | | | | | | | |
| 3.9.1 Use Low-Pollution Fuels | CD - Submit specifications and estimate of fuel to be used. | | | | | | | | | |
| | C - Submit affidavits certifying the use of low-pollution vehicles and fuels during construction. | | | | | | | | | |

| SCHEDULE OF SUBMISSION REQUIREMENTS (cont.) | | | | | | | | | 11 |
|---|---|--|----|----|---|----|----|-----|----|
| Section | Requirements | BPCA Comments | DD | CD | C | PO | PC | ALL | |
| 3.9.2 | Use Low-Pollution Diesel Equipment | CD - Submit specifications and/or manufacturer's data. | | | | | | | |
| | C - Submit confirmation of equipment. | | | | | | | | |
| 4.0 Education, Operations & Maintenance | | | | | | | | | |
| 4.1 | Education | | | | | | | | |
| 4.1.1 | Provide "Green Construction Practices" and Training to Construction Personnel | CD- Submit curriculum of training. | | | | | | | |
| | | C - Submit confirmation of trained attendees and dates of training. Provide hard hat sticker for participants. | | | | | | | |
| 4.1.2 | Green Team Leader | DD - Submit job description and proof of employment for GTL. | | | | | | | |
| 4.1.3 | Tenant Guide | DD - Submit outline of Tenant Guide | | | | | | | |
| | | CD - Submit developed, comprehensive Tenant Guide for approval. | | | | | | | |
| | | PO - Submit a final Tenant Guide before the first TCO. Provide Guide to tenants at lease signing in hard-copy form and as an on-line resource. | | | | | | | |
| 4.1.4 | Provide O&M Training to Building Operations Manager and Key Staff | CD - Submit curriculum of training | | | | | | | |
| | | PO - Submit confirmation of trained attendees and dates of training. | | | | | | | |
| 4.1.5 | Provide Bulletin Board or Web Screen in Lobby Area | DD - Submit plan layout/elevation showing location and size. | | | | | | | |
| | | CD - Submit details of system. | | | | | | | |
| | | PC - With As-Built submittals, include copies of material initially posted in the bulletin board/web screen. | | | | | | | |
| 4.2 | Commissioning | | | | | | | | |
| 4.2.1 | Engage an Independent Commissioning Authority | DD - Submit roster of team members and credentials. | | | | | | | |
| 4.2.2 | Develop and Utilize a Commissioning Plan | DD - Submit a Commissioning Plan. | | | | | | | |
| 4.2.3 | Incorporate Commissioning Requirements into Construction Documents | DD - Submit specifications, highlighting commissioning requirements. | | | | | | | |

| SCHEDULE OF SUBMISSION REQUIREMENTS (cont.) | | | | | | | | | 12 |
|---|--|---------------|----|----|---|----|----|-----|----|
| Section | Requirements | BPCA Comments | DD | CD | C | PO | PC | ALL | |
| 4.2.4 ICA Report | | | | | | | | | |
| 4.2.4.a Conduct a Design Development Review | DD - Submit an Initial Commissioning Report for design development review, and a Final Commissioning Report before issuance of contract documents. | | | | | | | | |
| 4.2.4.b Conduct a Construction Document Review | CD - Submit a Commissioning Report and a Final Commissioning Report before issuance of contract documents. | | | | | | | | |
| 4.2.4.c Review Contractor Submittals Relative to Systems Being Commissioned | C - Submit Commissioning Report documenting review of contractor submittals. | | | | | | | | |
| 4.2.4.d Provide Developer with a Complete Commissioning Report | PC - Submit final Commissioning Report. | | | | | | | | |
| 4.2.4.e Review Building Operation with O&M Staff | PC - Submit ICA report of building operation staffing plan. | | | | | | | | |
| 4.3 Building Systems Monitoring | | | | | | | | | |
| 4.3.1 Install and Maintain a Permanent BMS or Equivalent | DD - Submit schematic of Building Monitoring System. | | | | | | | | |
| | CD - Submit Building Monitoring Equipment Schedule and schematics. | | | | | | | | |
| 4.3.2 Submit an Air Quality Testing Protocol | CD - Submit air quality testing protocol. | | | | | | | | |
| | PO - Submit an Air Quality Profile at the time of initial occupancy, as outlined in § 4.3.2. Declare and summarize the installation, operational design, and controls/zones for any and all permanently installed monitoring systems. Include in Maintenance Manual. | | | | | | | | |
| 4.4 Maintenance Accountability | | | | | | | | | |
| 4.4.1 Prepare and Submit a Maintenance Manual | DD - Submit outline of Maintenance Manual. | | | | | | | | |
| | CD - Submit developed Maintenance Manual. | | | | | | | | |
| | PO - Submit a finalized Maintenance Manual prior to the first TCO. | | | | | | | | |
| 4.4.2 Include Key O&M Staff in the Design, Selection, and Commissioning of Building Systems and Equipment | DD - Submit a roster of the building's maintenance staff during the design phase. | | | | | | | | |

| SCHEDULE OF SUBMISSION REQUIREMENTS (cont.) | | | | | | | | | 13 |
|--|---|---------------|----|----|---|----|----|-----|----|
| Section | Requirements | BPCA Comments | DD | CD | C | PO | PC | ALL | |
| 4.4.3 Prepare an Annual Building Performance Report | CD - Submit outline of Annual Building Performance Report. | | | | | | | | |
| | PO - Submit developed Annual Building Performance Report. | | | | | | | | |
| | PC - Submit, by February 1 of each year after reaching 90% occupancy, an Annual Building Performance Report to BPCA and tenants. Specific requirements, metered systems, and format of Report to be determined by the developer and BPCA during construction. | | | | | | | | |
| 4.4.4 LEED [™] EB Certification | PC - Achieve and submit for LEED-EB certification every five years. Submit proof of certification to BPCA. | | | | | | | | |
| 5.0 Water Conservation & Site Management | | | | | | | | | |
| 5.1 Storm Water Management | | | | | | | | | |
| 5.1.1 Rain Water Collection Parameters | DD - Submit plan layout, design calculations, uses and schematics for necessary infrastructure. | | | | | | | | |
| | CD - Submit details of system. | | | | | | | | |
| 5.1.2 Adopt EPA Best Management Practices for Waste Water | CD - Submit memorandum during the Construction Documents phase describing BMP for harvesting rain water and using reclaimed water collected on-site, as well as schematics of measures incorporated. | | | | | | | | |
| 5.1.3 Provide "Reclaimed Water" Taps at Building Exterior | DD - Submit plan layout and specifications. | | | | | | | | |
| | CD - Update DD Submission. | | | | | | | | |
| 5.1.4 Design a Site-Specific Sediment and Erosion Control Plan | CD - Submit Sediment and Erosion Control Plan during the Construction Documents phase. | | | | | | | | |
| | C - Submit certification of conformance with above Sediment and Erosion Control Plan during construction. | | | | | | | | |
| 5.2 Water Use Reduction | | | | | | | | | |
| 5.2.1 Install Water-Conserving Fixtures | DD - Submit Equipment Schedule and design calculations. | | | | | | | | |
| | CD - Submit product cuts or specifications. | | | | | | | | |
| 5.2.2 Specify Low Water Volume/Conserving Equipment | DD - Submit Equipment Schedule and design calculations. | | | | | | | | |
| | CD - Submit specifications. | | | | | | | | |

| SCHEDULE OF SUBMISSION REQUIREMENTS (cont.) | | | | | | | | | 14 |
|---|---|--|----|----|---|----|----|-----|----|
| Section | Requirements | BPCA Comments | DD | CD | C | PO | PC | ALL | |
| 5.2.3 | Utilize Drip Irrigation Systems | CD - Submit plan layout and specifications. | | | | | | | |
| 5.3.1 | Treat and Reuse Waste Water with a Reclaimed Water Treatment System | DD - Submit design calculations and assumptions, system design schematics, plan layout, and description of system. | | | | | | | |
| | | CD - Update DD Submission. | | | | | | | |
| 5.3.2 | Use Ecology-Based Treatment Processes for Reclaimed Water | DD - See above. | | | | | | | |
| | | CD - Update DD Submission. Submit specifications to show use of ecology-based treatment processes as opposed to a chemical treatment system | | | | | | | |
| 5.3.3 | Use Reclaimed Water for Sewage Conveyance, Toilet Flushing, Cooling Tower Make-up, Irrigation, and Building Management Uses | DD - Submit design layout, system schematics and design calculations. | | | | | | | |
| | | CD - Update DD Submission. | | | | | | | |
| 5.3.4 | Minimize Chemical Maintenance in Cooling Tower | CD - Submit plan layout and specifications to show best efforts to minimize use of chemicals in the maintenance of cooling towers. | | | | | | | |
| 5.4 | Water Efficient & Responsible Landscaping Practices | | | | | | | | |
| 5.4.1 | Specify only BPCA/BPCPC Approved Plantings | DD - Submit schematic landscape drawings. | | | | | | | |
| | | CD - Submit specifications, and plant lists for review and approval. | | | | | | | |
| 5.4.2 | Specify only BPCA/BPCPC Approved Topsoils | CD - Submit topsoil specifications for review and approval. | | | | | | | |
| 5.4.3 | Landscape Maintenance Plan | CD - Submit outline of Landscape Maintenance Plan. | | | | | | | |
| | | PO - Submit landscape maintenance plan of sustainable landscape practices for all landscaped areas. | | | | | | | |
| 5.5 | Landscape and Roof Design to Reduce "Heat Islands" | | | | | | | | |
| 5.5.1 | Designate 75% of all Roof Area(s) as "Green" Roof Gardens | DD - Submit schematic roof landscape drawings, elevations, and area calculations | | | | | | | |

| SCHEDULE OF SUBMISSION REQUIREMENTS (cont.) | | | | | | | | | 15 |
|---|---|--|----|----|---|----|----|-----|----|
| Section | Requirements | BPCA Comments | DD | CD | C | PO | PC | ALL | |
| 5.5.1 | Designate 75% of all Roof Area(s) as "Green" Roof Gardens (cont.) | CD - Update DD Submission. Submit plant list and topsoil specification. | | | | | | | |
| 5.5.2 | Use High-Albedo Materials on Open Roof Areas | DD - Submit plan layout and material selection. | | | | | | | |
| | | CD - Submit specifications. | | | | | | | |
| 5.5.3 | Provide Street Trees as per HLCBPCA Requirements | DD - Submit street landscaping plans, specifications, and plant lists during the Design Development Phase for review and approval. | | | | | | | |
| | | CD - Update DD Submission. Submit builder's pavement plan. | | | | | | | |
| 5.6 | Light Pollution Reduction | | | | | | | | |
| 5.6.1 | Interior Lighting | DD - Submit Interior Lighting Plan, calculations, and narrative demonstrating compliance. | | | | | | | |
| | | CD - Update DD Submission. Submit specifications. | | | | | | | |
| 5.6.2 | Exterior Lighting | DD - Submit Exterior Lighting Plan, fixture schedule, calculations, and narrative demonstrating compliance. | | | | | | | |
| | | CD - Update DD Submission. Submit specifications. | | | | | | | |

| SCHEDULE OF SUGGESTED ADDITIONAL MEASURES SUBMISSION REQUIREMENTS | | | | | | | | | | 16 |
|---|--|---------------|----|----|---|----|----|-----|--|----|
| Section | Requirements | BPCA Comments | DD | CD | C | PO | PC | ALL | | |
| EE Add 1 Additional Energy Efficiency | PC - Confirmation of 35% overall energy efficiency after project is completed with on-site measurement (see § 4.3.1). Include in Annual Building Performance Report (see § 4.4.3). | | | | | | | | | |
| EE Add 2 Enthalpy Wheel | DD - Submit plan layout and specifications to show use of enthalpy heat wheel technology for year-round conditioning of air for 75% of apartments. | | | | | | | | | |
| | CD - Update DD Submission. | | | | | | | | | |
| EE Add 3 Geothermal | DD - Submit plan layout to show use of 30 tons cooling and heating using geothermal technology. | | | | | | | | | |
| | CD - Update DD Submission. Submit specifications. | | | | | | | | | |
| IAQ Add 1 Thermostat Connectivity | CD - Submit Equipment Schedule and specifications. Include in Maintenance Manual (see § 4.4.1). | | | | | | | | | |
| | PO - Update CD Submission. | | | | | | | | | |
| MR Add 1 Composting | DD - Submit outline plan for composting. | | | | | | | | | |
| | CD - Submit plan layout and specifications to show designated area for composting collection on each apartment floor or provide separate waste line for garbage disposals to a central point for composting. Include additional area on site for storage and in Maintenance Manual. | | | | | | | | | |
| | PO - Update CD Submission. Provide proof of 5-year agreement within building or via outside party showing use of compost produced. | | | | | | | | | |
| MR Add 2 Add. Recycled Content | C - Submit a Recycled Materials Log as per § 3.3.1, confirming use of recycled materials for 20% of the total value of materials in the project. | | | | | | | | | |
| MR Add 3 Renewable Materials | C - Submit a Recycled Materials Log, confirming use of renewable bio-based materials, as defined in the Glossary, for 2% of the total value of materials in the project. | | | | | | | | | |
| OP Add 1 Life Cycle Analysis | CD - Submit an Environmental Impact Assessment of the proposed building, showing the overall life cycle analysis of the building. The analysis / assessment should be done using the Athena Institute's Environmental Impact Estimator system, or an equivalent methodology approved in advance by the BPCA. | | | | | | | | | |

| SCHEDULE OF SUGGESTED ADDITIONAL MEASURES SUBMISSION REQUIREMENTS (cont.) | | | | | | | | | 17 |
|---|--|---------------|----|----|---|----|----|-----|----|
| Section | Requirements | BPCA Comments | DD | CD | C | PO | PC | ALL | |
| WC Add 1 Intensive Green Roof | DD - Submit plan layout and specifications to show intensive green roof cover over 75% of all roof area over conditioned space and including terraces, not used for mechanical equipment or skylights. | | | | | | | | |
| | CD - Update DD Submission. | | | | | | | | |
| WC Add 2 Additional Green Roof | DD - Submit plan layout and specifications to show additional green roof cover over 90% of all roof area over conditioned space and including terraces, not used for mechanical equipment or skylights. System to be intensive for at least 50% of green roof. | | | | | | | | |
| | CD - Update DD Submission. | | | | | | | | |

| ADDITIONAL DOCUMENT SUBMITTALS | | | | | | | | |
|--------------------------------------|--|----|----|---|----|----|-----|--|
| Submittal | Requirement | DD | CD | C | PO | PC | ALL | |
| Cost Analysis | Submit a cost analysis of all green features. Format shall be as per the Residential Environmental Guidelines Independent Cost Impact Study of 2003, prepared by Skanska USA Building Inc. | | | | | | | |
| Agency Approvals | Submit to BPCA copies of all agency approvals. | | | | | | | |
| As-Built Drawings & Specifications | Submit to BPCA copies of as-built drawings and specifications. | | | | | | | |
| LEED [™] NC Submission | Submit to BPCA copies of USGBC LEED [™] NC submission and any CIR or follow-up information. | | | | | | | |
| LEED [™] EB Submission | Submit to BPCA copies of format for LEED [™] EB submission with subsequent full document submission at 5-year intervals. | | | | | | | |
| LEED [™] CI Support | Submit to BPCA supporting core and shell documentation required for them to submit for LEED [™] Commercial Interiors. | | | | | | | |
| Annual Building Report | Submit to BPCA copies of outline of Annual Building Report and submittal after one year of occupancy. | | | | | | | |
| Commissioning Report | Submit to BPCA copies of the Commissioning Report. | | | | | | | |
| Maintenance Manual | Submit to BPCA copies of Maintenance Manual, electronically and as a hard copy. | | | | | | | |
| Tenants Manual | Submit to BPCA copies of Tenant Guide, required before initial occupancy. | | | | | | | |
| Green Building Tax Credit Submission | Submit to BPCA copies of Green Building Tax Credit submission, if applicable. | | | | | | | |

EXHIBIT G

BPCA Commercial/Institutional Environmental Guidelines (2002)



HUGH L. CAREY
BATTERY PARK
CITY AUTHORITY

Commercial Institutional Environmental Guidelines



Hugh L. Carey Battery Park City Authority Commercial / Institutional Environmental Guidelines 1.0

George E. Pataki
Governor, State of New York


James F. Gill
Chairman

Charles J. Urstadt
Vice Chairman

David Cornstein
Board Member

Timothy S. Carey
President & Chief Executive Officer

March 2002



Sponsored By:
Hugh L. Carey Battery Park City Authority
New York State Energy Research and Development Authority
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Vision Statement

These Guidelines reinforce the leadership position of the Hugh L. Carey Battery Park City Authority (HLCBPCA) in the field of environmentally responsible design.

With the active encouragement and support of Governor George E. Pataki, HLCBPCA is setting standards for healthy and sustainable environments. The predecessors to these guidelines, HLCBPCA Residential Guidelines, are responsible for the first “Green” residential tower in the United States. With the Commercial/Institutional Guidelines, HLCBPCA seeks to bring the same leadership to the field of Commercial and Institutional projects. All future buildings built under its direction would be at the forefront of ecologically responsible design and would be responsible for educating and influencing the Real Estate market and the Construction industry.

Mission Statement

The purpose of the HLCBPCA Commercial/Institutional Guidelines is to provide both the direction and the metrics for design strategies such that the resultant buildings are outstanding examples of environmental responsibility.

Introduction

Sustainable Design

Sustainable design is “meeting the needs of the present without compromising the ability of future generations to meet their own needs.” In most instances this is a “common sense” approach to development that prevents further depletion of natural resources, air pollution, and global warming. This approach decreases dependency on non-renewable resources while improving opportunities for more efficient and more economical alternatives that are sustainable.

Market Strategy

The following guidelines adhere to the most current thinking with respect to sustainable design strategies and are a vehicle for the development of commercial and institutional buildings that are both environmentally and financially rewarding. The guidelines have been designed specifically for the Hugh L. Carey Battery Park City Authority (HLCBPCA), an established leader in urban development. The guidelines respond to increased public awareness of environmental conservation and increased demand for high quality and healthier working environments. Incorporating sustainable principles in the development of the commercial and institutional buildings serves to enhance the current marketing strategies that continue to make Battery Park City a model for urban development.

Total System Approach

A total system approach is the backbone of the guidelines and the best approach to achieving the desired result in a cost effective manner over the life of a building. One of the financial goals of a total system approach is to minimize the impact on first costs (construction costs) by offsetting increases from some requirements with decreases from others. While it is understood that this is a New York City commercial and/or institutional development with customary relationships between owners and occupants, it is anticipated that both developer and tenant will comply with the HCLBPCA green commercial guidelines. The developer will be making significant investments in innovative building systems that will enhance building performance in indoor environmental quality, water conservation, lighting, and energy use. The tenant will share in the benefits of those investments. Careful evaluations must be made of the first costs, operational savings, building performance, potential benefits and how developer and tenants will reasonably participate in those costs and benefits.

Execution

Successful execution of the guidelines depends on owners, developers, tenants, design professionals, and contractors beginning their dialogue at the earliest stages of design to ensure the proper and cost effective realization of sustainable solutions. These guidelines do not represent a complete resource, but rather a framework of concepts that may be interpreted and refined by the individual design teams to achieve the desired result. While some

Introduction

of the requirements are prescriptive, most are purposely goal oriented to provide for creative solutions in response to rapidly changing technologies and to avoid conflict with evolving policies, regulations, and building codes.

Rebuilding Green

These Guidelines are being issued, after the tragic events of September 11 2001, in a world very different from the one in which they were originally conceived. While its true that events such as the terrorist attack, their causes and their effects are factors much larger than those a set of building guidelines can hope to address, these Guidelines would like to utilize this opportunity to:

- a) Ensure that the construction guided by it is, inherently, safer. This would not be achieved by providing more security, but instead by promoting decentralized technologies, such as distributed generation, which make it difficult to immobilize systems by attacking single components.
- b) Setting very progressive, yet practical, standards for Indoor Air Quality (IAQ) so that structurally sound buildings can become safe havens instead of becoming places of danger.

Coordination with LEED

The Guidelines are closely coordinated with United States Green Building Council's (USGBC) "Leadership in Energy and Environmental Design Version 2 (LEED V2)" of June 2001. It is the intention of these Guidelines to help create buildings that achieve the LEED "Gold" rating. However, HLCBPCA is guided by a unique set of concerns that, at times, vary from LEED V2. While LEED V2 is a ratings system, these Guidelines are mandatory.

Every section of the Guidelines references the relevant section from LEED V2 - typically, as a footnote at the bottom of every page. The tally of points is subdivided into two columns: "BPCA Score" and "LEED Possible". The first column tallies the number of LEED points scored when implementing any of the Guidelines. The second column tallies the maximum number of achievable points. A running tally is kept through the entire set of Guidelines.

The LEED V2. can be downloaded, free of charge, from:

<http://www.usgbc.org>

LEED Green Building Certification Levels

| | | | |
|-------------------------------|---|-------|--------|
| LEED Certified | = | 26-32 | Points |
| LEED Certified Silver Level | = | 33-38 | Points |
| LEED Certified Gold Level | = | 39-51 | Points |
| LEED Certified Platinum Level | = | 52+ | Points |

Disclaimer

- 1) While these guidelines closely relate to LEED V2, they don't provide any guarantees for obtaining any LEED certification.
- 2) The Guidelines record, in the footnotes, only those LEED V2 points that are pertinent to them.
- 3) The sequence of the Guidelines' points does not always match the sequence of the LEED V2 equivalents.

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1.0 Site Management

1.1 General Provisions

Intent:

Minimize the impact to the surrounding environment by managing storm water, protecting below grade conditions, and maintaining air quality standards. Maximize the amount of open space and eliminate light pollution.

Assumptions:

Battery Park City is an urban development within New York City that benefits from its density and infrastructure.

The earliest ideas for Battery Park City were precipitated by the collapsing status of 20 piers in the Hudson River. The solution was to build this "unprecedented new city" on top of the shipping terminals, with an esplanade along the edge. A new bulkhead line was created and these piers were filled in with landfill. Streets and sidewalks are at grade level and form an extension of Manhattan's grid and mass transit systems. Additionally, these Guidelines call for all new paved surfaces to increase existing permeability and to reduce storm water run-off.

Projects developed on sites within Battery Park City are responding to site concerns by participating in a conscious and managed site plan that encourages high density development and counteracts the effects of urban sprawl and loss of open space, agricultural land, wetlands, and the disturbance of natural habitats. The process creates new public park lands within the city. Battery Park has played a crucial role in revitalizing the residential and commercial aspects of lower Manhattan and in checking the historic deterioration of an existing urban environment.

Site
Credit
1(1Pt)

Site
Credit
2(1Pt)

Requirements:

Design to a site sediment and erosion control plan, as applicable in the unique circumstances of HLBPCA sites, conforming to EPA's storm water management for construction activities; EPA document # EPA 832-R-32-5, Chapter 3.

Take necessary steps to conserve topsoil, if present.

Methods could include seeding and mulching.

Eliminate erosion into adjacent receiving waters. Any appropriate method may be used including straw-bales.

Site
Pre-
Req.

Relevant Section from LEED V2

| | <i>Intent:</i> | BPCA Score | LEED Possible |
|---------------------------|--|---------------|------------------|
| Site Pre-Requisite | Control erosion to reduce negative impacts on water and air quality. | - | - |
| Site Credit: 1 | Avoid development of inappropriate sites and reduce the environmental impact from the location of a building on a site. | 1 | 1 |
| Site Credit: 2 | Channel development to urban areas with existing infrastructure, protecting green fields and preserving habitat and natural resources. | 1 | 1 |
| | TOTAL | 2 | 2 |

1.0 Site Management

1.2 Landscape & Roof Design to Reduce "Heat Islands."

Intent:

Minimize contribution to "Heat Islands" (thermal gradient differences between developed and undeveloped areas) and reduce the amount of heat gain/loss through the roof.

Requirements:

- .1 Maximize amount of area for planted or "green" roof gardens (i.e., grass or other vegetative material) "Green" roofing is required for 75% of all non-mechanical roof area or 50% of all roof area, whichever is higher.
- .2 All other roof areas to use roof materials with an Albedo reflectance value of at least 0.3(after 3 years of use).
- .3 Provide street trees per Hugh L. Carey Battery Park Conservancy (HLCBPC) requirements.
- .4 Pedestrian and low vehicular traffic areas to be paved with paving systems with minimum 33% permeability.

Site
Credit
7(1pt)

Site
Credit
7(1pt)

Technologies/Strategies:

- Provide vegetated surfaces such as green roofs and/or grass paving systems that are water efficient.
- Provide trees to shade exposed surfaces.
- Use high *Albedo* roofing and roof paving materials.

Cost Implications:

- Increased first cost to structure, drainage, and waterproofing.
- Reduced energy consumption due to reduced heat gains/losses.
- Reduced cost of mechanical equipment (and possibly reduced cost of structure due to downsized mech.).
- Potential for longer roof life because of diminished wear from thermal expansion and contraction.

Funding Sources:

- None at this time.

Relevant Section from LEED V2

| | <i>Intent:</i> | BPCA Score | LEED Possible |
|--------------------------|---|---------------|------------------|
| Site Credit 7 | Reduce heat islands (thermal gradient differences between developed and undeveloped areas) to minimize impact on microclimate and human and wildlife habitat. | | |
| | Provide shade (within 5 years) on at least 30% of non-roof impervious surface on the site, including parking lots, walkways, plazas, etc., OR, use light-colored/ high-albedo materials (reflectance of at least 0.3) for 30% of the site's non-roof impervious surfaces. | 1 | 1 |
| | Install a "green" (vegetated) roof for at least 50% of the roof area. | 1 | 1 |
| | SUBTOTAL | 2 | 2 |
| | TOTAL (Cumulative across Sections) | 4 | 4 |

1.0 Site Management

1.3 Alternative Transportation

Intent:

Limit contributions to pollution and the use of non-renewable energy sources for transportation by encouraging the use of bicycles and alternative-fuel driven vehicles.

Requirement

- .1 Provide enclosed bicycle storage for a minimum of 5% of building occupants.
- .2 Provide showers, lockers and changing facilities for bicycle commuters (health club facilities within the building may satisfy this requirement if these bicyclists are not required to pay a fee for use of the facility).
- .3 Install electric-recharging stations(s) for 3% of the total vehicle parking capacity of the site.
- .4 Dedicate 5% of parking spaces to car-pooled ridership.

Site
Credit
4(1pt)

Site
Credit
4(1pt)

Technologies/Strategies:

- The availability of appropriate storage will encourage occupants to commute using bicycles.
- When bicycle storage is not adequately provided and bicycles are stored in places with finishes that are not designed for heavy dirt and traffic, there is a consequent increase in maintenance expenses and an effect on the quality of the indoor environment.

Cost Implications:

- Cost of storage space.
- Decrease in maintenance.
- Increased longevity of building finishes.

Funding Sources:

- None at this time.

Relevant Section from LEED V2

| | <i>Intent:</i> | BPCA Score | LEED Possible |
|--------------------------|--|---------------|------------------|
| Site Credit 4 | Reduce pollution and land development impacts from automobile use. | | |
| | Locate building within ½ mile of a commuter rail, light rail or subway station or ¼ mile of 2 or more bus lines. | 1 | 1 |
| | Provide suitable means for securing bicycles, with convenient changing/shower facilities for use by cyclists, for 5% or more of building occupants. | 1 | 1 |
| | Install alternative-fuel refueling station(s) for 3% of the total vehicle parking capacity of the site. Liquid or gaseous fueling facilities must be separately ventilated or located outdoors. | 1 | 1 |
| | Size parking capacity not to exceed /to meet only minimum local zoning requirements AND provide preferred parking for carpools or van pools capable of serving 5% of the building occupants. OR, add no new parking for rehabilitation projects AND provide preferred parking for carpools or van pools capable of serving 5% of the building occupants. | 0 | 1 |
| | SUBTOTAL | 3 | 4 |
| | TOTAL (Cumulative across Sections) | 7 | 8 |

2.0 Water Conservation

2.1 General Provisions

Intent:

Minimize water consumption by reducing both inflows of processed, city-supplied water and outflow of wastewater. Adopt Best Management Practices (BMP, as published by the Office of Wastewater, Environmental Protection Agency (EPA) and available at www.epa.gov/owm/mtb/runoff.pdf) for harvesting storm water and using reclaimed water generated on-site. Conserve potable water by reducing demands for landscaping, irrigation and other non-potable uses.

Assumptions:

Projects developed on sites within Battery Park City are responding to landscaping and irrigation concerns by participating in a conscious and managed landscape plan that encourages responsible and sustainable landscaping practices, utilizes native and adaptive plantings, high efficiency irrigation and sewage-conveyance technologies, and creates new public park lands within the city.

2.0 Water Conservation

2.2 Storm Water Management

Intent:

Minimize the impact of storm water on the NYC systems and minimize the use of potable water for maintenance and landscaping purposes by treating and recycling water.

Requirement:

- .1 Provide for 100% of all roof and setback rainwater run-off to be collected for maintenance and landscape irrigation by providing on site storage, treatment and infrastructure. Any excess may be considered by HLCBPCA for use in adjacent landscaping.

Site
Credit
6(1Pt)

Technologies/Strategies:

- Storm water storage cisterns above/below the ground.
- Permeable paving for reducing storm-water run-off.

Cost Implications:

- Increased first costs to plumbing infrastructure.
- Savings on water and sewage costs.
- Future water cost avoidance.
- Decreased demand on city infrastructure.
- Water available during drought conditions.

Funding Sources:

- None at this time.

Relevant Section from LEED V2

| | <i>Intent:</i> | BPCA Score | LEED Possible |
|--------------------------|---|---------------|------------------|
| Site Credit 6 | Limit disruption of natural water flows by eliminating minimizing storm water runoff, increasing on-site infiltration and reducing contaminants. | | |
| | No net increase in the rate or quantity of storm water runoff from existing to developed conditions; OR, if existing imperviousness is greater than 50%, implement a stormwater management plan that results in a 25% decrease in the rate and quantity of stormwater runoff. | 1 | 1 |
| | Treatment systems designed to remove 80% of the average annual post development total suspended solids (TSS), and 40% of the average annual post development total phosphorous (TP), by implementing Best Management Practices (BMPs) outlined in EPA's Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters (EPA 840-B-92- 002 1/93). | 0 | 1 |
| | SUBTOTAL | 1 | 2 |
| | TOTAL (Cumulative across Sections) | 8 | 10 |

2.0 Water Conservation

2.3 Water Use Reduction

Intent

Minimize the use of potable water by reducing water needs.

Requirements:

- .1 Reduce the overall water usage of the project and install fixtures that in aggregate use 20% less water than the water usage requirements in the Energy Policy Act of 1992.
- .2 Specify water-less urinals.
- .3 Specify delimiters for cooling towers to reduce evaporation and drift.
- .4 Specify automatic shut-off faucets for all lavatories.

Water
Credit
3(2Pt)

Technologies/Strategies:

- Specify low water volume/conserving fixtures, toilets, appliances and dishwashers. Specify waterless urinals.
- Additional water savings, over and above that provided by "low-flow" fixtures, is envisaged from waterless urinals/reclaimed water. Structure water use calculations to substantiate this.
- Consider alternative sources for cooling tower makeup water.
- Install timers on irrigation systems.

Cost Implications:

- Slight increase in first costs.
- Certain kinds of water-less urinals could result in reduced first costs due to reduced plumbing.
- Savings on water and sewage costs.
- Increased energy savings (pumping).

Funding Sources:

- NYS Green Building Tax Credit

Relevant Section from LEED V2

| | <i>Intent:</i> | BPCA Score | LEED Possible |
|---------------------------|---|---------------|------------------|
| Water Credit 3 | Maximize water efficiency within buildings to reduce the burden on municipal water supply and wastewater systems. | | |
| | Employ strategies that in aggregate use 20% less water than the water use baseline calculated for the building (not including irrigation) after meeting Energy Policy Act of 1992 fixture performance requirements. | 1 | 1 |
| | Exceed the potable water use reduction by an additional 10% (30% total efficiency increase). | 1 | 1 |
| | SUBTOTAL | 2 | 2 |
| | TOTAL (Cumulative across Sections) | 10 | 12 |

2.0 Water Conservation

2.4 Innovative Water Technologies

Intent

Use reclaimed water, generated on-site, to substitute potable water for non-human consumption. This minimizes both intake of water filtered and processed by municipal authorities as well as reduces the output of wastewater by the building.

Requirements:

- .1 Use reclaimed water to flush toilets, for cooling tower make-up, and for irrigation (if applicable and properly treated).
- .2 Provide separate supply infrastructure for the reclaimed water systems.
- .3 Locate reclaimed water systems and components on site. Use ecology based natural filtering technology as opposed to chemical treatment. Provide adequate space within the building for storage, treatment and necessary infrastructure.

Water
Credit
2(1Pt)

Technologies/Strategies:

- Capture graywater from lavatories, showers and institutional dishwashing facilities for treatment and reuse by the base building operations.
- Exceed the requirement by treating all wastewater (a.k.a. blackwater) and reduce plumbing costs associated with separate systems.

Cost Implications:

- Increased first costs to plumbing infrastructure.
- Savings on water and sewage costs.
- Decreased demand on infrastructure.
- Water available during drought conditions.

Funding Sources:

- None at this time.

Relevant Section from LEED V2

| | <i>Intent:</i> | BPCA Score | LEED Possible |
|---------------------------|--|---------------|------------------|
| Water Credit 2 | Reduce generation of wastewater and potable water demand, while increasing the local aquifer recharge. | | |
| | Reduce the use of municipally provided potable water for building sewage conveyance by a minimum of 50%, OR, treat 100% of wastewater on site to tertiary standards. | 1 | 1 |
| | SUBTOTAL | 1 | 1 |
| | TOTAL (Cumulative across Sections) | 11 | 13 |

2.0 Water Conservation

2.5 Water Efficient & Responsible Landscaping Practices

Intent

Minimize the use of potable water for building and grounds maintenance. Eliminate the use of potable water for irrigation after initial establishment period. Avoid using pesticides, herbicides, or fertilizers that may pollute the environment.

Requirements:

- .1 Specify 100% of plantings to be those that (depending on reclaimed water availability) require low amounts of water and that are pest and disease resistant per HLCBPCA Parks Conservancy requirements.
- .2 Use non-toxic pesticides, herbicides, and fertilizers per HLCBPCA Parks Conservancy requirements.
- .3 Provide only clearly labeled storm water / reclaimed water taps, accessible only to building maintenance staff, for building maintenance, sidewalk washing etc.
- .4 Specify drip irrigation systems programmed for efficient use. No potable water would be utilized to run these systems.

Innov
Credit
1(1pt)

Water
Credit
1(2Pt)

Technologies/Strategies:

- Employ best practices for landscape development by properly establishing plantings, using pesticides as a last resort with an Integrated Pest Management program, and by avoiding highly water-soluble pesticides per HLCBPCPC requirements.

Cost Implications:

- No first cost implications
- Decrease in Maintenance and Operating Costs
- Future Water cost avoidance
- Extended Life of Plantings

Funding Sources:

- None at this time.

Relevant Section from LEED V2

| | Intent: | BPCA Score | LEED Possible |
|----------------------------|---|------------|---------------|
| Water Credit 1 | Limit or eliminate the use of potable water for landscape irrigation. | | |
| | Use high efficiency irrigation technology, OR, use captured rain or recycled site water to reduce potable water consumption for irrigation by 50% over conventional means. | 1 | 1 |
| | Use only captured rain or recycled site water for an additional 50% reduction (100% total reduction) of potable water for site irrigation needs, OR, do not install permanent landscape irrigation systems. | 1 | 1 |
| Innovation Credit 1 | To provide design teams and projects the opportunity to be awarded points for exceptional performance above requirements set by the LEED Green Buildings System and/or innovative performance in Green Building categories not specifically addressed by the LEED Green Building Rating System. | 1 | 1 |
| | SUBTOTAL | 3 | 3 |
| | TOTAL (Cumulative across Sections) | 14 | 16 |

3.0 Energy Efficiency

3.1 General Provisions

Intent:

Improve whole building energy performance, reduce operating costs, and reduce the environmental impact associated with energy consumption. Maximize energy efficiency and use available technologies to evaluate energy performance throughout the design process. Maximize opportunities for on-site power generation from high efficiency cogeneration plants (plants able to capture waste-heat from electricity generation; utilizing it for production of steam to produce chilled water or additional electricity etc.), renewable energy sources and green power sources.

Energy
Pre-
Req 2

Assumptions:

Developments will be designed to exceed the requirements of the New York State Energy Code.

An integrated architectural/engineering design approach for base building and tenant systems will be required.

As a development within the urban boundaries of New York City, power will be carried via the existing infrastructure and, therefore, there will be no disturbance of the local environment that would otherwise be necessary to bring power to the site.

Relevant Section from LEED V2

| | <i>Intent:</i> | BPCA Score | LEED Possible |
|-------------------------|--|---------------|------------------|
| Energy Pre-Req 2 | Establish the minimum level of energy efficiency for the base building and systems. | | |
| | Design to meet building energy efficiency and performance as required by ASHRAE/IESNA 90.1-1999 or the local energy code, which ever is the more stringent. Analyze expected baseline building performance using the System/ Component Method. | - | - |
| | SUBTOTAL | - | - |
| | TOTAL (Cumulative across Sections) | 14 | 16 |

3.0 Energy Efficiency

3.2 Maximize Energy Efficiency

Intent:

Maximize energy performance, reduce operating costs, and reduce the environmental impact associated with energy consumption.

Requirements:

- .1 Increase energy efficiency by 30% over ASHRAE 90.1 of 1999 (At an efficiency increase of 35% over New York State Energy Code, a building would achieve energy efficiency standards set in the New York State Green Buildings Tax Credit (NYSGBTC) regulations).
- .2 In the occupied base building and tenant areas, provide energy efficient fluorescent fixtures with daylight dimming systems, for all perimeter spaces.
- .3 Provide motion sensors in 100% of stairs, toilet rooms, storage rooms and 75% of MER spaces.
- .4 Use LED "EXIT" signs throughout the building.
- .5 Use at a minimum, exterior glazing that incorporates double glazed units with low "e", spectrally selective high-performance glass (0.25 shading coefficient, and 0.33 U value center of glass). Frames should have thermal breaks and insulated spacers.
- .6 Provide underfloor air delivery system for the building.
- .7 Major tenants will be required to follow a "Tenant Guide", prepared by the developer. This will specify the use of efficient lamps and lighting fixtures, daylight dimming controls, occupancy sensors, "Energy Star" personal computers, office equipment and appliances. Additionally, the guide will describe high-performance design features and systems utilized in the building, along with performance benefits in operating cost-savings, indoor environmental quality, occupant health and well-being and reduced environmental impact. The Guide will be made available to all building tenants and to their design professionals enabling better integration of tenant architectural, mechanical, electrical and lighting systems with the base building design.
- .8 Provide training to tenants, their designers and their facility managers on the energy efficiency measures incorporated into the design and on practices that tenants could adopt to exploit energy efficiency measures to the fullest.

Energy
Credit
1(4Pt)

Innov
Credit 2
(1pt)

Technologies/Strategies:

- Control infiltration through exterior openings, such as loading docks, lobby entrances, exterior doors, and pedestrian bridges. Reduce air leakage and thermal losses by specifying low-leakage sealing methods and better duct insulation. Consider thermal buffer zones for atriums and exterior corridors.
- Use state-of-the-art technologies for glazing, curtain wall and building envelope design/construction enhancing thermal performance.

3.0 Energy Efficiency

3.2 Maximize Energy Efficiency (cont.)

- Account for solar orientation of the building. The orientation of the different elevations should inform their design so as to increase/reduce solar gain, daylighting etc.
- Optimize interior architectural systems for daylighting and glare control, such as light shelves and daylight enhancing ceiling configurations, interior clerestories, light wells and solar shading devices. (blinds and louvers). Use daylight dimming controls for perimeter lighting zones
- Configure high efficiency lighting systems with a lighting control system, integrated with the Building Management System.
- "Right-size" mechanical equipment for each floor taking into account high performance envelope, partial or off-hour loads.
- Utilize premium efficiency motors. Size motors and power correction equipment to reduce power factor losses. Use components that have been designed and optimally sized to respond to part load conditions (peak and off-peak loads), i.e., Variable Air Volume air handling units, variable frequency drives for fans and pumps.
- Consider higher building power utilization voltages to reduce distribution losses.
- Investigate the most energy efficient power, heating and cooling systems.

Relevant Section from LEED V2

| | Intent: | BPCA Score | LEED Possible |
|----------------------------|--|-----------------|---------------|
| Energy Credit 1 | Achieve increasing levels of energy performance above the prerequisite standard to reduce environmental impacts associated with excessive energy use. | | |
| | Exceed the requirements of ASHRAE Standard 90.1-1999, demonstrated by a whole building simulation, by the following: Reduce design energy cost compared to the energy cost budget for regulated energy components described in the requirements of ASHRAE/IESNA Standard 90.1-1999, as demonstrated by a whole building simulation using the Energy Cost Budget Method described in Section 11. | 4 | 10 |
| | New Bldgs. | Existing Bldgs. | Points. |
| | 20% | 10% | 2 |
| | 30% | 20% | 4 |
| | 40% | 30% | 6 |
| | 50% | 40% | 8 |
| | 60% | 50% | 10 |
| | Regulated energy components include HVAC systems, building envelope, service hot water systems, lighting and other regulated systems as defined by ASHRAE. | | |
| Innovation Credit 2 | To provide design teams and projects the opportunity to be awarded points for exceptional performance above requirements set by the LEED Green Buildings System and/or innovative performance in Green Building categories not specifically addressed by the LEED Green Building Rating System. | 1 | 1 |
| | SUBTOTAL | 5 | 11 |
| | TOTAL (Cumulative across Sections) | 19 | 27 |

3.0 Energy Efficiency

3.2 Maximize Energy Efficiency (cont.)

Technologies/Strategies:

- Cooling system components should be optimized together, including chiller, cooling tower, pumping, and distribution. Consider variable cooling tower temperature control.
- Consider load-matching strategies to optimize system capacities for part load conditions.
- Evaluate night purge/mass-coupled thermal storage control strategies.
- Consider Demand Controlled Ventilation (DCV) HVAC controls with CO₂ sensors.
- Use low face-velocity coils and filters.
- Select air diffusers with high induction ratios, low-pressure drop, and good part-flow performance.
- Optimize duct sizes to reduce pressure losses, which reduces fan energy.
- Evaluate potential heat recovery from spill or exhaust air stream. Consider heat recovery using heat pumps or run-around hydronic loops for supply air reheat.
- Consider radiant heating/cooling systems (closed loop water circulation) for large areas with frequent exposure to ambient conditions, such as loading docks.

Cost Implications:

- By “right-sizing” the mechanical equipment serving the tenants and base building there should be a significant first cost savings in equipment, piping, and wiring. This savings can be used for higher quality exterior envelope components, more efficient lighting, and controls.
- Demand Controlled Ventilation can save energy by reducing unnecessary over-ventilation while maintaining target CFM per person rates.
- Substantial energy savings will be achieved.
- Equipment life cycles will be increased and operating costs will be reduced.

Funding Sources:

- NYS Green Building Tax Credit
- NYSERDA.
- New York Power Authority (NYPA). Funding requests are considered on a case-by-case basis.
- U.S. Department of Energy

3.0 Energy Efficiency

3.3 Modeling for Energy Performance

Intent:

Use DOE-2 or similar computer models to forecast energy performance. Evaluate opportunities to reduce operating costs, as well as the environmental impact associated with energy consumption, and help “right size” mechanical/electrical systems.

Requirement:

- .1 The HLCBPCA will provide the initial DOE-2 or equivalent energy model. The owner’s engineering consultant will take this model and add data as the design progresses in order to evaluate the energy efficiency of the building

Technologies/Strategies:

- Utilize computer modeling to facilitate an interactive process by which the owner, architect, engineer, and contractor team can adequately explore opportunities for energy conservation.

Cost Implications:

- Substantial energy savings.
- Potential increase in professional fees.

Funding Sources:

- NYSERDA

3.0 Energy Efficiency

3.4 Renewable Energy

Intent:

Employ the use of on-site, non-polluting, source-renewable technologies to reduce pollutants in the atmosphere, reduce operating costs, and reduce the environmental impact associated with energy consumption.

Requirements:

- | | | |
|----|---|----------------------|
| .1 | Provide fuel-cell generated power at a minimum rate of 500kW/1,000,000 s.f. of (gross) area or a fraction thereof. | Innov' Credit 3(1Pt) |
| .2 | Provide Building Integrated Photovoltaic (BIPV) panels that contribute a minimum of 5% of the base building (as defined in the NYSGBTC regulations, ref: Glossary) electrical load. | Energy Credit 2(1Pt) |

Technologies/Strategies:

- Specify adaptable equipment that can accept multiple fuel sources (i.e. bio fuels versus natural gas).

Cost Implications:

- Increase to first costs with long-term payback.
- It is expected that fuel cells will some day be able to produce electricity below today's costs.

Funding Sources:

- NYS Green Building Tax Credit
- NYSERDA
- U.S. Department of Energy

Relevant Section from LEED V2

Intent:

| | <i>Intent:</i> | BPCA Score | LEED Possible |
|----------------------------|---|---------------|------------------|
| Innovation Credit 3 | To provide design teams and projects the opportunity to be awarded points for exceptional performance above requirements set by the LEED Green Buildings System and/or innovative performance in Green Building categories not specifically addressed by the LEED Green Building Rating System. | 1 | 1 |
| Energy Credit 2 | Encourage and recognize increasing levels of self-supply through renewable technologies to reduce environmental impacts associated with fossil fuel energy use. % of total energy cost in renewables Points. | | |
| | 5% 1 | 1 | 2 |
| | 10% 2 | | |
| | SUBTOTAL | 2 | 3 |
| | TOTAL (Cumulative across Sections) | 21 | 30 |

3.0 Energy Efficiency

3.5 Green Power Sources

Intent:

Reduce environmental impact by utilizing alternative and/or renewable power sources. Purchase power from energy providers that utilize water, wind, solar and fuel cell sources to generate power.

Requirement:

- .1 Engage in a two-year contract to purchase power with a minimum of 30% generated from renewable sources that meet the Center for Resources Solutions (CRS) Green E-requirements.
http://www.green-e.org/what_is/standard/standard.html

Energy
Credit
6(1Pt)

Technologies/Strategies:

- Negotiated power agreements with local providers.

Cost Implications:

- Possible increase in central-source rates due to reduced usage

Funding Sources:

- None at this time.

Relevant Section from LEED V2

| | <i>Intent:</i> | Score | Possible |
|----------------------------|--|-------|----------|
| Energy Credit 6 | Encourage the development and use of grid-source, renewable energy technologies on a net zero pollution basis. | | |
| | Engage in a two year contract to purchase power with a minimum of 30% generated from renewable sources that meet the Center for Resource Solutions (CRS) Green-E requirements. | 1 | 1 |
| | SUBTOTAL | 1 | 1 |
| | TOTAL (Cumulative across Sections) | 22 | 31 |
| | | | |

4.0 Conserving Materials and Resources

4.1 General Provisions

Intent:

Reduce waste, preserve natural resources and reduce the environmental impact from materials manufacturing and transport while protecting the environment from biodiversity loss, increased erosion, air quality impacts, and further depletion by seeking out rapidly renewable resources and eliminating the use of chlorofluorocarbons.

Assumptions:

An integrated architectural approach will be required for the design of the base building and the tenant fit-out. Tenants will be encouraged by owner prepared documentation and instructional sessions to comply with the goals of this section and meet the HLCBPCA mandate to protect the environment and improve the health and well being of building occupants.

4.0 Conserving Materials and Resources

4.2 Storage & Collection of Recyclables

Intent:

Facilitate waste reduction. Congruent with the market, recycle materials that would otherwise be dumped into landfills.

Requirements:

- .1 On each floor, provide a dedicated and ventilated trash and recycling chute system leading to integrated storage bins at the loading berth level that are clearly labeled for recyclable contents.
- .2 Separate trash/recycling holding areas will be ventilated and maintained within the building for office use and retail use (if applicable) with direct access to the street, as set forth in the HLCBPC Parks Conservancy Guidelines.

Material
Pre-
Req

Technologies/Strategies:

- The easier it is to recycle, the more people will participate.

Cost Implications:

- Increased space for Trash/Recycling operations.
- Reduced waste disposal costs.
- Potential for income from recycling.

Funding Sources:

- NYS Green Building Tax Credit

Relevant Section from LEED V2

Intent:

Materials Pre-Req.

Facilitate the reduction of waste generated by building occupants that is hauled to and disposed of in landfills.

Provide an accessible area that serves the entire building and is dedicated to the separation, collection, and storage of materials for recycling including (at a minimum) paper, glass, plastics and metals.

SUBTOTAL

TOTAL (Cumulative across Sections)

BPCA
Score

LEED
Possible

-

-

-

-

22

31

4.0 Conserving Materials and Resources

4.3 Construction Waste & Resource Reuse

Intent:

Minimize construction waste and conserve resources through reuse/recycling to reduce the environmental impact from material manufacturing and transport.

Requirements:

- .1 During construction, develop and implement a waste management plan and quantify materials diverted by weight so that a minimum of 60% of waste material (by weight) is recycled.
- .2 Develop a plan to utilize recycled or salvaged materials during construction.

Material
Credit 2
(1Pt)

Technologies/Strategies:

- Identify licensed haulers and processors of recyclables.
- Recycle cardboards, metals, concrete, brick, asphalt, beverage containers, clean dimensional wood, plastic, glass, gypsum board, ceiling tiles and carpet.
- Evaluate the cost-effectiveness of recycling rigid insulation, engineered wood products, and other materials.
- Utilize clean, efficient fuels for construction machinery.
- Create standardized forms for record keeping and for efficient filing of information.

Innov.
Credit 4
(1pt)

Cost Implications:

- Potential income generation.
- Increased cost of Construction Management (overseer).

Funding Sources:

- NYS Green Building Tax Credit

Relevant Section from LEED V2

| | <i>Intent:</i> | BPCA Score | LEED Possible |
|--------------------------------|---|---------------|------------------|
| Materials Credit 2 | Divert construction, demolition, and land clearing debris from landfill disposal. Redirect recyclable material back to the manufacturing process. | | |
| | Management | | |
| | Develop and implement a waste management plan, quantifying material diversion by weight. | 1 | 1 |
| Innovation Credit 4 | Recycle and/or salvage at least 50% (by weight) of construction, demolition, and land clearing waste. | | |
| | Recycle and/or salvage an additional 25% (75% total by weight) of the construction, demolition, and land clearing debris. | 0 | 1 |
| | To provide design teams and projects the opportunity to be awarded points for exceptional performance above requirements set by the LEED Green Buildings System and/or innovative performance in Green Building categories not specifically addressed by the LEED Green Building Rating System. | 1 | 1 |
| | SUBTOTAL | 2 | 3 |
| | TOTAL (Cumulative across Sections) | 24 | 34 |

4.0 Conserving Materials and Resources

4.4 Recycled Content

Intent:

Reduce the use of raw materials by replacing them with recycled materials or materials with recycled content.

Requirement:

- .1 Use materials such that 50% of the total material cost (as computed by the method outlined in LEED Version 2, Resource Guide to calculate the value of recycled content in the total material cost) comes from recycled material.

Material
Credit 4
(2Pt)

Technologies/Strategies:

- Use of recycled materials or materials with recycled content will reduce the burden on already over harvested materials.
- Specify high-recycled content (minimum weighted average of 20% post-consumer and minimum weighted average of 50% post-industrial) carpet and suspended ceiling tiles from manufacturers with established post-consumer re-furbishing programs.
- Use methodology and spreadsheet laid out in *Materials Credit 4, LEED V2 Resource Guide*, to evaluate recycled content of materials.

Cost Implications:

- None at this time.

Funding Sources:

- NYS Green Building Tax Credit

Relevant Section from LEED V2

| | <i>Intent:</i> | BPCA Score | LEED Possible |
|-------------------------------|---|---------------|------------------|
| Materials Credit 4 | Increase demand for building products that have incorporated recycled content material, reducing the impacts resulting from extraction of new material. | | |
| | Specify a minimum of 25% of building materials that contain in aggregate a minimum weighted average of 20% post-consumer recycled content material, OR, a minimum weighted average of 40% post-industrial recycled content material. | 1 | 1 |
| | Specify an additional 25% (50% total) of building materials that contain in aggregate, a minimum weighted average of 20% post-consumer recycled content material, OR, a minimum weighted average of 40% post-industrial recycled content material. | 1 | 1 |
| | SUBTOTAL | 2 | 2 |
| | TOTAL (Cumulative across Sections) | 26 | 36 |

4.0 Conserving Materials and Resources

4.5 Local/ Regional Materials

Intent:

Reduce the impact of building materials transport and support the local economy.

Requirement:

- .1 Use a minimum of 40% of all building materials (based on cost) that are manufactured (final-assembly) within a 500-mile (by air) radius. Material
Credit 5
(1Pt)

Technologies/Strategies:

- Strengthening a local supply chain will reduce costs and build local building technology and infrastructure.

Cost Implications:

- None at this time.

Funding Sources:

- None at this time.

Relevant Section from LEED V2

| | <i>Intent:</i> | BPCA Score | LEED Possible |
|-------------------------------|--|---------------|------------------|
| Materials Credit 5 | Increase demand for building products that are manufactured locally, reducing the environmental impacts resulting from transportation, and supporting the local economy. | | |
| | Specify a minimum of 20% of building materials that are manufactured regionally within a radius of 500 miles. | 1 | 1 |
| | Of these regionally manufactured materials, specify a minimum of 50% that are extracted, harvested, or recovered within 500 miles. | 0 | 1 |
| | SUBTOTAL | 1 | 2 |
| | TOTAL (Cumulative across Sections) | 27 | 38 |

4.0 Conserving Materials and Resources

4.6 Renewable & Rapidly Renewable Materials

Intent:

Reduce the use of finite raw materials by replacing them with renewable materials.

Requirements:

- .1 The base building is to utilize rapidly renewable materials for 5% (by value) of the total material cost.
- .2 Encourage tenants, by incorporation of appropriate literature into the "Tenant Guidelines", to utilize rapidly renewable materials for 5%(by value) of the total material cost.

Material
Credit 6
(1Pt)

Technologies/Strategies:

- Rather than oak flooring which frequently comes from non-sustainable sources, consider a material like bamboo or a composite made of recycled material for the same purpose.
- Where applicable use products made from natural materials (i.e., wool carpeting, wool wall and furniture fabrics).

Cost Implications:

- None at this time.

Funding Sources:

- None at this time.

Relevant Section from LEED V2

| | <i>Intent:</i> | BPCA Score | LEED Possible |
|-------------------------------|---|---------------|------------------|
| Materials Credit 6 | Reduce the use and depletion of finite raw and long cycle renewable materials by replacing them with rapidly renewable materials. | | |
| | Specify rapidly renewable building materials for 5% (By Cost) of total building materials. | 1 | 1 |
| | SUBTOTAL | 1 | 1 |
| | TOTAL (Cumulative across Sections) | 28 | 39 |

4.0 Conserving Materials and Resources

4.7 Forest Management

Intent:

Encourage responsible forest management to protect and prolong forest habitats and wood species.

Requirement:

- .1 Use 100% Certified wood and wood products (per the Forest Stewardship Guidelines) during construction for temporary bracing, concrete formwork, and site safety barriers such as sidewalk bridges and site enclosures.
- .2 Encourage tenants, by incorporation of appropriate literature into the "Tenant Guidelines", to utilize wood and wood products certified by the Forest Stewardship Council (FSC) for 60%(by value) of the total wood/wood material cost.

Material
Credit 7
(1Pt)

Technologies/Strategies:

- Incorporate the requirements of the Forest Stewardship Guidelines in the building construction specifications and general conditions.

Cost Implications:

- Potential for slight increase in wood costs.

Funding Sources:

- NYS Green Building Tax Credit.

Relevant Section from LEED V2

| | <i>Intent:</i> | BPCA Score | LEED Possible |
|-------------------------------|---|---------------|------------------|
| Materials Credit 7 | Encourage environmentally responsible forest management. | | |
| | Use a minimum of 50% of wood-based materials certified in accordance with the Forest Stewardship Council Guidelines for wood building components including but not limited to structural framing, flooring, finishes, furnishings and non-rented temporary construction applications such as bracing, concrete form-work and pedestrian barriers. | 1 | 1 |
| | SUBTOTAL | 1 | 1 |
| | TOTAL (Cumulative across Sections) | 29 | 40 |

4.0 Conserving Materials and Resources

4.8 CFC Elimination

Intent:

Eliminate the use of CFC-based refrigerants in HVAC systems, the use of insulation materials that utilize CFCs during production, and solvents that contain CFCs – all of which contribute to ozone depletion.

Requirement:

- | | | |
|----|---|-----------------------|
| .1 | Develop a “phase-out plan” for equipment with CFCs and HCFCs (with the exception of HCFC123). | Energy Pre Req 3 |
| .2 | Use fire suppression systems with no HCFCs or Halon. | |
| .3 | Avoid the use of insulation materials that utilize Chlorine-based gasses in their production process. | Energy Credit 4 (1Pt) |
| .4 | Use HVAC equipment with no CFCs. | |

Technologies/Strategies:

- No new equipment is installed that uses CFC's.
- Currently there is a ban on CFCs and a ban on HCFCs is scheduled effective 2030.

Cost Implications:

- Possible reduced Energy Efficiency.

Funding Sources:

- NYS Green Building Tax Credit

Relevant Section from LEED V2

| | <i>Intent:</i> | BPCA Score | LEED Possible |
|-------------------------|--|------------|---------------|
| Energy Pre-Req 3 | Reduce ozone depletion. | | |
| | Zero use of CFC-based refrigerants in new building HVAC&R base building systems. When reusing existing base building HVAC equipment, complete a comprehensive CFC phaseout conversion. | - | - |
| Energy Credit 4 | Reduce ozone depletion and support early compliance with the Montreal Protocol. | | |
| | Install base building level HVAC and refrigeration equipment and fire suppression systems that do not contain HCFC's or Halon. | 1 | 1 |
| | SUBTOTAL | 1 | 1 |
| | TOTAL (Cumulative across Sections) | 30 | 41 |

5.0 Enhanced Indoor Environmental Quality (IEQ)

5.1 General Provisions

Intent:

Employ architectural and HVAC design strategies to prevent the development of Indoor Air Quality problems that will impact the overall indoor environment, health, and well being of the occupants.

Assumption:

The ideal building solution will integrate architecture and engineering to create environments that are very healthy and that engender increased productivity. Tenants will be encouraged, by means of Owner prepared documentation and instruction, to participate and strengthen the goal of achieving enhanced indoor environment quality. The required underfloor air delivery system goes a long way toward achieving this goal.

Requirement:

Establish minimum performance standards for indoor air quality performance to prevent problems and maintain the health and well being of occupants. Use ASHRAE 62-1999 as the reference standard.

IEQ
Pre
Req 1

Relevant Section from LEED V2

| | <i>Intent:</i> | BPCA Score | LEED Possible |
|----------------------|---|---------------|------------------|
| IEQ Pre-Req 1 | Establish minimum IAQ performance to prevent the development of indoor air quality problems in buildings, maintaining the health and well-being of the occupants. | | |
| | Meet the minimum requirements of voluntary consensus standard ASHRAE 62-1989/1999, Ventilation for Acceptable Indoor Air Quality and approved Addenda. | - | - |
| | SUBTOTAL | - | - |
| | TOTAL (Cumulative across Sections) | 30 | 41 |

5.0 Enhanced Indoor Environmental Quality (IEQ)

5.2 Indoor Air Quality (IAQ)

Intent:

Employ architectural and HVAC design strategies that provide improved ventilation effectiveness and minimize introduction of pollutants or of contaminants into occupiable spaces. Design systems for ease of maintenance, for minimal contaminant or pollutant introduction into space, and to avoid dirt, microbial pollutants, moisture, and standing water buildup.

Requirements:

- .1 Utilize underfloor air delivery system as specified in section 3.2.6 of this document.
- .2 Provide dedicated ventilation systems for maintenance areas associated with chemical use, paint storage, or other potentially harmful pollutants with no air re-circulation and deck-to-deck structural separation from adjoining spaces. IEQ Credit 5(1pt)
- .3 Provide 90% HEPA/other filtration media deemed adequate by HVAC designers to protect occupants against anticipated microbial threats. (90% filtration addresses 90% of sizes of the particulate spectrum).
- .4 Provide walk-off grilles at all building entrances to catch potential contaminants and dirt and decrease maintenance requirements. IEQ Pre Req 2
- .5 Provide a dedicated ventilation system, with sufficient capacity, within the core of the building to which tenants could connect smoking room's (maintained at negative pressure) exhausts.
- .6 Provide humidity stabilization through out the year to all occupied building spaces. Conform to ASHRAE 55-1992/1995 Addenda.
- .7 Mechanical ventilation strategies must be designed for ease of maintenance to prevent dirt collection points, rain entry, coil condensation, and standing water during construction and during operation.
- .8 Design ventilation systems to allow for 100% outside air flushing of any floor including the floor immediately above or below to mitigate against indoor air quality problems from construction or renovation during the occupancy of the building.
- .9 Locate building fresh air intake away from loading areas, building exhaust fans, cooling towers, and other sources of contamination.
- .10 Locate building maintenance areas away from occupied floors and provide ducted exhaust to the exterior roof.
- .11 Utilize best practices for interior pest management (i.e., properly sealing cavities, walls, joints; properly detailing and maintaining trash areas; limiting the use of pesticides and insecticides).

5.0 Enhanced Indoor Environmental Quality (IEQ)

5.2 Indoor Air Quality (IAQ) (contd.)

.12 Provide CO₂ monitoring as specified in 6.3.4.

Cost Implications:

- Increase First Costs to HVAC systems.
- Increased employee productivity.
- Decreased sick time.
- Decreased operation cost.
- Decreased emergency spending to resolve unexpected problems.

Funding Sources:

- NYS Green Building Tax Credit

Relevant Section from LEED V2

| | <i>Intent</i> | BPCA Score | LEED Possible |
|----------------------|--|------------|---------------|
| IEQ Credit 5 | Design to minimize cross-contamination of regularly occupied occupancy areas by chemical pollutants: Employ permanent entry way systems (grills, grates, etc.) to capture dirt, particulates, etc. from entering the building at all high volume entry ways, AND provide areas with structural deck to deck partitions with separate outside exhausting, no air recirculation and negative pressure where chemical use occurs (including housekeeping areas and copying/print rooms), AND provide drains plumbed for appropriate disposal of liquid waste in spaces where water and chemical concentrate mixing occurs. | 1 | 1 |
| IEQ Pre Req 2 | <p><i>Intent:</i></p> <p>Prevent exposure of building occupants and systems to Environmental Tobacco Smoke (ETS).</p> <p>Zero exposure of nonsmokers to ETS by prohibition of smoking in the building, OR, by providing a designated smoking room designed to effectively contain, capture and remove ETS from the building. At a minimum, the smoking room shall be directly exhausted to the outdoors with no recirculation of ETS-containing air to the non-smoking area of the building, enclosed with impermeable structural deck-to-deck partitions and operated at a negative pressure compared with the surrounding spaces of at least 7 Pa (0.03 inches of water gauge). Performance of smoking rooms shall be verified using tracer gas testing methods as described in ASHRAE Standard 129-1997. Acceptable exposure in non-smoking areas is defined as less than 1% of the tracer gas concentration in the smoking room detectable in the adjoining non-smoking areas. Smoking room testing as described in the ASHRAE Standard 129-1997 is required in the contract documents and critical smoking facility systems testing results must be included in the building commissioning plan and report or as a separate document.</p> | - | - |
| | SUBTOTAL | - | - |
| | TOTAL (Cumulative across Sections) | 31 | 42 |

5.0 Enhanced Indoor Environmental Quality (IEQ)

5.3 Select Low Emitting Materials

Intent:

Specify materials and finishes (including flooring and furniture) that contain no known carcinogens, have low levels of volatile organic compounds (VOC), and are non-toxic and chemically inert to reduce the amount of indoor air contaminants that are odorous and irritating, and unhealthy to occupants.

Requirements:

- .1 All adhesives, sealants (used as “filler” as opposed to a “coating”), paints, coatings and fabrics in the base building must meet the VOC limits set forth in South Coast Air Quality Management District Rule #1168.
- .2 Paints and coatings must meet or exceed the VOC and chemical component limits of Green Seal requirements.
- .3 Carpet systems must meet or exceed the Carpet & Rug Institute Green Label Indoor Air Quality Test Program.
- .4 Prohibit urea/phenol formaldehyde based agri-products.
- .5 Owner must prepare a “Tenant Guide” recommending the requirements of this section.

IEQ
Credit
4(4Pt)

Technologies/Strategies:

- Select only products and adhesive compounds with no or low VOC's that comply with the requirements of this section. This provides a health benefit to construction workers and tenants. Reference the *AIA Environmental Resource Guide*.

Cost Implications:

- Slight increase in project cost.

Funding Sources:

- NYS Green Building Tax Credit

Relevant Section from LEED V2

| | <i>Intent:</i> | BPCA Score | LEED Possible |
|-------------------------|---|---------------|------------------|
| IEQ Credit 4 | Reduce the quantity of indoor air contaminants that are odorous or potentially irritating to provide installer and occupant health and comfort. | | |
| | Meet or exceed VOC limits for adhesives, sealants, paints, composite wood products, and carpet systems as follows: | | |
| | Adhesives must meet or exceed the VOC limits of South Coast Air Quality Management District Rule #1168 by, AND all sealants used as a filler must meet or exceed Bay Area Air Resources Board Reg. 8, Rule 51 (1 point) | 4 | 1 |
| | Paints and coatings must meet or exceed the VOC and chemical component limits of Green Seal requirements. (1 point) | | 1 |
| | Carpet systems must meet or exceed the Carpet and Rug Institute Green Label Indoor Air Quality Test Program. (1 point) | | 1 |
| | Composite wood and agrifiber products must contain no added urea-formaldehyde or phenol-formaldehyde resins. (1 point) | | 1 |
| | SUBTOTAL | 4 | 4 |
| | TOTAL (Cumulative across Sections) | 35 | 46 |

5.0 Enhanced Indoor Environmental Quality (IEQ)

5.4 Controllability of Systems

Intent:

Increase occupant control of HVAC and natural ventilation systems to support optimum health, comfort and productivity.

Requirements:

- .1 Achieve maximum individual control of HVAC by adopting an Underfloor Air Delivery System, Ref:3.2.6.
- .2 Provide computerized Building Management Systems (BMS) for base building operation.
- .3 Provide individual controls for lighting and HVAC.

IEQ
Credit
6(1Pt)

Technologies/Strategies:

- Specify an under-floor air delivery system with manual control over the volume of air delivered.
- Provide floor-by-floor HVAC systems and programmable thermostats to allow occupants to set air conditioning/heating times of operation and temperature settings. Connect all tenant mechanical equipment to the BMS.

Cost Implications:

- Slightly increased First Costs.
- Increased energy savings.
- Greatly reduced cost for "churn" (the act of relocating employees/groups within the office).

Funding Sources:

- None at this time.

Relevant Section from LEED V2

| | <i>Intent:</i> | BPCA Score | LEED Possible |
|-------------------------|--|---------------|------------------|
| IEQ Credit 6 | Provide a high level of individual occupant control of thermal, ventilation, and lighting systems to support optimum health, productivity, and comfort conditions. | | |
| | Provide a minimum of one operable window and one lighting control zone per 200 s.f. for all occupied areas within 15 feet of the perimeter wall. | 0 | 1 |
| | Provide controls for each individual for airflow, temperature, and lighting for 50% of the non perimeter, regularly occupied areas. | 1 | 1 |
| | SUBTOTAL | 1 | 2 |
| | TOTAL (Cumulative across Sections) | 36 | 48 |

5.0 Enhanced Indoor Environmental Quality (IEQ)

5.5 Lighting & Daylighting

Intent:

Implement design strategies to maximize access to daylight and views to the outdoors in a glare-free way and whenever possible integrate indoor space with the outside environment to improve IEQ for building occupants.

Requirements:

- .1 Minimum floor to ceiling height to be 9'-6".
- .2 Maximize daylighting and access to views from all spaces that are occupied for a majority of the day.

IEQ
Credit
8(2Pt)

Technologies/Strategies:

- Request that tenants design their interiors with glass partitions, clerestory glass, and open planning at the perimeter to allow all occupants to have access to daylight.
- Increase floor to ceiling heights.

Cost Implications:

- Increased first costs.
- Decreased operating costs.
- Increased productivity.

Funding Sources:

- None at this time.

Relevant Section from LEED V2

| | <i>Intent:</i> | BPCA Score | LEED Possible |
|-------------------------|---|---------------|------------------|
| IEQ Credit 8 | Provide a connection between indoor spaces with and the outdoor environment through the introduction of sunlight and views into the occupied areas of the building. | | |
| | Achieve a minimum Daylight Factor of 2% (excluding all direct sunlight penetration) in 75% of all space occupied for critical visual tasks, not including copy rooms, storage areas, mechanical, laundry, and other low occupancy support areas. Exceptions include those spaces where tasks would be hindered by the use of daylight or where accomplishing the specific tasks within a space would be enhanced by the direct penetration of sunlight. | 1 | 1 |
| | Direct line of sight to vision glazing while seated from 90% of all regularly occupied spaces, not including copy rooms, storage areas, mechanical, laundry, and other low occupancy support areas. | 1 | 1 |
| | SUBTOTAL | 2 | 2 |
| | TOTAL (Cumulative across Sections) | 38 | 50 |

5.0 Enhanced Indoor Environmental Quality (IEQ)

5.6 Indoor Pest and Microbial Contaminant Control

Intent:

Design HVAC delivery systems to better protect occupants from intended or unintended microbial attacks. Traditional pests (such as cockroaches, mice, and rats) and their excrement may be a source for asthma, allergies, and other health concerns for building occupants; the use of toxic chemicals to rid the building of pests, in turn, can cause the degradation of IAQ.

Requirements:

- .1 Ref. 5.2.3 of these Guidelines.
- .2 Develop a "Pest Management Plan" as part of the required "Maintenance Manual" (see §6.4) that strongly recommends the requirements of this section.
- .3 Use best efforts to seal, caulk, and repair points of entry, habitation, and breeding areas to mitigate against pest occurrences within the building.
- .4 In the base building, use boric acid powder for insect control as opposed to the practice of extermination with toxic chemicals and strongly recommend it to tenants.

Technologies/Strategies:

- Properly seal all penetrations (i.e. around water pipes, steam risers, electrical conduits, etc...) with copper mesh and caulking or plaster.
- Properly seal cracks and joints at tile floor/wall joints, baseboard/wall interfaces, and window frame/wall interfaces.
- Cover all ventilation portals with insect mesh (metal window screen) and ¼ inch wire mesh (hardware cloth).
- Encourage prompt repair of leaky faucets, condensation on pipes, or other sources of water in the "Maintenance Manual."
- Eliminate moisture traps.

Cost Implications:

- None at this time.

Funding Sources:

- None at this time.

6.0 Operations & Maintenance

6.1 General Provisions

Intent:

Provide proper construction, maintenance, and controls so that building systems operate as designed in order to achieve and maintain energy performance and IEQ requirements.

Assumptions:

- Tenants will be encouraged by owner prepared documentation and instructional sessions to comply with the goals of this section and meet the HLCBPCA mandate to protect the environment, save energy, and improve the health and well being of building occupants.
- An as-built manual will be prepared that will incorporate material substitutions and method variations; changes during construction, field data, contractor's affidavits and construction log information. The as-built manual will be used as research data for future building standards and will become a resource for building design teams on future development projects.

6.0 Operations & Maintenance

6.2 Full Commissioning

Intent:

Test and calibrate building systems to be certain they can be operated as designed in order to achieve and maintain energy performance and IEQ requirements.

Requirements:

- .1 Submit "Building Commissioning Plan" to HLCBPCA.
- .2 A "Commissioning Team", put together by the owner, and comprising at a minimum, representatives of the building staff, construction team and the Mechanical, Electrical & Plumbing (MEP) engineers, must be integrally involved with the project from design development to 8 months after occupation.
- .3 Commissioning plan must be satisfactorily completed and approved by HLCBPCA.

Energy
Pre
Req1

Technologies/Strategies:

- Introduce mandatory Testing, Adjusting and Balancing (TAB) procedures for all mechanical equipment.
- Introduce standards and strategies early into the design process.
- Incorporate and clearly state design intentions and requirements in the project construction documents.
- Tie final contractor payments to performance.
- Institute continuous commissioning practices.

Cost Implications:

- Increase in professional fees.
- Substantial energy savings.
- Decrease in life cycle and operating costs.
- Reduced change orders, recall and project delay.

Funding Sources:

- NYS Green Building Tax Credit
- NYSERDA

Relevant Section from LEED V2

| | <i>Intent:</i> | BPCA Score | LEED Possible |
|-----------------------------|---|---------------|------------------|
| Energy Pre-Req 1 | Verify and ensure that fundamental building elements and systems are designed, installed and calibrated to operate as intended. | | |
| | Engage a commissioning authority. | - | - |
| | Document Develop design intent and the basis of design for the building and systems. documentation. | | |
| | Include commissioning requirements in the construction documents. | | |
| | Develop and utilize a commissioning plan. | | |
| | Verify installation, functional performance, training and documentation. | | |
| | Complete a commissioning report. | | |
| | SUBTOTAL | - | - |
| | TOTAL (Cumulative across Sections) | 38 | 50 |

6.0 Operations & Maintenance

6.3 Building Systems Monitoring

Intent:

Design and specify equipment to be installed in the base building systems to provide feedback for comparison, management, and optimization of actual vs. estimated energy performance over time and IEQ.

Requirements:

- .1 Install and maintain a permanent monitoring system that tracks the IEQ and energy performance of the base building systems and allow operators to make adjustments to maintain targets semi-annually.
- .2 Divide floor plates above 10,000sf into quadrants for sample gathering. "Shared-sensor" or distributed sensors maybe used.
- .3 Provide air quality profile, prepared by a licensed engineer or certified industrial hygienist, for each tenant space at time of initial occupancy that meets the following criteria:
 - a. < 50 ppb of Formaldehyde
 - b. < 200 μm^3 total volatile organics
- .4 Provide permanent carbon dioxide (CO_2) monitoring with a real-time Demand Controlled Ventilation (DCV) system that matches the amount of ventilation air to the level of occupancy; as mentioned in Section 3.2 (Strategies/Technologies).

IEQ
Credit 1
(1Pt)

Technologies/Strategies:

- Use Internet communication technologies to monitor svstems

Cost Implications:

- Increased First Costs to HVAC system.
- Minimal cost to perform quality profile; IAQ testing costlier.
- Decreased cost of operations.

Funding Sources:

- NYS Green Building Tax Credit

Relevant Section from LEED V2

| | <i>Intent:</i> | BPCA Score | LEED Possible |
|-------------------------|--|---------------|------------------|
| IEQ Credit 1 | Provide capacity for indoor air quality (IAQ) monitoring to sustain long term occupant health and comfort. | | |
| | Install a permanent carbon dioxide (CO_2) monitoring system that provides feedback on space ventilation performance in a form that affords operational adjustments, AND specify initial operational set point parameters that maintain indoor carbon dioxide levels no higher than outdoor levels by more than 530 parts per million at any time. | 1 | 1 |
| | SUBTOTAL | 1 | 1 |
| | TOTAL (Cumulative across Sections) | 39 | 51 |

6.0 Operations & Maintenance

6.4 Maintenance Accountability

Intent:

Provide for maintenance and operational continuity for the entire building by establishing an ongoing system that guarantees accountability for maintaining performance standards.

Requirement:

- .1 A "Maintenance Manual" will be prepared by the owner and submitted to the HLCBPCA for review and will subsequently be made available to all maintenance staff. The manual will include best practices for maintenance and housekeeping, building systems descriptions (include model numbers if applicable), manufacturer's literature, and best practices for pest management.
- .2 Persons responsible for maintaining building systems are to be involved in the design, selection, and commissioning of all equipment.
- .3 The "Maintenance Manual" shall have specific directions for the storage and conveyance of trash from the site including the number and size of trash compactors and a refrigerated trash room if found necessary. The "Maintenance Manual" shall specify that trash will be maintained in the building until pickup.
- .4 Incorporate into the "Maintenance Manual" specific requirements as per DOE's International Performance Measurement and Verification Protocol for the following items: items: lighting systems and controls, constant and variable motor loads, variable frequency drive operation, chiller efficiency and variable loads (kW/ton), cooling load, air and water economizer and heat recovery cycles, air distribution static pressures and ventilation air volumes, boiler efficiencies, building specific process energy efficiency systems and equipment, and indoor water risers and outdoor irrigation systems.

Energy
Credit 5
(1Pt)

Relevant Section from LEED V2

| | <i>Intent:</i> | BPCA Score | LEED Possible |
|----------------------------|--|---------------|------------------|
| Energy Credit 5 | Provide for the ongoing accountability and optimization of building energy and water consumption performance over time. | | |
| | Comply with long term continuous measurement of performance as stated in Option B: Methods by Technology of US DOE's International Performance Measurement and Verification Protocol | 1 | 1 |
| | SUBTOTAL | 1 | 1 |
| | TOTAL (Cumulative across Sections) | 40 | 52 |

6.0 Operations & Maintenance

6.4 Maintenance Accountability (cont.)

Technologies/Strategies:

- .1 Regularly replace filters and calibrate equipment to maintain energy performance targets.
- .2 Use only environmentally responsible cleaning materials that minimize the impact to indoor air quality.

Cost Implications:

- Decreased maintenance labor costs.
- Increased product life.
- Decreased exposure to pollutants, translating to decreased health care cost/lost time.

Funding Sources:

None at this time.

List of Resources

Publications:

- American Institute of Architects. *AIA Environmental Resource Guide*. New York: McGraw-Hill, 1995.
- Barnett, Dianna Lopez and William Browning. *Primer on Sustainable Building*. Rocky Mountain Institute, 1995
- Battery Park City Authority and Ralph Lerner. *Battery Park City: Design Guidelines for The North Residential Neighborhood*. 1994.
- City of New York Department of Design And Construction (DDC). *High Performance Building Guidelines*. 1999.
- City of New York and The Department of Buildings. *New York City Building Code*. 1999.
- Earth Day New York, *Lessons Learned: 4 Times Square, Vol. I*, 1997
- Earth Day New York, *Lessons Learned: 4 Times Square, Vol.II*, 2001
- Johnson, Tim. *Low E Glazing Design Guide*. Boston: Butterworth, 1991.
- Hays, Steve et al. *Indoor Air Quality*. New York: McGraw-Hill, 1995.
- Olgyay, Victor. *Design With Climate*. Princeton: Princeton University Press, 1973.
- Rocky Mountain Institute. *Green Development: Integrating Ecology And Real Estate*. New York: John Wiley & Sons, Inc., 1998.
- Tuluca, Adrian (Steve Winter and Associates, Inc.). *Energy Efficient Design and Construction for Commercial Buildings*. New York: McGraw-Hill, 1997.
- Watson, Donald and Kenneth Labs. *Climatic Building Design*. New York: McGraw-Hill, 1983.
- US Green Building Council. *Leadership in Energy and Environmental Design Green Building Rating System Criteria (LEED™)*. 1999.
- State of New York. *Green Buildings Tax Credit Regulations*, 2001.
NB: Although cited in several places in these Guidelines as a source of funding, it should be understood that the NYSGBTC funds come available to the development team only upon the complete fulfillment of all the statutes of that regulation and not upon meeting isolated requirements.

List of Resources (cont.)

Web Sites:

American Council for an Energy-Efficient Economy

<http://www.aceee.org/>

Energy Efficiency and Renewable Energy Network (EREN)

<http://www.eren.doe.gov/>

Energy Star Program (U.S. EPA)

<http://www.energystar.gov/>

Environmental Building News

<http://www.ebuild.com/>

Environmental Defense Fund

<http://www.edf.org/>

Iris Communications – Resource for Environmental Design Index

<http://www.oikos.com/>

National Resources Defense Council

<http://www.nrdc.org/>

New Jersey Department of Environmental Protection

<http://www.state.nj.us>

New York State Energy and Research Development Authority

<http://www.nyserda.org/>

Rocky Mountain Institute

<http://www.rmi.org/>

Scientific Certification Systems

<http://www.scs1.com/>

Southface Energy Institute

<http://www.southface.org/>

US Department of Energy

<http://www.doe.gov/>

US Environmental Protection Agency

<http://www.epa.gov/>

US Green Building Council

<http://www.usgbc.org/>

List of Resources (cont.)

Technical Documents Cited:

EPA 832-R-32-5 Chapter 5: Erosion control and topsoil conservation.

South Coast Coast Air Quality Management District Rule 1168: Adhesive and sealants' off gassing limits.

"Green Seal" (www.greenseal.org) : Paints and coatings.

Carpet and Rug Institute's Green Label IAQ Test Program: Permissible limits of off-gassing by carpets and rugs.

Center for Resources Solutions' "green-e" requirements: Sources of "Green" power.

American Society of Heating, Refrigeration and Air-conditioning Engineers' Standard 62-1999: Minimum permissible Indoor Air Quality standards.

Leadership in Energy and Environmental Design, Version 2 (LEED V2) Resource Guide: General reference.

New York State Energy Code: Energy performance base-line.

Appendix

Summary of Innovation Credit Points:

| <i>Section:</i> | <i>BPCA Commercial Environmental Guidelines Requirement:</i> | <i>Points</i> |
|-----------------|---|---------------|
| 2.5.1 | Specify 100% of plantings to be those that (depending on reclaimed water availability) require low amounts of water and that are pest and disease resistant per HLCBPCA Parks Conservancy requirements. | 1 |
| 3.2.8 | Provide training to tenants, their designers and their facility managers on the energy efficiency measures incorporated into the design and on practices that tenants could adopt to exploit energy efficiency measures to the fullest. | 1 |
| 3.4.1 | Provide fuel-cell generated power at a minimum rate of 500kW/1,000,000 s.f. of (gross) area or a fraction thereof. | 1 |
| 4.3 | Utilize clean, efficient fuels for construction machinery. | 1 |
| TOTAL | | 4 |

Appendix (cont.)

Funding Sources

New York State Green Building Tax Credit

[New York State Department of Taxation and Finance](#)

(tax related questions)

Business Tax Hotline:

1 - 800 - 972 - 1233

General Tax Information Hotline:

1 - 800 - 225 - 5829

[New York State Energy Research and Development Authority](#)

(building- related questions)

Craig Kneeland, Project Manager

(518) 862 - 1090, ext. 3311

e-mail: cek@nyserda.org

New York State Department of Environmental Conservation

(all other questions)

James Austin, Assistant Commissioner

(518) 485 - 8437

e-mail :jdaustin@gw.dec.state.ny.us

<http://www.dec.state.ny.us/>

New York State Energy and Research Development Authority

For more information about NYSERDA's building programs, contact:

Technical Communications Unit

NYSERDA

Corporate Plaza West

286 Washington Avenue Extension

Albany, New York 12203-6399

Phone: 518.862.1090, ext. 3250

<http://www.nyserda.org/>

United States Department of Energy

For more information about USDOE building programs, contact:

Dru Crawley

United States Department of Energy

1000 Independence Ave. SW

Washington, DC. 20585

Phone: 202.586.2344

Fax: 202.586.1628

drury.crawley@ee.doe.gov

<http://www.doe.gov/>

Appendix (cont.)

Schedule of Limits on VOC Emissions

Requirements for Adhesives

Limits on VOCs in grams per liter, less water and exempt compounds, used for welding and installation.

| | |
|---|-----|
| Non-vinyl backed indoor carpet installation | 150 |
| Carpet pad installation | 150 |
| Wood flooring installation | 150 |
| Ceramic tile installation | 130 |
| Dry wall and panel installation | 200 |
| Subfloor installation | 200 |
| Rubber floor installation | 150 |
| VCT and asphalt tile installation | 150 |
| PVC welding | 510 |
| CPVC welding | 490 |
| ABS welding | 400 |
| Plastic cement welding | 350 |
| Cove base installation | 150 |
| Adhesive primer for plastic | 650 |
| All other | 250 |

Limits on VOCs in grams per liter, less water and exempt compounds, applied to the following substrates.

| | |
|-----------------------------|-----|
| Metal to metal | 30 |
| Plastic foams | 120 |
| Porous material except wood | 120 |
| Wood | 30 |
| Fiberglass | 200 |

Requirements for Sealants

Limits on VOCs in grams per liter, less water as applied, or in grams per liter of low-solids products.

| | |
|-----------------------------|-----|
| Sealants: | |
| Architectural | 250 |
| Roadways | 250 |
| Roofing material insulation | 450 |
| PVC welding | 480 |
| Other | 420 |
| Sealant Primer: | |
| Architectural – nonporous | 250 |
| Architectural – porous | 775 |
| Other | 775 |

Appendix (cont.)

Requirements for Architectural Coatings

Limits on VOCs in grams per liter, less water.

| | |
|--|-----|
| Group I | |
| Bituminous pavement sealer | 100 |
| Bond Breaker | 600 |
| Concrete curing compound | 350 |
| Dry fog coating | 400 |
| Industrial maintenance primer or topcoat | 450 |
| Mastic texture coating | 200 |
| Metallic pigmented coating | 500 |
| Non-flat architectural coating | 380 |
| Primer, sealer, and undercoater | 350 |
| Roof coating | 300 |
| Swimming pool coating | 600 |
| Traffic coating | 250 |
| Waterproof mastic coating | 300 |
| Wood preservative coating | 550 |
| Group II | |
| Fire retardant coating (opaque) | 500 |
| Fire retardant coating (all others) | 850 |
| High heat resistant coating | 650 |
| Lacquer | 680 |
| Multicolored coating | 600 |
| Quick-dry primer, sealer, undercoater | 500 |
| Shellac (clear) | 730 |
| Shellac (pigmented) | 550 |
| Sign Paint | 450 |
| Stain (semi-transparent) | 550 |
| Stain (opaque) | 350 |
| Tile-like glaze coating | 550 |
| Varnish | 450 |
| Waterproof sealer | 600 |
| All other architectural coatings | 250 |

Appendix (cont.)

Schedule of Low Flow Rates

(Rates are 20% less flow than the Energy Policy Act of 1992)

| | |
|-------------------------------|-----------------|
| Showerheads | 2.00 gal./min. |
| Lavatory Faucets | 2.00 gal./min. |
| Lavatory Replacement Aerators | 2.00 gal./min. |
| Kitchen Faucets | 2.00 gal./min. |
| Kitchen Replacement Aerators | 2.00 gal./min. |
| Metering Faucets | 2.00 gal./min. |
| Gravity Toilets | 1.28 gal./flush |
| Urinals | 0.80 gal./flush |

Appendix (cont.)

Schedule of Submission Requirements

The owner is required to assemble this information into a single resource and submit two (2) copies with the required Schematic Design, Design Development, Construction Document, and As-built submissions to the Battery Park City Authority as follows:

- Bound 8½ x 11 formats (11x17 fan fold inserts acceptable)
- Include a table of contents and a list of all applicable team participants and consultants.
- Each of the six environmental categories from the guidelines will be a separate section (i.e., 1.0 Site Management).
- Within each of these sections, the requirements are to be referenced by section number (i.e., §1.3.2)
- For each requirement, include a narrative that describes the owner's actions and strategies for compliance with the guidelines followed by the requested information from the "Compliance Requirements". The Schematic Design submission must include the DOE-2 analysis, but may only include the written narratives for all other requirements.
- Required a comprehensive "Tenant Guide" to be separately bound as an appendix item. "Tenant Guide" will only be required for the As-built or final submission.
- The HLCBPCA may request the final version of the manual to be submitted in an electronic format (i.e., CD-ROM, CAD and text file formats to be determined).

The intent is to demonstrate compliance with the guidelines. Therefore, for each and every submission the written narrative must be included for each requirement. The manual must be 100% complete at the end of construction documents. The As-built manual will incorporate material substitutions; changes during construction, field data, contractor's affidavits and construction log information. The As-built manual will be used as research data for future building standards and will become a resource for building design teams on future development projects.

The HLCBPCA will review all submissions in a prompt and timely manner. Further, the HLCBPCA will maintain field personnel to observe construction methods and technologies and to verify that construction is proceeding in accordance with the official documents.

Glossary (cont.)

The following is a partial glossary of terms from the City of New York Department of Design And Construction's (DDC) *High Performance Building Guidelines*.

Albedo: The ratio of reflected light to the total amount falling on a surface. A high Albedo indicates high reflectance properties.

Building Commissioning: A systematic process beginning in the design phase, lasting at least one year after construction, and including the preparation of operating staff of ensuring, through documented verification, that all building systems perform interactively according to the documented design intent and the owner's operational needs.

Chlorofluorocarbons: CFCs are a family of chemicals used in refrigeration, air conditioning, packaging, insulation, or as solvents and aerosol propellants. Because CFCs are not destroyed in the lower atmosphere they drift into the upper atmosphere where their chlorine components destroy the earth's protective ozone layer.

Energy Modeling: A computer model that analyzes the buildings energy related features in order to project energy consumption.

Fuel Cell: A technology that uses an electromagnetic process to convert energy into electrical power. Often powered by natural gas, fuel cell power is cleaner than grid-connected power sources. In addition, hot water is produced as a by-product that can be utilized as a thermal resource for the building.

Graywater: Wastewater that does not contain sewage or fecal contamination and can be reused for irrigation after simple filtration.

Hydrochlorofluorocarbon: HCFCs are generally less detrimental to depletion of stratospheric ozone than related chlorofluorocarbons (CFCs). HCFCs are generally used to replace CFCs where mandates require CFCs to be eliminated. A total ban on CFCs and HCFCs is scheduled effective 2030.

Integrated Pest Management: A coordinated approach to pest control that is intended to prevent unacceptable levels of pests by the most cost-effective means with the least possible hazard to building occupants, workers, and the environment.

Life Cycle Cost: The amortized annual cost of a product, including capital costs, installation costs, operating costs, maintenance costs, and disposal costs discounted over the lifetime of the product.

Low-E windows: "Low-E" (low-emissivity) windows reflect heat, not light, and therefore keep spaces warmer in the winter and cooler in the summer.

Glossary (cont.)

Operations & Maintenance: Operations refers to how equipment or systems are run, e.g., when a system should be turned on, temperature ranges, set points for boiler pressures and temperatures, thermostat set points, etc. Maintenance refers to servicing or repair of equipment and systems. “Preventive maintenance” performed on a periodic basis to ensure optimum life and performance is designed to prevent breakdown and unanticipated loss of production or performance. “Corrective” or “unscheduled” maintenance refers to repairs on a system to bring it back “on-line.” “Predictive” maintenance is performed on equipment monitored for signs of wear or degradation, e.g., through thermography, oil analysis, vibration analysis, maintenance history evaluation.

Photovoltaic Panels: Photovoltaic devices use semiconductor material to directly convert sunlight into electricity. Power is produced when sunlight strikes the semiconductor material and creates an electric current.

Post-consumer Recycled Content: Post-consumer material is material or finished product that has served its intended use and has been discarded for disposal or recovery, having completed its life as a consumer item.

Pre-consumer Recycled Content: Pre-consumer material is material diverted from the waste stream following an industrial process, excluding reutilization of materials such as rework, regrind or scrap generated in a process and capable of being reclaimed within the same process. Synonyms include post-industrial and secondary material.

R-value: A measure of the thermal resistance of material.

Recycling: The series of activities, including collection, separation, and processing, by which products or other materials are recovered from the solid waste stream for use in the form of raw materials in the manufacture of new products other than fuel for producing heat or power by combustion.

Renewable Energy: Energy resources such as wind power or solar energy that can keep producing indefinitely without being depleted.

Glossary (cont.)

Urban Heat Island Effect: The additional heating of air over city as the result of the replacement of vegetated surfaces with those composed of asphalt, concrete, rooftops and other man-made materials. These materials store much of the sun's energy, producing a dome of elevated air temperatures up to 10°F greater over city compared to air temperatures over adjacent rural areas. Light colored rooftops and lighter colored pavement can help to dissipate heat by reflecting sunlight, and tree planting can further help modify the city's temperature through shading and evapotranspiration.

Volatile Organic Compounds: VOCs are chemicals that contain carbon molecules and are volatile enough to evaporate from materials surfaces into indoor air at normal room temperatures (referred to as off-gassing). Examples of building materials that may contain VOCs include, but are not limited to: solvents, paints, adhesives, carpeting, and particleboard. Signs and symptoms of VOC exposure may include eye and upper respiratory irritation, nasal congestion, headache and dizziness.

The following definition has been taken from the State of New York's *Green Building Tax Credit Regulations*:

Base Building: All areas of the building not intended for occupancy by a tenant or owner, including but not limited to the structural components of the building, exterior walls, floors, windows, roofs, foundations, chimneys and stacks, parking areas, mechanical rooms and mechanical systems, and owner controlled and/or operated service spaces, sidewalks, main lobby, shafts and vertical transportation mechanisms, stairways and corridors.

The following items are independently defined for the purposes of these Guidelines:

Blackwater: Waste water from the toilet.

Reclaimed Water: Water gathered from any combination of Graywater, Blackwater and from harvested Storm water.

EXHIBIT H

COST PROPOSAL FORMAT

| | Cost |
|--|----------------------------|
| Individual Not-To-Exceed Fees for: | |
| a) BPC Sustainability Plan and New Green Guidelines | |
| b) Sustainability Implementation Plan | |
| | |
| Total Not-To-Exceed Fee for all Services (a + b above) <i>(not including reimbursable or out-of-pocket expenses)</i> | |
| Total Not-To-Exceed Amount for Reimbursable Costs | |
| a) Breakdown of reimbursable costs by category or item | Attach as a separate sheet |
| Grand Total | |
| | |
| Fully-loaded Hourly Billing Rates | Attach as a separate sheet |
| | |