

ENERGY PERFORMANCE CONTRACT (the “Contract”)

An Energy Performance Contract is hereby made by and between the **DORMITORY AUTHORITY of the State of New York**, a public authority and public benefit corporation established by the laws of the State of New York, having its principal office and place of business at 515 Broadway, Albany, New York 12207-2964, and **[CONTRACTOR NAME]**, the Energy Service Contractor whose principal office and place of business is at ADDRESS, hereinafter referred to as the CONTRACTOR.

WHEREAS, the OWNER is authorized by section 9-103 of the Energy Law of the State of New York to enter into energy performance contracts; and

WHEREAS, section 9-102 of the Energy Law of the State of New York defines an energy performance contract as an agreement for the provision of energy services, including but not limited to electricity, heating, ventilation, cooling, steam or hot water, in which a person agrees to install, maintain or manage energy systems or equipment to improve the energy efficiency of, or produce energy in connection with, a building or facility in exchange for a portion of the energy savings or revenues; and

WHEREAS, the OWNER solicited expressions of interest and proposals by contractors which possess the knowledge, experience and resources to undertake an energy performance contract and the program described in this Contract; and

WHEREAS, the CONTRACTOR established the qualifications necessary to undertake an energy performance contract and the program described in this Contract.

NOW, THEREFORE, the OWNER and the CONTRACTOR hereby mutually covenant and agree as follows:

ARTICLE I: TERM OF CONTRACT

The OWNER may issue Energy Assessment Work Authorizations (EAWAs), Design Work Authorizations (DWAs) and Project Installation Agreements (PIAs) under this Contract **for a period of Five (5) years** beginning on the date the OWNER executes this Contract, except that, the CONTRACTOR shall continue to render services for each EAWA, DWA and PIA which the CONTRACTOR is issued during the term of this Contract until completion of said EAWA, DWA and PIA unless the OWNER terminates performance prior to completion in accordance with this Contract. The OWNER may, in its sole discretion, extend the term for issuance of an EAWA, DWA and PIA under this Contract for two (2) year at a time, but not more than twice. Any additional extensions to this Contract thereafter require the mutual written consent of the OWNER and CONTRACTOR. The maximum term of this Contract shall be no greater than thirty-five (35) years, provided that such term shall not exceed the reasonably expected useful life of the energy facilities or equipment subject to this Contract.

ARTICLE II: DEFINITIONS

Client: The entity for whom the Dormitory Authority is performing services, including subsidiaries, agents, related corporations, or fiduciaries of the entity.

Energy Assessment Report “EAR”: A Report to be delivered by CONTRACTOR to OWNER in connection with an Energy Assessment, more fully described under Article III (C).

Contract: This agreement for energy performance contracting between CONTRACTOR and OWNER.

Contract for Professional Services, Chapter Three, General Terms and Conditions: The contractual terms and conditions located at Exhibit B to this Contract, as more fully described in Article III (B) (4).

Construction Subcontract: The documents forming the agreement between CONTRACTOR and Construction Subcontractor in connection with this Contract.

Construction Subcontractor: an entity performing all or a portion of a Project Installation Agreement pursuant to a Construction Subcontract.

Design Work Authorization (“DWA”) – Written authorization, from OWNER to CONTRACTOR in standard OWNER’s format, directing CONTRACTOR to perform specified design services in connection with this Contract.

Energy Conservation Measure (“ECM”) – a proposed initiative to improve the energy efficiency of building infrastructure by replacement and/or upgrade of the existing systems.

Energy Assessment Work Authorization (“EAWA”) – the contractual document whereby the OWNER directs the CONTRACTOR to perform facility energy assessment scope(s) of work pursuant to specified terms and conditions.

GENERAL CONDITIONS for CONSTRUCTION (“General Conditions”): The contractual terms and conditions governing all implementation located at Exhibit C to this Contract, as more fully described in Article III.

Owner’s Related Parties: Any parent, subsidiary, Client or affiliated entities of the OWNER, including the respective officers, trustees, office holders, directors, shareholders, partners, and employees of each.

Project: The work at or near the site described in the Contract that is carried out pursuant to the Contract and one or more other contracts.

Project Contract Documents: Project Installation Agreements (“PIA”), drawings and specifications listed in the PIA, the General Conditions, the General Requirements and this Contract.

Project Installation Agreement (“PIA”): Written authorization, from OWNER to CONTRACTOR in standard OWNER’s format, directing CONTRACTOR to perform specified design implementation in connection with this Contract.

Scoping Documents: Implementation documents for which an architect’s or engineer’s stamp and signature is not required, but from which implementation of the Work can be directed.

Subconsultant: An entity, including but not limited to, an architect or engineer, engaged by the CONTRACTOR, for the provision of services and related items required to design or engineer part or all of the Project.

Work: All obligations explicitly and implicitly imposed upon the CONTRACTOR by the Contract.

ARTICLE III: SCOPE OF SERVICES

A. Purpose and Scope – Overview

The purpose and scope of this Contract is to provide professional services and construction phase procurement, implementation and management services in order to implement a program of energy related improvements and upgrades to facilities for DASNY Clients as directed by the OWNER. Projects under this Contract shall be conducted in accordance with ASHRAE Guideline 14-2002, Section 3.5.3 – Minimum Requirements for Compliance with This Guideline, unless otherwise directed by the Owner.

Projects undertaken as part of this program are intended to meet the following objectives:

- a net decrease in energy consumption; and
- a net reduction in energy costs over the life of the Project., and
- a net reduction in GHG production

The scope of services hereunder shall include, but not be limited to, all articles of this Contract and all obligations imposed upon the CONTRACTOR by the appendices and exhibits, which are attached to and made a part hereof, by each and every EAWA, DWA and PIA issued pursuant to this Contract and by each and every document included in an EAWA, DWA and PIA.

The OWNER may request that the CONTRACTOR provide any specific service(s), or all of the services, delineated herein:

1. OWNER may direct the CONTRACTOR to conduct an Energy Assessment and/or at a particular location. This Energy Assessment is intended to form the basis of design for one or more Projects, consisting of replacement or renovation of the facilities or retrofits, modernization or replacement of controls, devices, components, equipment, and/or systems at that location.
2. Based upon the Energy Assessment Report prepared by the CONTRACTOR for a particular location, the OWNER may issue a Design Work Authorization (“DWA”) directing the CONTRACTOR to prepare an implementation phase scope of Work (“Scoping Documents”) and/or a design for a Project, which will yield the Projected Energy Use described in the Energy Assessment Report. The CONTRACTOR shall confirm that the implementation phase scope of Work or design is adequate to provide the guarantees specified in Article XIII - Guarantees.
3. Upon completion of the preparation of the implementation phase scope of Work and/or design for a Project, the OWNER may request the CONTRACTOR to execute a Project Installation Authorization (“PIA”). Upon execution of the PIA the CONTRACTOR shall provide all materials, plant, tools, skill and labor of every kind required to accomplish the Project and shall complete the Project in the most substantial and workmanlike manner within the timeframe established by the OWNER. Alternatively, the OWNER may engage a different entity to perform the PIA.
4. The various phases of Work available to the Client under this Contract –Energy Assessments, Design Phase Services, Construction Phase Services, and Post-Construction Deliverables – may be provided as a continuum of linear services, or may be provided as discrete, modular services. A single contractor, or several different contractors, may be directed to provide the various services.
5. Projects assigned as part of this program will address the installation, modification, maintenance or replacement of energy consuming systems and equipment, and energy efficiency measures, including but not limited to the following areas:

Primary Heating

- Boiler replacement with units of greater efficiency
- Replacement of hydronic or steam distribution system specialties including thermostats, steam traps and control valves
- Burner replacement
- Reinsulation of steam and hydronic system piping and equipment

Domestic Hot Water

- Installation of domestic hot water heating units
- Installation of summer load boilers
- Fixture replacement to decrease consumption

Building Air Conditioning & Ventilation

- Installation or expansion of Energy Management Systems with addition of energy saving control routines including optimal start/stop, night setback and discharge temperature reset
- Fume hood replacement and/or modification of laboratory air systems

- Retro-commissioning of building controls and other building systems

Chilled Water Plants

- Replacement of existing electric centrifugal, steam turbine centrifugal or absorption chiller units with new, high efficiency equipment
- Replacement of existing cooling towers with new or alternate type units
- Replacement of DX or ancillary system equipment with high efficiency units and reconfiguration of pumping system layout

Alternate Energy

- Cogeneration
- Renewable power equipment

Additional Services

- Provide additional energy evaluation, assessment, maintenance, operations and implementation services as directed by the OWNER.

Building Automation Systems and Controls

- Provide assessment, retrofits, modernization or replacement of controls, devices, components, equipment, and/or systems
- Provide and install data loggers, controls and/or devices as may be required, including but not limited to
 - provide baseline data for evaluation, and to
 - proper requisite data and performance documentation for proposed upgrades and modifications and for the M&V for same

Other Systems and Equipment

- As directed by OWNER

B. General Terms and Conditions

1. The CONTRACTOR and, if the CONTRACTOR is not authorized to practice professional engineering in New York State, its approved partner(s) or subconsultant(s) for professional engineering and architectural services, shall comply with applicable New York State law regarding the practice of professional architectural and engineering services, including certification and stamping of Project drawings and engineering documents. The CONTRACTOR and, if the CONTRACTOR is not authorized to practice professional engineering in New York State, its approved partner(s) or subconsultant(s) for professional engineering and architectural services, represent to OWNER that each provider of professional engineering and architectural services is an organization of professionals experienced in the type of services which the provider is engaged to provide for this Contract, is authorized, licensed and registered to do business in the State of New York for professional services, possesses the required Certificate of Authorization under the Education Law of the State of New York, is qualified, willing and able to perform the professional services requested and has the expertise and ability to provide the professional services which will meet the OWNER's objectives and requirements and comply with the requirements of all governmental, public and quasi-public authorities and agencies having jurisdiction over the Project.
2. The CONTRACTOR shall be responsible for the professional quality, technical accuracy, and the coordination of all designs, drawings, scoping documents, specifications, reports, scoping documents and other architect/engineer services ("Professional Services"). The CONTRACTOR shall, without additional compensation, correct any errors or deficiencies in the designs, drawings, specifications reports, scoping documents or other Professional Services. Neither the OWNER'S review, approval or acceptance of, nor payment to the CONTRACTOR for any of the Professional Services shall be construed as a waiver of any of OWNER'S rights under this Contract or of any cause of action arising out of CONTRACTOR'S performance or non-performance of the Professional Services or its failure to comply with a provision of this Contract, and CONTRACTOR shall be and remain liable to OWNER in accordance with applicable law for all damages to OWNER

to the extent caused thereby or arising therefrom.

3. Where this Contract provides that the CONTRACTOR shall provide specified services as “required to achieve the purposes of this Contract”, the CONTRACTOR is obligated to provide such services where such services are (i) required by law, (ii) necessary or desirable for accomplishing the relevant Phases(s) of Work, (iii) necessary or desirable for achieving the purposes of section 9-103 of the Energy Law of the State of New York, or (iv) where it would be considered ordinary and reasonable by one in the same trade or profession to provide such services on such a project under similar circumstances and conditions. CONTRACTOR may request clarification from OWNER in writing whether a service is “required to achieve the purposes of this Contract” and OWNER shall timely respond in writing.
4. General Conditions: Each phase of the Work is subject to the terms and conditions of DASNY’s current Contract for Professional Services, Chapter Three, General Terms and Conditions, and DASNY’s General Conditions for Construction located at Exhibit B. For purposes of this Contract, in Chapter Three of OWNER’s current Contract for Professional Services, the term “Professional” shall refer to the CONTRACTOR and, if the CONTRACTOR is not authorized to practice professional engineering in New York State, its approved partner(s) or subconsultant(s) for professional engineering and architectural services; and the term “Contract for Professional Services” shall refer to this Contract. Where any conflict or ambiguity exists between this Contract and DASNY’s current Contract for Professional Services, Chapter Three, General Terms and Conditions, the interpretation involving a greater quantity or higher quality of Work shall prevail.
5. For all EAWA, DWA and PIA issued by the OWNER to CONTRACTOR, the CONTRACTOR is bound by the following terms and requirements which are incorporated into the EAWA, DWA and PIA:

- a. Project Testing Services

- i. The CONTRACTOR acknowledges that the Client and OWNER rely on the CONTRACTOR’s expertise to ensure that appropriate, customary and necessary testing for the design and construction of the Project is identified and, where appropriate, made part of the Contract. To the extent that Client and OWNER may direct that certain testing is required, such direction does not relieve the CONTRACTOR from its obligation to ensure that appropriate, customary and necessary testing is identified and, where appropriate, made part of the Contract.

As such, the CONTRACTOR shall perform these Project testing services as required to achieve the purposes of this Contract or where directed by the Owner.

- ii. Required Project Testing Services:
 1. Assess and provide the monitoring, reporting and data collection systems as may be necessary to achieve the purposes of this Contract.
 2. Provide appropriate and advisable requirements for testing during the Project including, but not limited to, geotechnical, mold and Hazardous Materials surveys/assessments, remedial investigations, potential hazardous waste streams, as well as structural, chemical, electrical, or mechanical tests and investigations, and materials testing;
 3. prepare scopes of work, including, but not limited to, preliminary testing parameters for geotechnical work, soil borings and load tests for soil bearing capacity.
 4. OWNER may direct Project testing be designed or performed by other entities;
 5. Provide testing results performed by the testing contractor, consultant, subconsultant or other testing entity. The CONTRACTOR shall provide evaluations and analysis of the testing as prepared by the CONTRACTOR for review by the OWNER;

6. coordinate schedule, timing and order for testing, hazardous materials surveys/assessments, exploratory investigations, remedial investigations, potential hazardous waste stream sampling and sample collection;
 7. evaluate and provide an assessment of test results, hazardous materials survey/assessment results, exploratory investigations, remedial investigation results, potential hazardous waste stream sample results;
 8. report to OWNER unacceptable, questionable, inconsistent, or otherwise problematic test results, hazardous materials survey/assessment results, exploratory investigations, remedial investigation results, potential hazardous waste stream sample results; and
 9. Recommend necessary, customary and advisable additional Project testing.
- b. Project Requirements: As required to achieve the purposes of this Contract or where directed by OWNER, CONTRACTOR shall comply with the following Project requirements at each Phase of the Work:
- i. Code Compliance:
 1. The CONTRACTOR shall prepare and provide the OWNER's Code Compliance Form, including but not limited to, the OWNER's energy code compliance checklist and or other documents, as directed by the OWNER.
 - ii. Utility Information:
 1. The CONTRACTOR shall provide copies of correspondence and information provided to or received from utility companies and public corporations regarding required connections, locations of connections, equipment for connections, and loads for new or modified services. Public corporations include, but are not limited to, counties, cities, towns, villages, district corporations, and public benefit corporations which include public authorities.
 - iii. Meetings:
 1. The CONTRACTOR shall attend Project meetings. The CONTRACTOR shall provide minutes of meetings using the OWNER's Project Management Program within 5 calendar days of said meetings. Where the OWNER directs that one or more of the CONTRACTOR's Subconsultants attend a Project meeting, the CONTRACTOR is required to ensure that such Subconsultant(s) attends.
 - iv. Design Reviews:
 1. The CONTRACTOR shall provide written responses in the manner directed by OWNER to comments provided by the OWNER, the OWNER's Consultants, and the Client. The CONTRACTOR shall submit, for OWNER's review and approval, procurement checklist including, but not limited to, identification of sole/single source, design delegation, etc.
 - v. Facility Operational Parameters:
 1. The Contractor shall meet with facilities operations personnel and shall document the operations and maintenance requirements of the project and its devices, components, equipment and systems as may be related to, including, but not limited to:
 - a. Staff Operations and Maintenance Capability and Programs
 - b. Equipment and systems, controls, BAS/BMS, and sequences of operation
 - c. Reliability and Ease of Maintenance
 - d. Training Requirements
 - e. Emergency Operations
 - f. Parts and Supplies Availability
 - g. Longevity, Upgradability, Obsolescence,
 - h. Warranty, O&M Manual(s) and maintenance Requirements

- vi. Grants, Funding and Incentives:
 - 1. By the conclusion of Schematic Design or where directed by OWNER, the CONTRACTOR shall ascertain and communicate the availability of grants, incentives and other financial remuneration for green, sustainable and energy saving attributes of the project, including, as may be applicable, from:
 - a. US Department of Energy (DOE)
 - b. New York State Energy Research and Development Authority (NYSERDA) (Note that NYSERDA needs to be notified of the project prior to the end of schematic design in order to maximize potential incentives.)
 - c. New York State Department of Environmental Conservation (DEC)
 - d. Other entities that may have financial incentives available for sustainable buildings.
 - 2. The CONTRACTOR shall reevaluate their assessment at the conclusion of each phase, and assist in the application for grants, incentives, funding, and other financial remuneration determined by the OWNER to be viable for the project.

c. Quality Control Program

- i. The CONTRACTOR shall have a written Quality Control Program in place as part of the CONTRACTOR's standard office practices. The OWNER may review the CONTRACTOR's Quality Control Program at any time but the CONTRACTOR is responsible for the quality of drawings, specifications and other documents produced by the CONTRACTOR and its Subconsultant(s). The Quality Control Program shall apply to the CONTRACTOR's work, including, but not limited to, the review of drawings, specifications and other documents prior to submission to the OWNER.
- ii. The CONTRACTOR shall be responsible for the work of its Subconsultant(s) and Construction Subcontractors, including, but not limited to, quality, completeness, coordination and timeliness. The CONTRACTOR shall coordinate the CONTRACTOR's work and the work of its various Subconsultant(s) and Construction Subcontractors.

d. Project Management Program

- i. The CONTRACTOR shall record project related information in the OWNER's Project Management Program in accordance with the OWNER's instructions. The CONTRACTOR agrees to request user accounts to the OWNER's Project Management Program for each employee who will be working on the Project. The CONTRACTOR further agrees to have their employees attend training in the use of the OWNER's Project Management Program, and to utilize the DASNY instructions to perform necessary tasks. The OWNER will provide the training.
- ii. The CONTRACTOR shall use the OWNER's current Project Management Program in accordance with the OWNER's protocol to manage Project-related correspondence, transmittals, meeting minutes, requests for information, deliverables, daily logs, Project costs, change management and reporting.
- iii. The OWNER may direct the CONTRACTOR to provide the Project Management Program functions as directed by OWNER from available web-based and/or application service provider system(s) as selected by the OWNER.
- iv. The CONTRACTOR shall provide a document management plan and shall establish, maintain and operate a web-based or application-based design documentation management and control system, including but not limited to documentation access and storage, version control, distribution and tracking. The CONTRACTOR's document management plan shall provide access for the OWNER's project team

and include training, as may be required. The management plan and control system shall be submitted to the OWNER for approval.

- e. Project Regulatory and Utilities Approval Services
 - i. As required to achieve the purposes of this Contract or where directed by OWNER, the CONTRACTOR shall provide the services necessary or useful to obtain regulatory approvals, permits, certificates, and other consents of any form from authorities having jurisdiction over the Project, including but not limited to, a construction permit from DASNY or a building permit from the appropriate regulatory authority and/or municipal corporation, and:
 - 1. promptly prepare and file applications for regulatory approvals, construction permits, building permits, rezoning, site plan approval, local variances, or other approvals, permits, certificates, and other consents of any form including completion of necessary applications and supporting documentation;
 - 2. attend any meetings required to secure regulatory approvals, permits, certificates, and other consents of any form from authorities and/or utilities having jurisdiction over the Project unless the OWNER directs otherwise;
 - ii. Include coordination with and approval of utilities unless specified elsewhere;
 - 1. Authorities having jurisdiction over the Project may include, but are not limited to, New York City (NYC) Fire Department, NYC Buildings Department, NYC Transportation Department, NYCDEP, NYC Landmarks, New York State (NYS) Department of Transportation, NYS Department of Health, NYS Department of Environmental Conservation, and NYS Office of Parks, Recreation and Historic Preservation;
 - 2. This obligation of the CONTRACTOR includes work necessary including but not limited to final inspections, to obtain a Certificate(s) of Occupancy or Certificate(s) of Code Compliance whichever is applicable.

C. Energy Assessments

Through the issuance of an EAWA, the OWNER may direct the CONTRACTOR to perform a broad-based Comprehensive Energy Assessment (“CEA”) and/or a more targeted Facility Energy Assessment (“FEA”), as follows:

Comprehensive Energy Assessment

- 3. Comprehensive Energy Audit Process
 - a. The CONTRACTOR shall perform a CEA and deliver a Comprehensive Energy Assessment Report (“CEA Report”) for OWNER’s review and consideration.
 - b. Procurement Exemptions: CONTRACTOR shall identify to OWNER any potential procurement exemptions that may be required for the performance of the ECMs set forth in the CEA Report.
 - c. The CONTRACTOR shall perform the following CEA phases in order, including the performance specifications for the information to be collected, associated required analysis, a non-exclusive list of energy conservation measures (“ECMs”) to be considered, methodology for calculations, financing expectations, required structure for the CEA Report.
 - i. Preliminary Coordination Meeting:
The CONTRACTOR and OWNER shall participate in an initial meeting (the "Preliminary Coordination Meeting") to discuss the approach to delivering the CEA and the parties' respective responsibilities. The CONTRACTOR will prepare an agenda and conference record to include those agenda items.

- ii. Energy Assessment and Data Collection:
The CONTRACTOR shall submit an Energy Assessment Plan (the "Assessment Plan") for OWNER's approval within 10 days of the Preliminary Coordination Meeting. Once the Assessment Plan is approved, OWNER will coordinate and cooperate with the CONTRACTOR to facilitate staff interviews, disclose and provide reasonable access to relevant data and records and provide access to the physical facilities, as appropriate and in accordance with the Assessment Plan.
- iii. Baseline Establishment:
The CONTRACTOR shall develop and establish a baseline period consumption (the "Energy Consumption Baseline"). The OWNER and Client will provide access to the necessary individuals, records and meters in order for the CONTRACTOR to develop the Energy Consumption Baseline
- iv. Preliminary Analysis, Review and Next Steps:
The CONTRACTOR shall prepare and present a preliminary analysis that is expected to comprise the CEA to OWNER in accordance with Exhibit A at each of the following check-points:
 - 1. 25% complete;
 - 2. 50% complete; and
 - 3. 75% complete.The purpose of these reports will be for OWNER to confirm that the CONTRACTOR is performing the CEA in accordance this Contract and proposed Project objectives.
- v. Draft Detailed Analysis Report:
Once the CONTRACTOR has advanced beyond (C) (2) (i) through (C) (2) (iv) above, the CONTRACTOR shall conduct a detailed analysis of the recommended ECMs and begin developing the basis and analysis for the draft CEA Report (the "Draft CEA Report").
- vi. Draft CEA Report:
 - 1. The CONTRACTOR shall deliver the Draft CEA Report consistent with the delineated requirements within the time period for delivery set forth in the EAWA. The Draft CEA Report will be submitted to OWNER for its review and approval prior to the CONTRACTOR's submission of the final CEA Report (the "Final CEA Report").
 - 2. The Draft CEA Report shall contain the CONTRACTOR's advisements to the OWNER in connection with any potential procurement exemptions that may be required for the performance of the ECMs set forth in such report.
- vii. Finalization of Draft CEA Report:
OWNER and the CONTRACTOR will meet within 7 days of OWNER's receipt of the Draft CEA Report. The Parties may engage in multiple meetings to allow for OWNER to conduct concurrent reviews and provide formal and informal input on the Draft CEA Report. The CONTRACTOR will prepare an agenda for the initial meeting to finalize the Draft CEA Report, consistent with the topics covered from the Preliminary Coordination Meeting. The CONTRACTOR may make any presentations necessary to explain the recommendations, savings calculations and impact of the ECMs on the Facilities. The CONTRACTOR will revise the Draft CEA Report as requested by OWNER and will issue the Final CEA Report consistent with the feedback and comments received from OWNER.
- viii. Issuance of Final CEA Report:
The CONTRACTOR shall deliver a Final CEA Report within the time period for delivery set forth in the EAWA. The Final CEA Report shall be certified by the

CONTRACTOR for accuracy and completeness.

ix. Preliminary M&V and Commissioning Plans:

1. Measurement and Verification (M&V): CONTRACTOR shall provide confirmation of the preliminary M&V plan and/or revise the M&V plan as directed by OWNER.
2. Commissioning: CONTRACTOR shall incorporate a preliminary commissioning plan and protocols.

Facility Energy Assessment

2. Facility Energy Assessment Process

Pursuant to a EAWA issued by the OWNER, the CONTRACTOR may be directed to conduct a Facility Energy Assessment (“FEA”) and prepare a Facility Energy Assessment Report (“FEA Report”) for the facility or facilities identified in the EAWA. In the event that the Facility Energy Assessment and Report require schematic deliverables, such documents shall be prepared by a registered professional engineer licensed in the State of New York.

The Report shall be submitted to the OWNER for written approval and shall include, as applicable, but not be limited to, the following:

- a. Description of each facility and relevant mechanical, electrical, architectural and any other related systems, as required, including an inventory and condition assessment of applicable heating, cooling and ventilation systems with ancillary systems and equipment; identification and location of all hazardous or potentially hazardous materials present or possibly present at the facility.
- b. Documentation of occupancy, hours of operation, billing history analysis, utility rate comparisons and energy consumption profile. The CONTRACTOR shall identify and quantify all factors which affect the energy use of the equipment or facility, including but not limited to: hours and levels of occupancy and load, adjustment in labor force, building use and operational procedures, temperature, humidification and ventilation levels, general level of repair and efficiency of existing heating, cooling and other energy use equipment.
- c. If required, a technology assessment of applicable Energy Conservation Measures (ECMs), comparison of equipment alternatives and identification of utility requirements.
- d. A Measurement & Verification (M&V) Plan to measure Post Installation Energy Savings, in accordance with the requirements of ASHRAE Guideline 14 – Measurement and Verification of Energy & Demand, outlining required Performance Tests and Measurements. The M&V plan shall at a minimum define the proposed Compliance Path and specific approach along with the hardware, software and personnel requirements of the plan. The level of uncertainty and level of confidence shall be defined for the proposed Compliance Path. In no case shall the level of uncertainty be less than 50% of the annual reported savings at the 68% confidence level.
- e. Development of an Energy Guarantee Matrix and establishment of the Guarantee Percentage in accordance with the requirements of Article XIII.
- f. Preliminary project schedule with appropriate milestone dates including design, hazardous waste removal, procurement, construction, startup and testing
- g. Estimate of complete cost of project including but not limited to cost of design, construction, hazardous material removal, startup and testing.

- h. As required to achieve the purposes of this Contract or where directed by the OWNER, narratives, drawings and specifications shall be prepared in accordance with the OWNER'S Design Professionals Submission Requirements document, Schematic Design Phase (30% Submission), (<http://www.dasny.org/construc/procedures.php>)
- i. Such other tasks as the OWNER may include in the EAWA
- j. Copies of the Report shall be submitted to the OWNER for review and written approval in a quantity to be determined by the OWNER.

Terms and Requirements of all EAWAs

2. Each EAWA is subject to and incorporates the following terms:

- a. Exhibit A, entitled Energy Assessment Scope of Work, sets forth the detailed requirements, task lists, and other terms and conditions applicable to all EAWAs as fully as if the same was set forth herein.
- b. The EAWA shall be conducted so that the estimate of project construction cost does not exceed the project construction budget, if a project construction budget has been established by the OWNER. If at any time the estimate of project construction cost exceeds the project construction budget, the CONTRACTOR, or, if the CONTRACTOR is not authorized to practice professional engineering in New York State, its approved Subconsultant(s) for professional engineering and architectural services, shall revise, at its own cost and expense, and at no additional cost to the OWNER, all or any part of the EA Report to bring the estimate of project construction cost within the project construction budget. Such revision shall include, if the OWNER directs and at no additional cost to the OWNER, value engineering, redefining the scope of the project, incorporating all scope reductions and project modifications into the Report, and developing and incorporating alternatives into the Report.
- c. Limited Scope of Work
 - 1. The CONTRACTOR is not authorized to perform any other work, analysis or installation other than what is permitted and required under the EAWA. Performing a EAWA does not guarantee or provide any rights to the CONTRACTOR or any third-party in performing any additional work under this Contract or otherwise.
 - 2. The OWNER is authorized to direct the CONTRACTOR, through EAWA, DWA or PIA, to perform additional Scopes of Work in connection with this Contract, and the OWNER possesses complete discretion to instead issue an EAWA, DWA or PIA to any other entity to perform additional Work on the Project.
- b. Project Cost Estimating Services
 - i. As required to achieve the purposes of this Contract or where directed by OWNER, the CONTRACTOR shall prepare a Construction Cost Estimate that describes the total anticipated projected cost for Contractor(s) to complete construction of the Project in the identified location and anticipated local market conditions, based on anticipated costs of individual Project components added together. The Construction Cost Estimate shall include labor, material, and equipment costs organized according to Construction Specification Institute (CSI) codes or other generally accepted cost estimating system acceptable to the OWNER, as well as other administrative costs required for Contractor(s) to complete the Project, and shall be escalated to the mid-point of the construction duration.
 - 1. Cost Estimator Qualifications: The cost estimator shall be a natural person experienced in construction cost estimating in New York, and shall have a minimum of five years of demonstrated experience estimating large capital projects or other experience estimating capital projects that the OWNER, in

its sole and exclusive discretion, finds acceptable.

ii. Estimating Requirements

1. The CONTRACTOR shall provide a Construction Cost Estimate, using costs appropriate for the type of work and design stage, based upon experience, and including an appropriate design contingency, bidding contingency, contractor's overhead and profit, escalation, trade contractor general conditions costs, current market conditions, and other contingencies as directed by the OWNER.
2. The Construction Cost Estimate shall be detailed enough so that each component of the estimate clearly correlates with the Project description and the most recent delineation of the scope of work, drawings and specifications.
3. Unless otherwise directed by the OWNER, the Construction Cost Estimates shall be based upon a detailed take-off of labor, materials and equipment, including wage rates (including base rate, taxes, insurance and fringe benefits) for the installation of the materials and equipment. Estimates shall be in the same format as the OWNER's Schedule of Values and shall be prepared using the OWNER provided "Consultant Cost Estimating Workbook", which can be found on OWNER's website at www.dasny.org. Upon prior written approval of the OWNER, the CONTRACTOR may prepare the estimate in an alternative format provided the estimate includes, at a minimum, information contained in the OWNER supplied format.
4. The CONTRACTOR shall evaluate the impact of Project constraints on the Construction Cost Estimate, including but not limited to, conformance with industry standards, Site logistics, Project Schedule, environmental considerations and local market conditions. The CONTRACTOR shall provide recommendations, and an assessment of options and possible alternative value engineering solutions, to address any issues with the Construction Cost Estimate.
5. The CONTRACTOR shall hold an estimating conference at each phase. The OWNER, Client, CONTRACTOR and cost estimator shall participate in each conference. If the OWNER directs, the cost estimator shall participate in person. If the OWNER directs, the conference can be part of another meeting.
6. The CONTRACTOR shall provide a reconciliation to the previous Construction Cost Estimate and the Approved Construction Budget at each phase. The reconciliation shall include an explanation of any variances or overall increases.
7. The CONTRACTOR shall provide estimating services as directed by the OWNER and as necessary for the Project, including, but not limited to, life cycle costing, net present value analysis, and total cost of ownership.

c. Project Schedule Services

- i. As required to achieve the purposes of this Contract or where directed by OWNER, the CONTRACTOR shall provide project scheduling deliverables from the current versions of the OWNER's standard scheduling program.
- ii. Project Scheduler Qualifications: Unless otherwise directed by Owner, a natural person experienced in Critical Path Method (CPM) scheduling and reporting, with capability of producing CPM reports and diagrams within timeframes required or requested by the OWNER.
- iii. Scheduling Requirements
 1. Evaluate Scheduling Requirements: Evaluate the impact of ECM choices on the Project Construction Schedule, including but not limited to, conformance with industry standards, reasonableness of overall proposed schedule duration, and methodology. Provide recommendations and possible alternative solutions, which at minimum addresses:
 - a. Available labor resources.

- b. Construction sequence, logical progression of the Work.
 - c. Phasing, long lead items.
 - d. Critical path.
 - e. Proposed milestones and division of Work.
- d. Measurement and Verification (M&V): CONTRACTOR shall provide confirmation of the preliminary M&V plan and/or revise the M&V plan as directed by OWNER.
- e. Commissioning: CONTRACTOR shall incorporate a preliminary commissioning plan and protocols.
- f. Procurement exemptions: CONTRACTOR shall identify to OWNER any potential procurement exemptions that may be required for the performance of the ECMs set forth in the Facility Energy Assessment Report.
- g. **PRESCHEMATIC SERVICES**

Preschematic Services may include the preliminary investigation and analysis of the Project, the Site and the familiarization with baseline information identified in the initial investigation. The CONTRACTOR shall define and confirm the building program, provide preliminary design solutions, anticipated Construction Cost estimates and anticipated Project Schedule.

The CONTRACTOR shall be responsible for the Work of its Subconsultant(s) and for the coordination of its Work and the Work of its various Subconsultant(s), including, but not limited to, the information presented within the phase submission.

- i. Scope of Preschematic Services: The CONTRACTOR shall submit preliminary investigation and analysis documentation, diagrams, preliminary drawings, programming report, preliminary design options, the anticipated Construction Cost estimates and the anticipated Project Schedule to the OWNER for review and approval.

As required to achieve the purposes of this Contract or where directed by OWNER, the CONTRACTOR shall perform the following tasks, including but not limited to:

1. The CONTRACTOR shall: visit and thoroughly inspect the Project Site, including existing structure(s) and man-made feature(s) to identify existing deficiencies and ascertain the specific locations of pertinent structural components;
2. Perform site assessments, as may be applicable to perform the Facility Energy Assessment. Such assessments may include evaluation of prevailing direction and speeds, sun path and access, and other aspects of the microclimate, soil conditions, local aquifer location, local flora and fauna of note;
3. familiarize with prior uses of the Project Site and prior structures and man-made features that were located on the Project Site;
4. familiarize itself with the survey of the location of existing buildings, utilities, conditions, streets, equipment, components and other attributes having or likely to have an impact on, or adjacent to, the Project;
5. familiarize itself with, design objectives, Approved Construction Budget and pertinent Project information and programming needs including goals set by the OWNER entity;
6. provide the Project Testing Services as required by this Contract;
7. familiarize itself with, review and analyze applicable local zoning restrictions and requirements including but not limited to determining the proposed structure(s) compliance (or noncompliance) with the local municipality's planning and zoning codes:

8. familiarize itself with the current applicable Executive Orders and Laws of the state and or the affected municipalities, if applicable, related to sustainability, resilience, energy use reductions, GHG reductions, electrification, social equity, and other laws, codes and regulations that may be applicable;
 9. gather any other information necessary for a thorough understanding of the Project;
 10. attend the Project kick-off meeting;
 11. review available as-built and record drawings, plans and specifications; and
 12. where requested by OWNER, provide a preliminary environmental assessment and/or complete an Environmental Assessment Long Form or, at the OWNER's direction, assist an Environmental Consultant for the DASNY Office of Environmental Affairs in the preparation of such form.
- ii. Programming: provide a comprehensive delineation of the design needs for the Project; including but not limited to identification of building user needs, patterns of use of space, space and adjacency needs, room-by-room technical requirements, engineering criteria, and site opportunities and constraints.
 - iii. Provide to the OWNER a series of alternate solutions that explore a full range of potential project, building and site development possibilities including alternative mechanical, electrical and structural considerations; establish a basic Project strategy by addressing critical relationships among program elements. Select, in collaboration with the OWNER, the overall solution or combination of solutions that best address the needs of the OWNER

h. SCHEMATIC SERVICES

Where appropriate or as required by the OWNER, the Phase shall consist of development of the design narrative and the preferred design option. The CONTRACTOR shall continue to refine the building program, preferred design solution, the anticipated Construction Cost estimate and anticipated Project Schedule.

- i. As required to achieve the purposes of this Contract or where directed by OWNER, the Scope of Schematic Services shall include:
 1. The CONTRACTOR shall submit narratives, drawings, outline specifications, updated Project description and initial Basis of Design narrative, the anticipated Construction Cost estimate, anticipated Project Schedule to the OWNER for review and approval.
 2. The CONTRACTOR shall be responsible for the work of its Subconsultant(s) and for the coordination of its work and the work of its various Subconsultant(s), including, but not limited to, the information presented within the phase submission.
 3. Narratives, Drawings, and Specifications: Narratives, drawings and specifications shall be prepared in accordance with the OWNER's Design Professional's Submission Requirements located on DASNY's website at www.dasny.org.
- ii. The Schematic Design Documents shall consist of drawings and other documents including, but not limited to, a site plan, if appropriate, and preliminary building plans, sections and elevations; and may include some combination of assessments, study models, perspective sketches, or digital representations, or additional documentation as requested by the OWNER. Preliminary selections of major building system and construction materials shall be noted on the drawings or described in writing.

D. Design Phase Services – Contract Documents and Bid

Depending upon the results of any EA Report, Design Phase Services may commence at Schematic or Design Development Services.

Pursuant to a Design Work Authorization (“DWA”) issued by the OWNER for the Project described therein, the CONTRACTOR shall produce drawings for the Project for OWNER review and written approval, and, at a minimum, the specified following deliverables, stamped by a professional engineer licensed in the State of New York where appropriate and required by law. The following services and deliverables will not apply to every Project. Consult the DWA and written instructions from OWNER for the requirements.

Alternatively, this section sets forth an expedited design process for the creation of scope of work delineations called “Scoping Documents” may not involve the practice of professional architecture nor engineering. Scoping Documents may only be used where no building permit is required to implement the scope of work delineation, such as for minor alterations or ordinary repairs. Scoping Documents are intended to provide efficiency in situations where traditional designs stamped by a design professional are not required.

The CONTRACTOR shall provide design documentation and deliverables as directed by OWNER, which may include some or all of the tasks set forth below. Such documentation shall be provided as required for the installation as directed by the OWNER of a range of projects including, but not limited to:

- Maintenance – Minor Equipment, Controls, Devices and Upgrades
- Capital – Minor Miscellaneous Modifications – Equipment, Controls, Devices and Upgrades
- Capital – Intensive Modifications – Design/Construction Management Build
- Design/Build

1. Preschematic and/or Schematic Services

Preschematic and/or Schematic Services shall be performed by the CONTRACTOR as set forth in “Requirements of the DWA” section below.

2. Design Development Services - 60% Submission

Per the DWA and as directed by the OWNER in writing, the CONTRACTOR shall prepare 60% Construction Documents for the Project based on the findings of the Report as approved by the OWNER. These documents shall clearly define all major elements of the Project including where applicable but not necessarily limited to:

- Project overview report detailing facility layout and all design assumptions.
- Applicable code analysis.
- Verification of utility contacts for electric, gas, water and sewer.
- Mechanical, electrical and structural calculations inclusive of purpose, assumptions, design input and references.
- For alterations to existing systems: ratings and capacity of existing mechanical, electrical and structural systems with demands and loads imposed by modifications.
- Testing reports including soils, structural, piping, electrical capacity and acoustical tests.
- Demolition drawings including rigging paths, staging areas and construction phasing.
- Mechanical flow diagrams and electrical one-lines.
- Mechanical and electrical layout drawings for all relevant systems illustrating dimensioned footprint layout of equipment with access and maintenance isles, space for equipment and tube removal and major piping, ductwork, cable trays, conduits and necessary circuiting.
- Controls schematics defining system architecture and basic sequence of operations for all systems including interface with existing systems.

- Major and ancillary equipment schedules listing major technical specifics and ratings.
- Structural floor, foundation and roof plans and sections showing bays, floor slabs, beam, girder, footing, grade beams, foundation wall and column sizes.
- Define loads and impacts on existing structures and special features.
- Define and show architectural modifications required to implement the Project.
- Outline equipment and construction specifications for all relevant disciplines.
- Updated 60% design estimate of Project construction cost. The estimate shall be prepared in accordance with the OWNER's requirements and format.
- Updated Preliminary Project CPM Schedule with appropriate, additional procurement and construction milestones.
- As directed by OWNER, Narratives, drawings and specifications shall be prepared in accordance with the OWNER'S Design Professionals Submission Requirements document
- Any additional items as required by the OWNER'S and/or Client's Design Consultant's Guidelines

2. Construction Document Services - 100% Submission

As required to achieve the purposes of this Contract or where directed by OWNER, the CONTRACTOR shall prepare 100% Construction Documents for the Project subsequent to OWNER written approval of 60% Construction Documents. Except for the OWNER'S final comments, these documents shall be complete and ready for construction bidding and shall contain the following:

- Responses to comments from OWNER'S and Client's 60% Construction Document review.
- Project overview report detailing facility layout and all design assumptions.
- Complete mechanical flow diagrams and electrical one-lines and riser diagrams for all systems in the Project.
- Complete MEP construction drawings.
- Complete controls schematics and points list.
- Complete equipment and specialty item schedules.
- Complete structural and architectural plans, sections and details.
- Complete specifications for all disciplines.
- Detailed Energy Guarantee performance test protocols and acceptance criteria for installed equipment. A detailed protocol is required showing required instrument locations and accuracy, test durations and all required data to be collected.
- Updated 100% design estimate of Project construction cost. Unless otherwise directed by OWNER, the estimate shall be prepared using the OWNER provided "Consultant Cost Estimating Workbook".
- Updated Preliminary Project CPM Schedule with appropriate, additional construction milestones.
- Narratives, drawings and specifications shall be prepared in accordance with the OWNER's Design Professionals submission requirements.
- Any additional items as required by the OWNER'S Design Consultant's Guidelines

3. Bid Document Services

As directed by the OWNER in writing, the CONTRACTOR shall prepare bid documents for the Project subsequent to OWNER's written approval of (i) design documentation, (ii) the Scoping Documents, or (iii) the 100% Construction Documents as follows:

- Responses to all comments from the OWNER'S 100% Construction Document review. Responses shall be in writing prior to release of Bid Documents for bidding.
- Furnish all finalized deliverables from the 100% Construction Document submission inclusive of OWNER'S comments.
- Final estimate of Project construction cost.
- OWNER'S construction terms and conditions for bidding.

- CONTRACTOR'S construction terms and conditions for bidding, as approved by the OWNER.
- Suggested schedule of anticipated monthly requisition amounts for partial payments.
- Initiate all code and regulatory permits.
- Model contract payment breakdown (Schedule of Values) to establish the minimum level of detail required for Subcontractor's payment breakdown and invoicing.
- Final Preliminary Project CPM Schedule with all appropriate procurement and construction milestones.
- Narratives, drawings and specifications shall be prepared in accordance with the OWNER'S Design Professionals submission requirements.
- Any additional items as required by the OWNER'S Design Consultant's Guidelines

Upon completion of documents, the CONTRACTOR shall certify to the OWNER that all Bid Documents have been thoroughly checked for constructability, accuracy and for the coordination of all their parts and details and conformity to all applicable laws, ordinances, and codes. The CONTRACTOR shall at a minimum obtain NYC Fire Department, NYC Building Department and all municipal, state, federal and utility and regulatory permits and approvals. If the OWNER is the authority issuing the building permit, then the CONTRACTOR shall be responsible for obtaining the permit from the OWNER.

Where required by (i) law, (ii) the Authority having jurisdiction, or (iii) where directed by OWNER, all drawings and specifications shall bear the signature and seal of a professional engineer licensed in the State of New York, except for architectural documents which can be sealed by a registered architect licensed in the State of New York. The CONTRACTOR shall be fully responsible for all designs and bid documents provided under this Contract.

4. Bid Evaluation and Contract Award

The CONTRACTOR shall perform the following procurement tasks as part of the Design Phase Services:

- a. Formal Advertising - For the purpose of obtaining expressions of interest from responsible bidders, formal advertising entails:
 - i. Preparation of bid documents on which competitive bids will be solicited; and
 - ii. Advertise for expressions of interest in the New York State Contract Reporter or as otherwise required by law or by the Owner.

- b. Pre-qualification of Bidders - Provide to the OWNER a list of three (3) or more bidders for OWNER'S approval prior to soliciting bids for the Project. The OWNER reserves the right to approve the bidders. Bidders will be required to meet specified qualifications before being invited to submit a bid on that bid package. The OWNER reserves the right to review and approve the qualification criteria and qualification process prior to advertising by the CONTRACTOR.

To facilitate the pre-qualification of bidders, the announcement per paragraphs (a) (i) and (ii). above shall be described in sufficient detail to inform prospective bidders of the nature and scope of the work, and anticipated schedule, and shall contain instructions to interested bidders for submitting qualifications, including New York State Vendor Responsibility Questionnaire submittals to the OWNER. Prospective bidders must submit their years of experience in performing said work on contracts of similar size and complexity. The CONTRACTOR, in concert with the OWNER as necessary and as directed by the OWNER, will review the prospective bidders' history and qualifications, and also review:

- (1) Registration status with the Department of State.

- (2) New York State Vendor Responsibility questionnaire, including financial statements, and the OWNER'S Vendor Questionnaire.
- (3) Past projects performance/contract history of the prospective bidder, including litigation with the CONTRACTOR or its affiliates, and with the OWNER.
- (4) Non-confidential information shared by members of the New York State Council of Contracting Agencies.
- (5) New York City Passport advice of caution or other adverse information.
- (6) New York State Department of Labor debarred list and one-willful prevailing wage violation list.
- (7) NYS Labor Law and OSHA serious violations.
- (8) Other public sources of debarment and performance information.

Pre-qualified firms will be invited to submit a bid subsequent to the OWNER's written approval of the Bid Documents

c. Contract Awards

Prior to the award of any Construction Subcontract for the Work, the CONTRACTOR shall:

- (1) Conduct the solicitation of sealed competitive bids for Construction Subcontracts for all equipment, materials and installation work applicable to the Project. The OWNER shall be present at the opening of bids unless an alternate arrangement acceptable to OWNER is available pursuant to law.
- (2) Provide the OWNER with a written bid comparison and evaluation addressing the responsiveness and responsibility of the bidders, recommending award and documenting the basis for award of such Construction Subcontracts.

In the event that the lowest bid of all responsive and responsible bidders for a Construction Subcontract is more than one hundred and ten (110%) of the amount for that Construction Subcontract in the approved Final estimate of Project construction cost, or if less than three bids are received in response to the invitation to submit a bid, the CONTRACTOR shall, upon direction from the OWNER, reject all bids and issue a revised invitation to bid approved by the OWNER.

If the low bid for any bid package appears to be too low, and it appears that the bidder would be unable to complete the contract at the price bid, the CONTRACTOR shall so notify the OWNER. The OWNER, in concert with the CONTRACTOR, will review the bid price breakdown, and the history of the bidder, in accordance with Executive Order 170.1, Uniform Guidelines for Responsibility Determinations. Assuming the OWNER agrees with the CONTRACTOR that the bid price is too low, or that the history of the bidder raises serious concerns about the bidder's ability to perform the work in a timely and satisfactory manner, and such agreement shall not be unreasonably withheld, the CONTRACTOR will proceed to review the next low bidder, in like manner if necessary.

- (3) Provide the OWNER a list of three (3) or more competitive bids for the Construction Subcontract. Acceptance of the bid will be based on the lowest responsive and responsible bidder.

- (4) Provide the OWNER with a formal recommendation detailing the basis for the award. The recommendation shall include all relevant factors such as price, schedule, quality, efficiency, maintainability, and past experience with similar work. The prices in the CONTRACTOR'S agreements with Construction Subcontractors for the Work shall be inclusive of all costs, including, but not limited to labor, material, incidental and direct expenses and overheads, insurance, permits, bond, licensee and taxes. The OWNER shall not be liable to the CONTRACTOR for any additional sums.

d. Contract Documents

- The CONTRACTOR shall include the OWNER'S current GENERAL CONDITIONS for CONSTRUCTION ("General Conditions") (Exhibit C) and General Requirements in each bid package. The General Requirements may be modified as required in order to adapt them to the specific Project but such modifications are subject to the OWNER'S written approval prior to inviting bidders to submit a bid. The General Conditions and General Requirements as modified for the Project must be included in the bid package. CONTRACTOR shall award one Construction Subcontract for each Project, unless the OWNER directs otherwise; each bidder awarded a Construction Subcontract shall be a Construction Subcontractor.
- All contract documents for the Construction Subcontract between the CONTRACTOR and a Construction Subcontractor shall be made available for review by the OWNER and are subject to the written approval of the OWNER prior to award. Copies of the executed Construction Subcontract shall be provided to the OWNER after execution of the Project Installation Agreement.
- The OWNER shall be a third-party beneficiary to each Construction Subcontract.

5. Each DWA shall include the following terms and conditions:

a. Project Cost Estimating Services

- i. As required to achieve the purposes of this Contract or where directed by OWNER, the CONTRACTOR shall prepare a Construction Cost Estimate, updated at each phase of design, that describes the total anticipated projected cost for Contractor(s) to complete construction of the Project in the identified location and anticipated local market conditions, based on anticipated costs of individual Project components added together. The Construction Cost Estimate shall include labor, material, and equipment costs organized according to Construction Specification Institute (CSI) codes or other generally accepted cost estimating system acceptable to the OWNER, as well as other administrative costs required for Contractor(s) to complete the Project, and shall be escalated to the mid-point of the construction duration.
 - 1. Cost Estimator Qualifications: The cost estimator shall be a natural person experienced in construction cost estimating in New York, and shall have a minimum of five years of demonstrated experience estimating large capital projects or other experience estimating capital projects that the OWNER, in its sole and exclusive discretion, finds acceptable.
- iii. Estimating Requirements
 - 1. At each phase of design, the CONTRACTOR shall provide a Construction Cost Estimate, using costs appropriate for the type of work and design stage, based upon experience, and including an appropriate design contingency, bidding contingency, contractor's overhead and profit, escalation, trade contractor general conditions costs, current market conditions, and other contingencies as directed by the OWNER.
 - 2. The Construction Cost Estimate shall be detailed enough so that each

component of the estimate clearly correlates with the Project description and the most recent drawings and specifications of this phase.

3. Unless otherwise directed by the OWNER, the Construction Cost Estimates shall be based upon a detailed take-off of labor, materials and equipment, including wage rates (including base rate, taxes, insurance and fringe benefits) for the installation of the materials and equipment. Estimates shall be in the same format as the OWNER's Schedule of Values and shall be prepared using the OWNER provided "Consultant Cost Estimating Workbook", which can be found on DASNY's website at www.dasny.org. Upon prior written approval of the OWNER, the CONTRACTOR may prepare the estimate in an alternative format provided the estimate includes, at a minimum, information contained in the OWNER supplied format.
4. The CONTRACTOR shall evaluate the impact of Project constraints and design choices on the Construction Cost Estimate, including but not limited to, conformance with industry standards, Site logistics, Project Schedule, environmental considerations and local market conditions. The CONTRACTOR shall provide recommendations, and an assessment of possible alternative value engineering solutions, to address any issues with the Construction Cost Estimate.
5. The CONTRACTOR shall hold an estimating conference at each design phase (pre-schematic, schematic, design development, construction documents, and bid documents). The OWNER, Client, CONTRACTOR and cost estimator shall participate in each conference. If the OWNER directs, the cost estimator shall participate in person. If the OWNER directs, the conference can be part of another meeting.
6. The CONTRACTOR shall provide a reconciliation to the previous Construction Cost Estimate and the Approved Construction Budget at each phase of design. The reconciliation shall include an explanation of any variances or overall increases.
7. The CONTRACTOR shall provide supplemental estimating services as directed by the OWNER and as necessary for the Project, including, but not limited to, life cycle costing, net present value analysis, and total cost of ownership.

b. Project Schedule Services

- i. The CONTRACTOR shall provide project scheduling deliverables from the current versions of the OWNER's standard scheduling program.
- ii. Project Scheduler Qualifications: A natural person experienced in Critical Path Method (CPM) scheduling and reporting, with capability of producing CPM reports and diagrams within timeframes required or requested by the OWNER. The project scheduler shall have or be able to obtain certification as a Planning and Scheduling Professional (PSP) or have a minimum of five years of demonstrated experience scheduling large capital projects, or have other experience scheduling capital projects that the OWNER, in its sole and exclusive discretion, finds acceptable.
- iii. Scheduling Requirements: Evaluate Scheduling Requirements: Evaluate the impact of design choices on the Project Construction Schedule, including but not limited to, conformance with industry standards, reasonableness of overall proposed schedule duration, and methodology. Provide recommendations and possible alternative solutions, which at minimum addresses:
 1. Available labor resources.
 2. Construction sequence, logical progression of the Work.
 3. Phasing, long lead items.
 4. Critical path.
 5. Proposed milestones and division of Work.
 6. Project Design Schedule: Prepare a schedule for the design phase of the work, including at a minimum:

7. Submissions to the OWNER.
 8. OWNER review periods.
 9. Design milestones that impact construction packages.
- iv. Project Construction Schedule: Prepare an expanded schedule for the construction phase of the Project using a time-scaled Precedence Diagram Method (PDM) network diagram including major activities and milestones unique to each proposed Contract. The initial schedule shall be submitted at the design development phase review and updated thereafter with each scheduled design submission. Include skeleton diagram, which outlines significant construction activities of each proposed Contract. Indicate activities such as:
1. Notice to Proceed.
 2. Major activities unique to each Contract.
 3. Phasing.
 4. Critical path.
 5. Substantial Completion.
 6. Contract closeout.
 7. Proposed Milestones

c. Commissioning

- i. The CONTRACTOR shall incorporate a commissioning plan and protocols.
- ii. The CONTRACTOR shall participate and provide services in the Building Commissioning Process as set forth in NYS Tax Law §19, which created the NYS Green Buildings Tax Credit 638, the United States Green Building Council's LEED™ (Leadership in Energy and Environmental Design) rating system, New York State Executive Order 88, NYC Local Law 86, the State Green Building Construction Act (Article 13 of the Energy Law) and the DASNY Building Commissioning Guidelines.
- iii. The CONTRACTOR shall provide the services of the Designer as described in 6NYCRR § 638.8 Commissioning, as amended by the OWNER in the DASNY Commissioning Guidelines. The Commissioning Professional shall provide the services of the Commissioning Authority and the respective Contractor(s) shall provide the services of the Commissioning Agent as described in 6NYCRR § 638.8 Commissioning, as amended by the OWNER in the DASNY Commissioning Guidelines.
- iv. The CONTRACTOR shall perform the specific task(s) and provide the specific work product(s) required by 6NYCRR § 638.8 Commissioning, as amended by the OWNER in the DASNY Commissioning Guidelines. All work shall be performed and completed in full compliance with 6NYCRR § 638.8 Commissioning, as amended by the OWNER in the DASNY Commissioning Guidelines and as directed by the OWNER. The CONTRACTOR's services shall include, but not be limited to the following:
 1. the CONTRACTOR will be a primary participant in the commissioning process and provide documentation of the design intent, the basis of design, and the full sequences of operation for all equipment and systems;
 2. provide commissioning specifications;
 3. monitor and review systems commissioning and related documentation and coordinate resolution of design issues related to the commissioning process;
 4. review the commissioning plan;
 5. assist with and review pre-functional and functional performance test procedures and test results;
 6. assist with and review start-up, check-out procedures and checklists;
 7. assist with, review and approve the systems & energy management manual and the commissioning report; and
 8. provide all systems information in electronic format as directed by Owner..
 9. The CONTRACTOR shall coordinate with the Construction Manager (if applicable), the Contractors and the Commissioning Professional (if applicable) to achieve the successful commissioning of the Project systems.

10. The CONTRACTOR shall, at Substantial Completion of the applicable Contract, issue a written certification to the OWNER that the required HVAC system tests and system balancing have been performed, and that in the CONTRACTOR's opinion the HVAC system is operating as designed.

d. Design Delegation

- i. Subject to the OWNER's written approval and authorization the CONTRACTOR may delegate or assign the performance of a professional service through an unlicensed third party, such as a contractor or subcontractor, to another licensee (delegatee). The CONTRACTOR may not delegate professional services to a contractor or other entity not authorized to provide professional services in the State of New York. The OWNER may disallow this action if not in accordance with the terms identified below. Such specifically defined design work shall be limited to project components ancillary to the main components of the project, and the OWNER is the sole and exclusive judge in determining which project components are ancillary to the main components of the project;
- ii. the CONTRACTOR shall specify in writing to the delegatee the design and performance parameters which the design must satisfy, including the condition and capacity of the structure and/or substrate to support the delegated design element. In the Contract Documents, the CONTRACTOR must clearly specify and delineate between the CONTRACTOR's and the delegatee's design responsibilities.
- iii. the design function shall be required to be performed in accordance with performance specifications established by the CONTRACTOR and with applicable codes, laws, rules, and regulations;
- iv. the delegatee shall be required to be licensed or otherwise legally authorized to perform the design work involved and shall be required to sign and seal any design and calculations prepared. At the discretion of the OWNER, the OWNER may engage a third party to review the delegatee's work and its conformance with the overall design parameters specified by the CONTRACTOR. The delegatee shall be required to submit their work product to the reviewer;
- v. the CONTRACTOR shall be required to review and provide their approval of the design submitted by the delegatee for conformance with the established specifications and parameters and such determination and approval shall be in writing to the OWNER;
- vi. the CONTRACTOR shall be required to determine that the design prepared by the delegatee conforms to the overall project design and can be integrated into such design and such determination shall be in writing to the OWNER;
- vii. the CONTRACTOR shall retain overall design responsibility for the Work in accordance with this Contract and may not assign or delegate that responsibility. The CONTRACTOR shall remain responsible for delegatee's adherence to the overall design intent and for reviewing delegatee's work relative to its impact on the base structure; and
- viii. the CONTRACTOR shall notify the OWNER, in writing, of elements delegated for design by the delegatee. This notification shall take place during the Design Development Phase of the project. For information, the CONTRACTOR shall submit to the OWNER a listing of submittals for which design has been delegated. A copy of the approved submittals must then be provided to the OWNER on a timely basis, immediately following the CONTRACTOR's approval of these documents. The OWNER may also request the CONTRACTOR to arrange for a design delegation coordination meeting.
- ix. Should the CONTRACTOR delegate any portion of the design to a delegatee then the CONTRACTOR must ascertain that the delegatee has professional liability insurance and is licensed to practice in the State of New York. The CONTRACTOR shall, as part of the submittal process, require proof of insurance from the delegatee. In addition, the CONTRACTOR shall require, as part of the submittal process, a copy of the delegatee's Certificate of Authorization to practice Engineering in the State of

New York, anytime the delegated work involves Engineering.

- x. The proof of insurance and the Certificate of Authorization shall be forwarded to the OWNER via a cover letter from the CONTRACTOR. The proof of insurance and the Certificate of Authorization shall be obtained and forwarded to the Owner prior to any work being performed by the delegatee.

- e. Measurement and Verification (M&V): CONTRACTOR shall provide confirmation of the final M&V plan and/or revise the M&V plan as directed by OWNER.

6. Requirements of the DWA:

This phase shall consist of the development of the ECMS and other initiatives from the approved EA Report, including the structural, mechanical, electrical, civil and other systems and disciplines required for the Project, as well as recommendations for bidding packages, order of construction and timing. During this phase, design criteria and solutions shall be established and developed within the program requirements and budget as established by the OWNER. CONTRACTOR shall incorporate comments on the approved EA Report of the OWNER, the OWNER's Consultants, and the Client into the design submissions.

a. PRESCHMATIC SERVICES

Preschematic Services may include the preliminary investigation and analysis of the Project, the Site and the familiarization with baseline information identified in the initial investigation. The CONTRACTOR shall define and confirm the building program, provide preliminary design solutions, anticipated Construction Cost estimates and anticipated Project Schedule.

The CONTRACTOR shall be responsible for the work of its Subconsultant(s) and for the coordination of its work and the work of its various Subconsultant(s), including, but not limited to, the information presented within the phase submission.

- i. Scope of Preschematic Services: The CONTRACTOR shall submit preliminary investigation and analysis documentation, diagrams, preliminary drawings, programming report, preliminary design options, the anticipated Construction Cost estimates and the anticipated Project Schedule to the OWNER for review and approval.

As required to achieve the purposes of this Contract or where directed by OWNER, the Contractor shall perform the following tasks, including but not limited to:

1. The CONTRACTOR shall: visit and thoroughly inspect the Project Site, including existing structure(s) and man-made feature(s) to identify existing deficiencies and ascertain the specific locations of pertinent structural components;
2. Perform site assessments, as may be applicable to perform the Facility Energy Assessment. Such assessments may include evaluation of prevailing direction and speeds, sun path and access, and other aspects of the microclimate, soil conditions, local aquifer location, local flora and fauna of note;
3. familiarize with prior uses of the Project Site and prior structures and man-made features that were located on the Project Site;
4. familiarize itself with the survey of the location of existing buildings, utilities, conditions, streets, equipment, components and other attributes having or likely to have an impact on, or adjacent to, the Project;
5. familiarize itself with, design objectives, Approved Construction Budget and pertinent Project information and programming needs including goals set by the OWNER entity;
6. provide the Project Testing Services as required by this Contract;

7. familiarize itself with, review and analyze applicable local zoning restrictions and requirements including but not limited to determining the proposed structure(s) compliance (or noncompliance) with the local municipality's planning and zoning codes;
 8. familiarize itself with the current applicable Executive Orders and Laws of the state and or the affected municipalities, if applicable, related to sustainability, resilience, energy use reductions, GHG reductions, electrification, social equity, and other laws, codes and regulations that may be applicable;
 9. gather any other information necessary for a thorough understanding of the Project;
 10. attend the Project kick-off meeting;
 11. Review available as-built and record drawings, plans and specifications; and
 12. Where requested by OWNER, provide a preliminary environmental assessment and/or complete an Environmental Assessment Long Form or, at the OWNER's direction, assist an Environmental Consultant for the DASNY Office of Environmental Affairs in the preparation of such form.
- ii. Programming: provide the design needs for the Project; including but not limited to identification of building user needs, patterns of use of space, space and adjacency needs, room-by-room technical requirements, engineering criteria, and site opportunities and constraints.
- iii. Provide to the OWNER a series of alternate solutions that explore a full range of potential project, building and site development possibilities including alternative mechanical, electrical and structural considerations; establish a basic Project strategy by addressing critical relationships among program elements. Select, in collaboration with the OWNER, the overall solution or combination of solutions that best address the needs of the OWNER.

b. Schematic Services

Schematic Services shall consist of development of the design narrative and the preferred design option. The CONTRACTOR shall continue to refine the building program, preferred design solution, the anticipated Construction Cost estimate and anticipated Project Schedule.

- i. As required to achieve the purposes of this Contract or where directed by OWNER, the Scope of Schematic Services shall include:
1. The CONTRACTOR shall submit narratives, drawings, outline specifications, updated Project description and initial Basis of Design narrative, the anticipated Construction Cost estimate, anticipated Project Schedule to the OWNER for review and approval.
 2. The CONTRACTOR shall be responsible for the work of its Subconsultant(s) and for the coordination of its work and the work of its various Subconsultant(s), including, but not limited to, the information presented within the phase submission.
 3. Narratives, Drawings, and Specifications: Narratives, drawings and specifications shall be prepared in accordance with the OWNER's Design Professional's Submission Requirements located on DASNY's website at www.dasny.org.
 4. The Schematic Design Documents shall consist of drawings and other documents including, but not limited to, a site plan, if appropriate, and preliminary building plans, sections and elevations; and may include, some combination of assessments, study models, perspective sketches, or digital representations, or additional documentation as requested by the OWNER. Preliminary selections of major building system and construction materials shall be noted on the drawings or described in writing.

- ii. Schematic Phase Approval: Unless directed otherwise in writing by the OWNER acting through the Director, Planning, Design and Quality Assurance or a duly authorized representative of OWNER, the Design Development Services shall not be started until the OWNER approves the schematic phase submissions and the OWNER provides the CONTRACTOR with written authorization to proceed to the Design Development Services. Without such written authorization, the CONTRACTOR will be proceeding at its own risk.

c. Design Development Services Requirements

i. Scope of Design Development Services

As required to achieve the purposes of this Contract or where directed by OWNER, the CONTRACTOR shall submit drawings, a descriptive report, specifications, updated Project description and Basis of Design narrative, the updated Construction Cost Estimate, updated Project Design Schedule, updated Project Schedule, initial Project Construction Schedule.

The CONTRACTOR shall be responsible for the work of its Subconsultant(s) and for the coordination of its work and the work of its various Subconsultant(s), including, but not limited to, the information presented within the phase submission.

- ii. Narratives, Drawings, and Specifications: Narratives, drawings, and specifications shall be prepared in accordance with the OWNER's Design Professional's Submission Requirements located on DASNY's website at www.dasny.org.

Based on the OWNER's approval of the Schematic Design Documents, and on the OWNER's authorization of any adjustments in the Project requirements and the budget for the Cost of Work, the CONTRACTOR shall prepare Design Development Documents for the OWNER's approval. The Design Documents shall illustrate and describe the development of the approved Schematic Design Documents and shall consist of drawings and other documents including, plans, sections, elevations, typical construction details, and diagrammatic layouts of building systems to fix and describe the size and character of the Project as to architectural, structural, mechanical and electrical systems, and other appropriate elements. The Design Documents shall also include outline specifications that identify major materials and systems and establish, in general, their quality levels.

- iii. Building Energy Modeling (BEM): Unless directed otherwise by OWNER, At the completion of the design development phase, BEM shall be performed and submitted to confirm the predicted energy performance of the project.
 - 1. Modeling software shall comply with the requirements of ASHRAE Standard 140. Examples include but are not limited to; DOE 2.1, Visual DOE or eQuest. Modeling runs shall compare the base building design complying with the New York State Energy Conservation Construction Code or by reference ASHRAE Standard 90.1 and the proposed building, showing the energy savings.
 - 2. For applicable projects, the modeling report shall document support of the goals of State Executive Orders that call for Energy Use Intensity (EUI) reduction over certain baselines.

- iv. Special Inspections: The drawings and specifications prepared by the CONTRACTOR shall include specifications for inspection and testing services during construction as required for code and regulatory compliance, or as directed by the OWNER. The CONTRACTOR shall prepare a draft Statement of Special Inspections utilizing the OWNER's form. The testing services to be provided by an

approved laboratory or engineer through a direct contract with the OWNER shall be identified as well as the testing to be conducted by the Contractor, the CONTRACTOR, or a third party not under contract with the OWNER.

- v. Design Development Phase Approval: Unless directed otherwise in writing by the OWNER acting through the Director, Planning, Design and Quality Assurance or a duly authorized representative of OWNER, the Construction Documents Services shall not be started until the OWNER approves the design development phase submissions and the OWNER provides the CONTRACTOR with written authorization to proceed to the Design Development Services. Without such written authorization, the CONTRACTOR will be proceeding at its own risk.

d. Construction Document Services Requirements

As required to achieve the purposes of this Contract or where directed by OWNER, the Construction Document Services Requirements shall consist of the development of the Construction Documents. The Construction Documents shall illustrate, describe further and complete the development of the approved Design Development Documents and shall include but not be limited to: drawings and specifications, including structural, mechanical, electrical, civil and other systems and disciplines required for the Project, scoping documents or reports setting forth in detail the quality levels and performance criteria of materials and systems and other requirements for construction or implementation of the Work. At the OWNER's discretion there may be an unsealed and unsigned set of construction documents submitted for preliminary review. The CONTRACTOR shall incorporate comments on the approved Design Development submission of the OWNER, the OWNER's Consultants, and the Client into the Construction Document submission.

- i. Scope of Construction Document Services: The CONTRACTOR shall submit final design deliverables. Including but not limited to: drawings, specifications, scoping documents or reports, Project description and Basis of Design narrative, the final Construction Cost Estimate, final Project Schedule, final Project Construction and Phasing Schedule. The CONTRACTOR shall be responsible for the work of its Subconsultant(s) and for the coordination of its work and the work of its various Subconsultant(s), including, but not limited to, the final design deliverables and the information presented within the phase submission.
- ii. Construction Documents:

As required to achieve the purposes of this Contract or where directed by OWNER, based on the information obtained from prior phases of design, and any modifications authorized by the OWNER, the CONTRACTOR shall prepare Construction Documents that detail the Work within the Approved Construction Budget. The Construction Documents shall:

1. be complete and correct, incorporating comments from the previous design review, with completed drawings so that no additional data, changes, or information are required, and with completed specifications so that no additional data, information, or changes are required;
2. be fully coordinated, biddable, and constructible for the OWNER's Contractors, and include complete drawings, specifications, requirements and any other pertinent data required to obtain complete bids and to enable the contractor to complete the Work as delineated therein;
3. take into account existing Site features and structures, and safely and efficiently integrate the Work into existing Site features and structures;
4. Include labor, material, and equipment necessary to complete the Work;
5. portray Work which meets the OWNER's disclosed, demonstrated or documented aesthetic, functional, and operational objectives;

6. comply with applicable laws, statutes, building codes, rules and regulations of governmental, public, and quasi-public authorities and authorities having jurisdiction over the Project in effect on the date the documents are delivered to the OWNER;
 7. bear the signature and seal of the CONTRACTOR or appropriate Subconsultant evidencing full responsibility for designs and Contract Documents provided for under this Contract; and
 8. be included with and prepared in accordance with the OWNER's standard Contract Documents such that they be fit and proper for the purpose intended.
- iii. Narratives, Drawings and Specifications: Narratives including the final Basis of Design narrative, Drawings, and Specifications shall be prepared in accordance with the OWNER's Design Professional's Submission Requirements located on DASNY's website at www.dasny.org.
 - iv. Building Energy Modeling (BEM): Unless otherwise directed by OWNER, at the completion of the construction document phase, BEM shall be performed and submitted to confirm the predicted energy performance of the project.
 1. Modeling software shall comply with the requirements of ASHRAE Standard 140. Examples include but are not limited to; DOE 2.1, Visual DOE or eQuest. Modeling runs shall compare the base building design complying with the New York State Energy Conservation Construction Code or by reference ASHRAE Standard 90.1 and the proposed building, showing the energy savings.
 2. For applicable projects, the modeling report shall document support of the goals of State Executive Orders that call for Energy Use Intensity (EUI) reduction over certain baselines.
 - v. Measurement and Verification (M&V): CONTRACTOR shall provide confirmation of the final M&V plan and obtain approval of such plan from OWNER.
 - vi. Design Reviews: The CONTRACTOR shall submit a set of complete signed/sealed documents for final review and provide the design review requirements.
 - vii. Certifications and Approvals: Upon completion of the Construction Documents, the CONTRACTOR shall ensure (1) that Contract Documents are constructible and accurate; (2) that the Contract Documents provide for the proper coordination of the components and details; and (3) that the Construction Documents conform to applicable laws, ordinances and codes.
 - viii. Special Inspections: The drawings and specifications prepared by the CONTRACTOR shall include specifications for inspection and testing services during construction as required for code and regulatory compliance, or as directed by the OWNER. The CONTRACTOR shall finalize the Statement of Special Inspections utilizing the OWNER's form. The testing services to be provided by an approved laboratory or engineer through a direct contract with the OWNER shall be identified as well as the testing to be conducted by the CONTRACTOR, the CONTRACTOR, or a third party not under contract with the OWNER.
 - ix. Schedule of Values: The CONTRACTOR shall develop the Schedule of Values containing information required by the OWNER to be included in the bid documents for each Contract. The Schedule of Values shall be transmitted electronically in a file type, layout and format specified by the OWNER.
 - x. Shop Drawings and Submittals: The CONTRACTOR shall develop a list of shop

drawings and submittals, required by the Specifications, to be included in the bid documents for each Contract. The CONTRACTOR agrees to develop the submittal list for each Contract and enter submittals in the OWNER's Project Management Program or any other program selected by the OWNER. In addition to the submittals required by the technical Specifications, the CONTRACTOR shall include pre and post construction submittals including: special guarantees, warranties, drawings, operation and maintenance manuals, construction materials to be turned over to OWNER after Substantial Completion and the required quantity thereof, special tools to be turned over to OWNER after Substantial Completion and the required quantity thereof, certificates of compliance, test results, training for OWNER or Client, and other close out items required for each specification section.

xi. Regulatory Approvals and Construction Permits:

1. DASNY as the Authority Having Jurisdiction: For Projects for which the OWNER is the permitting agency, the CONTRACTOR shall prepare and submit the OWNER's Construction Permit Application form and required supplemental forms. The CONTRACTOR shall meet the requirements and obtain a permit from the Authority.
2. Other Entities as the Authority Having Jurisdiction: For Projects where DASNY is not the authority having jurisdiction requiring a construction permit, the CONTRACTOR shall submit documentation evidencing regulatory approval of the project to have a permit issued from the authority having jurisdiction. or, as may be applicable (or as may be required), evidencing a proper building permit

xii. Construction Documents Revisions: If the OWNER determines that the Construction Documents are not sufficient in number, content or quality to demonstrate the feasibility of the architectural, civil, structural, electrical or mechanical installations, the OWNER may order that the documents be corrected or that additional documents be prepared at no additional cost to the OWNER to adequately define said feasibility. Any interference among trades caused by inadequate design or coordination of the Construction Documents will be the responsibility of the CONTRACTOR who will prepare, at no additional cost to the OWNER, any supplemental drawings necessary to resolve the interferences found prior to or during the bidding period, or during construction.

xiii. The Project shall be designed so that the estimate of Project construction cost does not exceed the Project construction budget. If at any time the estimate of Project construction cost exceeds the Project construction budget, the CONTRACTOR, or, if the CONTRACTOR is not authorized to practice professional engineering in New York State, its approved Subconsultant(s) for professional engineering and architectural services, shall revise, at its own cost and expense, and at no additional cost to the OWNER, all or any part of the Construction Documents, Bid Documents or any other design documents to bring the estimate of Project construction cost within the Project construction budget. Such revision shall include, if the OWNER directs and at no additional cost to the OWNER, value engineering, redefining the scope of the Project, incorporating all scope reductions and Project modifications into the Construction Documents, Bid Documents or other design documents, and developing and incorporating bid alternatives into the Construction Documents, Bid Documents or other design documents.

xiv. Supplemental General Conditions: On a project specific basis and at the OWNER's sole discretion, Supplemental General Conditions may be required to address client specific needs, including but not limited to the use of 26 U.S.C 179D. In the event the OWNER elects to utilize Supplemental General Conditions, the CONTRACTOR shall include the Supplemental General Conditions in the Bid Documents and the

Supplemental General Conditions shall be incorporated in the project specific PIA.

e. Bid Phase Services Requirements

This phase shall consist of the project bid and award of the Contract(s).

- i. Bid Documents: The CONTRACTOR shall prepare and supply bid documents and addenda electronically, bearing the seal and signature of the CONTRACTOR, for the bidding and eventual award of contracts. The CONTRACTOR shall label these sets of documents "BID DOCUMENTS."
 - ii. Bid Questions and Clarifications: The CONTRACTOR shall investigate questions posed by the bidders relative to bid document packages or any other questions and, after receiving the OWNER's prior written approval, issue written replies to all bidders in the form of addenda.
 - iii. Pre-Bid and Post-Bid Meetings: The CONTRACTOR shall attend pre-bid and post-bid meeting(s) scheduled by the OWNER and provide minutes in a format and timeframe acceptable to OWNER.
 - iv. Bid Reviews: The CONTRACTOR shall assist the OWNER and the OWNER's Consultants in reviewing and analyzing the bids, including research into the qualifications and capabilities of the apparent low bidders to determine that the apparent low bidders are capable of fulfilling bid requirements, and make recommendations to the OWNER as to the award of the contracts.
 - v. Conformed Documents: The CONTRACTOR shall provide Conformed Documents for construction (identified as "Issued For Construction" documents). Conformed Documents shall be the Construction Documents modified, updated and coordinated to include any addenda issued during the bidding and accepted alternates. The Conformed Documents shall bear the signature and seal of the CONTRACTOR or appropriate Subconsultant.
7. Scoping Documents: The OWNER may direct the CONTRACTOR to perform an expedited design process for the creation of scope of work delineations ("Scoping Documents") which do not involve the practice of the professional architecture nor engineering.
1. Scoping documents may only be used where no building permit is required to implement the scope of work delineation, such as for minor alterations or ordinary repairs.
 2. The OWNER may issue a DWA directing the CONTRACTOR to produce Scoping Documents providing basic information and direction for the performance of minor alterations or repairs, or other work not requiring a building permit. The PIA will set forth the requirements of the Scoping Documents.
 3. The CONTRACTOR may be directed by the OWNER to implement the Scoping Documents by way of a separate PIA, or the OWNER may direct a separate entity to implement the Scoping Documents.

E. Construction Phase Services

Pursuant to a PIA issued by the OWNER, the CONTRACTOR shall provide all labor, materials, supplies, equipment, services and all other things necessary or useful to complete the Project or Projects described therein in accordance with the drawings and specifications set forth in the PIA, the OWNER'S GENERAL CONDITIONS for CONSTRUCTION ("General Conditions") in effect at the time of issuance of the PIA (Exhibit "C") which are hereby incorporated by reference into the PIA, the OWNER'S standard General Requirements incorporated into and attached to the PIA and this Contract. The PIA, drawings and specifications listed in the PIA, the General Conditions, the General Requirements and this Contract comprise the Project Contract Documents. The CONTRACTOR shall

also fulfill for the Project or Projects all obligations imposed on the CONTRACTOR by the General Conditions, the General Requirements, the PIA and this Contract. Each PIA shall include: (1) the goals for utilization of New York State certified Minority and Women owned Business Enterprises in the performance of the PIA or, in the OWNER'S discretion, other arrangements for utilization of New York State certified Minority and Women owned Business Enterprises in the Project; and (2) any requirement for a Project Labor Agreement in the performance of the PIA.

The CONTRACTOR shall also provide all services for each Project necessary to ensure that the Work of each Project is performed in a workmanlike and expeditious manner (the "Construction Phase Services").

Pursuant to a PIA issued by the OWNER, the CONTRACTOR shall provide all labor, materials, supplies, equipment, services and all other things necessary or useful to complete the Project or Projects described therein, including but not limited to such other tasks as the OWNER may include in the PIA, including but not limited to:

- Maintenance – Minor Equipment, Controls, Devices and Upgrades
- Capital – Minor Miscellaneous Modifications – Equipment, Controls, Devices and Upgrades
- Capital – Intensive Modifications – Design/Construction Management Build
- Design/Build

The Construction Phase Services shall include, but not be limited to:

1. **Procurement**

The CONTRACTOR shall perform, at a minimum, the following procurement tasks as part of the Construction Phase Services:

- Recommended list of proposed bidders
- Recommend award of Construction Subcontracts to the successful bidder and supply all requested pre-award submittals, including but not limited to:
 - Recommendation to Award Package
 - Proposed Project Schedule
 - Proof of Construction Subcontractor's Insurance as required by the General Conditions
 - Vendor Responsibility Questionnaire (VRQ) for the Construction Subcontractor
- Review and approve Construction Subcontractors' Schedule of Values.
- Identify, recommend for purchase, purchase with OWNER's approval and expedite the procurement of equipment, materials and supplies which require long lead time for procurement or manufacture.

2. **Construction Administration**

The CONTRACTOR shall perform, at a minimum, the following construction administration tasks as part of the Construction Phase Services:

- Using the Final Preliminary Project CPM Schedule as a base, prepare with input from the Construction Subcontractors, the Construction Phase CPM Project Schedule (the "Project Schedule") in accordance with the General Conditions and submit it to the OWNER for approval.
- Conduct job meetings, to be held at a minimum biweekly.
- Conduct construction progress meetings. Frequency shall be as directed by the OWNER or, if there is no direction from OWNER, as required by the Project.
- Review project schedule at regular intervals and provide for Owner's review and approval any schedule changes.
- Prepare detailed minutes of the job and progress meetings and issue them to all attendees

and others designated by the OWNER. Issue the minutes within two working days of the meetings.

- Review and process all applications by the Construction Subcontractors for progress payments and final payments and make recommendations to the OWNER for approval and payment thereof to CONTRACTOR. Upon approval and payment to CONTRACTOR, make payment to the Construction Subcontractors.

3. **Submittals Review**

The CONTRACTOR shall perform, at a minimum, the following submittals review tasks as part of the Construction Phase Services:

- During the submittal review tasks, the CONTRACTOR shall make no change in design, and no changes requiring additional cost to the OWNER, without prior written approval from the OWNER.
- During review and approval or disapproval of all "or equal" products, equipment and materials, CONTRACTOR shall not approve any "or equal" products, equipment and materials which decrease energy efficiency, increase maintenance costs or adversely affect the Project Schedule.
- Review and approve the Construction Subcontractors' List of Durations for all activities, for conformance to the approved Project Schedule.
- Submit lists of shop drawings, samples, catalogue cuts and other documents on a submittal log form and update every two weeks or more frequently if directed by the OWNER including but not limited to, analyses in support of specified systems and components and/or modifications proposed by the CONTRACTOR or Construction Subcontractor.
- For hot systems, perform stress analysis of Construction Subcontractors final pipe routing to verify loads are within acceptable tolerance for hangers and equipment. Such stress analysis shall be performed by a professional engineer.

4. **Design Assist Technical Support**

The CONTRACTOR shall provide Design Assist Technical Support as required by the OWNER in support of the installation of equipment, components, construction and/or any other implementation of Work in connection with this Contract.

5. **Change Orders**

The CONTRACTOR shall perform, at a minimum, the following Change Order tasks as part of the Construction Phase Services:

- Review proposed Change Orders: Make recommendations to the OWNER regarding proposed Change Orders and issue written recommendations to the OWNER. No extra work shall be performed without the prior written authorization of the OWNER.
- Analyze and perform economic evaluation of all Construction Subcontractor claims for Construction Subcontract cost adjustment resulting from field changes and Change Orders, and recommend approval or disapproval by the OWNER.
- All Construction Phase Change Orders shall follow the Terms and Conditions of Article 7 of the OWNER's General Conditions, issued with the PIA.

6. **Field Inspection and Testing**

The CONTRACTOR shall perform, at a minimum, the following field inspection and testing

tasks as part of the Construction Phase Services:

- CONTRACTOR shall follow the Terms and Conditions of Article 13 of the OWNER's General Conditions, issued with the PIA.
- The OWNER reserves the right to have independent tests performed to ensure the quality of the Work.

7. Startup and Commissioning

The CONTRACTOR shall perform, at a minimum, the following startup and commissioning tasks as part of the Construction Phase Services:

- Ensure and oversee the training of facility operating and maintenance personnel in equipment and systems operation.
- participate and provide services in the commissioning process.
- The Commissioning Professional shall be provided by the OWNER, shall provide the services of the Commissioning Authority. The CONTRACTOR and the respective Construction Subcontractor shall provide the services of the Commissioning Agent as described in 6NYCRR § 638.8 Commissioning, as amended by the OWNER in the DASNY Commissioning Guidelines. If the Work to be commissioned was not performed by a Construction Subcontractor, the CONTRACTOR shall provide the services of the Commissioning Agent.
- The CONTRACTOR shall coordinate with its Construction Subcontractors, the provider(s) of professional engineering and architectural services for the Installation Order and the Commissioning Professional to achieve the successful commissioning of the Project systems in accordance with applicable law and regulations and the OWNER's and Client's requirements. .

8. Project Closeout

Unless directed otherwise by OWNER in writing, the CONTRACTOR shall perform the Project closeout tasks as part of the Construction Phase Services pursuant to the Terms and Conditions of Article 13 of the OWNER's General Conditions, issued with the PIA.

9. Construction Phase Services are subject to the following terms and conditions:

a. Project Cost Estimating Services:

- i. As required to achieve the purposes of this Contract or where directed by the Owner, the CONTRACTOR shall prepare a Construction Cost Estimate, updated at each phase of design, that describes the total anticipated projected cost for Contractor(s) to complete construction of the Project in the identified location and anticipated local market conditions, based on anticipated costs of individual Project components added together. The Construction Cost Estimate shall include labor, material, and equipment costs organized according to Construction Specification Institute (CSI) codes or other generally accepted cost estimating system acceptable to the OWNER, as well as other administrative costs required for Contractor(s) to complete the Project, and shall be escalated to the mid-point of the construction duration.
- ii. Cost Estimator Qualifications: The cost estimator shall be a natural person experienced in construction cost estimating in New York, and shall have a minimum of five years of demonstrated experience estimating large capital projects or other experience estimating capital projects that the OWNER, in its sole and exclusive discretion, finds acceptable.
- iii. Estimating Requirements: At each phase of design, the CONTRACTOR shall

provide a Construction Cost Estimate, using costs appropriate for the type of work and design stage, based upon experience, and including an appropriate design contingency, bidding contingency, contractor's overhead and profit, escalation, trade contractor general conditions costs, current market conditions, and other contingencies as directed by the OWNER.

- iv. The Construction Cost Estimate shall be detailed enough so that each component of the estimate clearly correlates with the Project description and the most recent drawings and specifications of this phase.
- v. Unless otherwise directed by the OWNER, the Construction Cost Estimates shall be based upon a detailed take-off of labor, materials and equipment, including wage rates (including base rate, taxes, insurance and fringe benefits) for the installation of the materials and equipment. Estimates shall be in the same format as the OWNER's Schedule of Values and shall be prepared in accordance with the Owner's requirements and direction. Upon prior written approval of the OWNER, the CONTRACTOR may prepare the estimate in an alternative format provided the estimate includes, at a minimum, information contained in the OWNER supplied format.
- vi. The CONTRACTOR shall evaluate the impact of Project constraints and design choices on the Construction Cost Estimate, including but not limited to, conformance with industry standards, Site logistics, Project Schedule, environmental considerations and local market conditions. The CONTRACTOR shall provide recommendations, and an assessment of possible alternative value engineering solutions, to address any issues with the Construction Cost Estimate.
- vii. The CONTRACTOR shall hold an estimating conference at each design phase (pre-schematic, schematic, design development, construction documents, and bid documents). The OWNER, Client, CONTRACTOR and cost estimator shall participate in each conference. If the OWNER directs, the cost estimator shall participate in person. If the OWNER directs, the conference can be part of another meeting.
- viii. The CONTRACTOR shall provide a reconciliation to the previous Construction Cost Estimate and the Approved Construction Budget at each phase of design. The reconciliation shall include an explanation of any variances or overall increases.
- ix. The CONTRACTOR shall provide supplemental estimating services as directed by the OWNER and as necessary for the Project, including, but not limited to, life cycle costing, net present value analysis, and total cost of ownership

b. Project Schedule Services

- i. The CONTRACTOR shall review construction schedules and comment.
- ii. As directed by the OWNER, the CONTRACTOR shall provide project scheduling deliverables from the current versions of the OWNER's standard scheduling program.
- iii. Project Scheduler Qualifications: A natural person experienced in Critical Path Method (CPM) scheduling and reporting, with capability of producing CPM reports and diagrams within timeframes required or requested by the OWNER. The project scheduler shall have or be able to obtain certification as a Planning and Scheduling Professional (PSP) or have a minimum of five years of demonstrated experience scheduling large capital projects, or have other experience scheduling capital projects that the OWNER, in its sole and exclusive discretion, finds acceptable.
- iv. Scheduling Requirements
 1. Evaluate Scheduling Requirements: Evaluate the impact of design choices on the Project Construction Schedule, including but not limited to, conformance with industry standards, reasonableness of overall proposed schedule duration, and methodology. Provide recommendations and possible alternative solutions, which at minimum addresses:
 - a. Available labor resources.
 - b. Construction sequence, logical progression of the Work.

- c. Phasing, long lead items.
 - d. Critical path.
 - e. Proposed milestones and division of Work.
- v. Project Design Schedule: Prepare a schedule for the design phase of the project, including at a minimum:
1. Submissions to the OWNER.
 2. OWNER review periods.
 3. Design milestones that impact construction packages.
- vi. Project Construction Schedule: Prepare an expanded schedule for the construction phase of the Project using a time-scaled Precedence Diagram Method (PDM) network diagram including major activities and milestones unique to each proposed Contract. The initial schedule shall be submitted at the design development phase review and updated thereafter with each scheduled design submission. Include skeleton diagram, which outlines significant construction activities of each proposed Contract. Indicate activities such as:
1. Notice to Proceed.
 2. Major activities unique to each Contract.
 3. Phasing.
 4. Critical path.
 5. Substantial Completion.
 6. Contract closeout.
 7. Proposed Milestones

vii. Requirements of Construction Phase Services:

a. Construction Phase Services Requirements:

The Construction Phase begins at a construction kickoff meeting and is comprised of Construction Administration and Construction Fieldwork tasks as outlined below.

The CONTRACTOR shall be responsible for the work of its Subconsultant(s) and for the coordination of its work and the work of its various Subconsultant(s), including, but not limited to the requirements set forth in the following sections

i. Construction Administration – Consultation, Interpretations, and Clarifications

The CONTRACTOR shall (i) consult with and advise the OWNER on design and technical matters; and, (ii) resolve the requests for information (RFIs) from Contractors concerning the Drawings and Specifications of the Contract in the manner required by the General Requirements of the Contract Documents. The CONTRACTOR shall enter the CONTRACTOR's response to each RFI, including attachments, graphic matter and documents referenced in the response, into the RFI log in the OWNER's Project Management Program. The CONTRACTOR shall render to the OWNER written, graphic, or written and graphic interpretations and recommendations necessary for the proper execution of the Work, including but not limited to the Design Intent of the drawings and specifications of the Contract. The CONTRACTOR shall supply the OWNER, in the manner directed by the OWNER, with copies of correspondence, reports, comments, transmittals, requests, architect's supplemental instructions ("ASIs"), bulletins, sketches, acted-upon shop drawings and other submittals, and other information relating to the Project.

1. Coordinated Composite Drawings: The CONTRACTOR shall review the Contractor(s) composite coordination drawings submission for conformance with the project requirements and specifications. The CONTRACTOR shall notify the OWNER in writing of material deficiencies in the Contractor(s) composite coordination drawings, including the delineation of the project in sufficient scope and appropriate detail. The CONTRACTOR shall provide the Contractor(s) with the physical or digital (as directed by the OWNER)

backgrounds for the Contractor(s) coordinated composite drawings. The CONTRACTOR's confirmation does not constitute approval of the accuracy or content or completeness of the drawings.

2. Submittals and Shop Drawings: The CONTRACTOR is obligated to promptly approve, reject or take other appropriate action on, and return, submittals to the Contractor within 15 calendar days unless otherwise directed by the OWNER. The CONTRACTOR shall not approve any such submittals unless such submittals conform to (i) the Design Intent; (ii) the Construction Documents; (iii) the Contract(s) and (iv) the OWNER's Approved Construction Budget. CONTRACTOR shall use the OWNER's Project Management Program to record the dates received from and/or returned to the Contractor, the findings of the CONTRACTOR's review, and other pertinent information pertaining to each submittal. "Reviewed" or "Not Reviewed" shall not be an acceptable response to a submittal.
3. The OWNER, at its option, may withhold and/or back charge the CONTRACTOR for any costs or delays caused by the CONTRACTOR's (i) failure to timely review and return submittals to the Contractor, or (ii) improper approval of a submittal which does not conform to (i) the Project Design Intent; (ii) the Construction Documents; (iii) the Contract(s) or (iv) the OWNER's Approved Construction Budget.
4. Comparable Products ("Or Equal" Clause): The CONTRACTOR shall review and approve, reject, or take other appropriate action on proposed substitutions for comparable products, materials or equipment within 15 calendar days of the request. The CONTRACTOR shall not approve any such proposed comparable products substitution of materials or equipment unless such proposed materials or equipment conform to (i) the Project Design Intent; (ii) the Construction Documents; (iii) the Contract(s), including but not limited to the General Conditions of the Contract(s) and the General Requirements of the Contract(s), (iv) the Project Construction Schedule, shop drawing, fabrication and delivery timeframes; (v) the OWNER's Approved Construction Budget; and (vi) the requirements and goals as defined in the OPR, including third-party rating system goals if applicable. The CONTRACTOR shall not approve any proposed "or equal" or substitution for any manufacturer or product for which the OWNER has a procurement exemption and has named a single source or sole source, unless otherwise authorized/approved by the OWNER. The CONTRACTOR shall review material substitutions with the OWNER for concurrence and approval.
5. Testing: The CONTRACTOR shall promptly, and in accordance with Project schedule requirements, review and evaluate the results of inspections, tests and written reports required by the OWNER and by any governmental entity having jurisdiction over the Project. The CONTRACTOR shall take appropriate action on test results, including acceptance, rejection, requiring additional testing or corrective work, or such other appropriate action. The CONTRACTOR shall promptly recommend to the OWNER rejection of Work that does not conform to and comply with testing requirements. The OWNER can accept or reject the CONTRACTOR's recommendation. The CONTRACTOR shall notify OWNER of any concerns with the quality of the testing.
6. Special Testing: The CONTRACTOR shall promptly require inspection or testing of any Work in addition to that required by the OWNER or governmental entities having jurisdiction over the Project when such additional inspections and testing is necessary or advisable, whether or not such Work is then fabricated, installed or completed. The CONTRACTOR shall take appropriate action on such special testing and inspection reports, including acceptance, rejection, requiring additional testing or corrective work, or such other appropriate action. The CONTRACTOR shall promptly

recommend to the OWNER rejection of Work that does not conform to and comply with testing requirements. The OWNER can accept or reject the CONTRACTOR's recommendation. The CONTRACTOR shall notify OWNER of any concerns with the quality of the testing.

7. Interpretation of Construction Documents: The CONTRACTOR shall act as initial interpreter of the requirements of the drawings and specifications of the Contract Documents. The CONTRACTOR shall render any assistance that the OWNER may require with respect to any claim or action in any way relating to the CONTRACTOR's services during or subsequent to the design or construction of the Project including, without limitation, review of claims, preparation of technical reports and participation in negotiations both before and after the CONTRACTOR has otherwise completed performance of the Contract and without any additional compensation therefore, except where otherwise agreed by the Owner in writing. The CONTRACTOR shall include in each agreement with a Subconsultant for this Project a requirement that such Subconsultant shall render any assistance that the OWNER may require with respect to any claim or action in any way relating to the Subconsultant's services during or subsequent to the design or construction of the Project including, without limitation, review of claims, preparation of technical reports and participation in negotiations both before and after the Subconsultant has otherwise completed performance of its services for this Project and without any additional compensation therefore, except where otherwise agreed by the Owner in writing.
8. Minor Changes, Change Order Requests and Change Orders:
 - a. When directed by the OWNER, the CONTRACTOR shall review a proposed Allowance Allocation Approval, an Allowance Allocation Approval, a proposed Notice to Proceed, a Notice to Proceed, a proposed Change Order, a Contractor's proposal for a Change Order, or a Change Order for the effect on Design Intent, OPR and code compliance and, if directed to do so by OWNER, perform an analysis of the quantity of materials in such document and make recommendations to the OWNER. For a Contractor's proposal for a Change Order or a proposed Change Order, the CONTRACTOR shall review and verify the proposed change in scope as requested by OWNER.
 - b. The CONTRACTOR shall promptly prepare required drawings, specifications and other supporting documentation as necessary in connection with a proposed or actual Allowance Allocation Approval, Notice to Proceed, or Change Order. The CONTRACTOR shall not be responsible for the economic evaluation, accounting or processing of an Allowance Allocation Approval, a Notice to Proceed, or a Change Order.
9. CONTRACTOR's Submittals to OWNER:
 - a. As-designed record drawings are the record of the CONTRACTOR's design for the Project and shall include but are not limited to the original Construction Documents plus other documentation and/or drawings, sketches and field directives related to addenda, supplemental Instructions and information, Change Orders, and changes, and modifications and/or substitutions in the work. Within sixty (60) days of Substantial Completion, the CONTRACTOR shall provide two (2) complete sets of compiled as-designed record drawings in PDF format and in the latest release of AutoCAD DWG format, unless otherwise directed by the OWNER.
 - b. As-constructed record drawings shall include as-built drawings and specifications and are the record of the Project as constructed based on information and documentation the CONTRACTOR provides to the OWNER under the Contract. Within sixty (60) days of the

OWNER's delivery to the CONTRACTOR, the CONTRACTOR shall review the documents for completeness, identify any material and/or significant inconsistencies deficiencies and omissions, and provide the OWNER and Contractor(s) with a list of deficiencies and omissions, if any. The CONTRACTOR shall review subsequent drafts in the same manner until the as-constructed record drawings are complete. The CONTRACTOR shall transmit one (1) paper copy set of marked-up as-constructed record drawings to the OWNER.

- c. Operations and maintenance manuals shall include operations and maintenance information and documentation for products, systems, subsystems and equipment, and are prepared by the CONTRACTOR, its subcontractors and/or suppliers. Within thirty (30) days of the OWNER's delivery to the CONTRACTOR, the CONTRACTOR shall review the draft operation and maintenance manual(s) and provide the OWNER and Contractor(s) with a list of deficiencies and omissions, if any. The CONTRACTOR shall review subsequent drafts in the same manner until the operation and maintenance manual(s) are complete. The CONTRACTOR shall transmit one (1) electronic PDF format set of operations and maintenance manuals to the OWNER.
10. Other required Documentation: The CONTRACTOR shall provide other documentation as may be required by the OWNER and/or regulatory entities, including but not limited to reports, startup, testing, turnover, sustainability, commissioning, etc.
- ii. Construction Fieldwork - Site Visits, Reporting, and Inspections of Work
 1. The CONTRACTOR shall visit the Project Site with sufficient frequency (at a minimum, once in every two-week period) to familiarize itself with the progress and quality of the Work and to inspect the Work to determine compliance of the Work with:
 - a. the Contract(s), including but not limited to approved shop drawings and other submittals;
 - b. the Project Construction Schedule;
 - c. applicable laws, statutes, building codes, rules or regulations of governmental, public, and quasi-public authorities and agencies having jurisdiction over the Project; and
 - d. the selected third-party rating system, if applicable to the Project.
 2. Each Subconsultant shall visit the Project Site with sufficient frequency when Work in its area of expertise is being performed to familiarize itself with the progress and quality of the Work and to inspect the Work to determine compliance of the Work with:
 - a. the Contract(s), including approved shop drawings and other submittals;
 - b. the Project Construction Schedule; and
 - c. applicable laws, statutes, building codes, rules or regulations of governmental, public, and quasi-public authorities and agencies having jurisdiction over the Project.
 - d. The CONTRACTOR shall include in each agreement with a Subconsultant for this Project a requirement that such Subconsultant shall be obligated to visit the Project Site and attend any meeting whenever the OWNER, in its sole and exclusive discretion, determines that such visit or attendance is necessary or useful to provide the services required by this Article. This obligation is a material component of this Contract.
 3. The CONTRACTOR shall attend construction kick-off meeting(s). The CONTRACTOR shall attend progress meetings and preinstallation meetings

with the OWNER, OWNER's Consultant(s), Contractor(s) and other necessary parties, shall prepare and distribute agendas when directed to do so by the OWNER, and shall record the minutes of such progress meetings and preinstallation meetings. The CONTRACTOR shall provide minutes of all meetings to the participants within five (5) business days of said meetings. The CONTRACTOR shall prepare and submit the meeting minutes using the OWNER's Project Management Program unless otherwise directed by OWNER. Subconsultants shall attend construction kick-off meeting(s), progress meeting(s) or preinstallation meeting(s) when directed to do so by the OWNER. The CONTRACTOR shall include provision(s) in its agreements with Subconsultants obligating such Subconsultants to attend meetings as set forth in this Contract.

4. Each on-Site construction inspection shall be conducted by an experienced, qualified representative of the CONTRACTOR or appropriate Subconsultant who is knowledgeable about the Project and competent in each discipline which has trade activities in progress at the time of the inspection. The CONTRACTOR shall prepare a record of each Site inspection within 48 hours of the inspection utilizing the OWNER's Project Management Program.
5. When a Project is subject to the Building Code of the State of New York, the CONTRACTOR or appropriate Subconsultant shall perform the structural observation for the Project required by and in accordance with the Building Code of the State of New York.
6. The CONTRACTOR shall exercise care and diligence in discovering and reporting to the OWNER and shall record their findings in the OWNER's Project Management Program the results of each of its visits, including defects and deficiencies in the Work, and shall recommend to the OWNER appropriate courses of action, if any.
7. The CONTRACTOR shall promptly recommend to the OWNER disapproval or rejection of Work that does not comply with:
 - a. the Contract Documents including approved shop drawings and others submittals; or
 - b. applicable laws, statutes, building codes, rules or regulations of governmental, public, and quasi-public authorities and agencies having jurisdiction over the Project.
8. The CONTRACTOR shall immediately notify the OWNER and shall issue a Notice of Non-Compliance using the OWNER's Project Management Program when the CONTRACTOR has disapproved or rejected any Work.
9. During each visit to the Site, the CONTRACTOR shall verify the Contractor's progress on preparing the as-built drawings. The CONTRACTOR shall include a status of the as-built drawings in the Site construction inspection report. The CONTRACTOR shall immediately notify the OWNER if inadequate progress is noted on as-built documents.

iii. Construction Fieldwork - Construction Completion

1. When the CONTRACTOR believes that the Work has progressed to Substantial Completion, the CONTRACTOR will notify the OWNER that the Work is ready for a Substantial Completion inspection. Upon receipt of such notification, the OWNER shall coordinate with the CONTRACTOR and the Contractor(s), if any, to schedule the inspection.
2. At the Substantial Completion inspection, the CONTRACTOR shall
 - a. inspect the Work;
 - b. determine whether the CONTRACTOR has satisfactorily completed the items of Work claimed to be complete, and compile for the OWNER a list of the incomplete items of Work;
 - c. determine whether the Work complies with (a) the Contract Documents, (b) applicable laws, statutes, building codes, rules or regulations of governmental, public, and quasi-public authorities and

- agencies having jurisdiction over the Project, and (c) applicable installation and workmanship standards;
- d. determine whether required inspections and approvals by the authorities and agencies having jurisdiction over the Project have been satisfactorily completed; and
 - e. provide the OWNER with an estimate of the value of the Work left to complete.
 - f. within two weeks of initial notification of Substantial Completion, the CONTRACTOR shall perform an initial inspection and develop and provide to the OWNER a punchlist.
 - g. upon completion of the punchlist work, the OWNER will notify the CONTRACTOR. Within five days of such notification, or as otherwise directed by the OWNER, provide follow-up inspections of the punchlist items and/or unperformed and uncorrected work items.
 - h. the CONTRACTOR shall attend punchlist review meetings as directed by the OWNER.
 - i. the process shall be repeated until Physical Completion of the Work.
 - j. the CONTRACTOR shall complete the OWNER's standard form(s), provide a listing of exceptions, if any, and a schedule for their completion.

F. POST-CONSTRUCTION DELIVERABLES

1. The CONTRACTOR shall prepare or have its Subconsultant prepare and deliver, prior to final acceptance of any identified phase of construction and prior to the completion of the Work, complete comprehensive descriptions of all mechanical and electrical systems, as to their functions and sequences of operation in accordance with the 1991 ASHRAE Applications Handbook, Chapter 38.3, "Documentation", or later revision. The description shall include information provided by the CONTRACTOR, Construction Subcontractors and Subconsultants as follows:
 - a. Complete wiring diagrams of all mechanical and electrical systems, such as fire alarm, communication systems, motor controls, supervisory control panel, temperature controls, maintenance and replacement schedules, sequences of operation, etc.;
 - b. Complete description of all mechanical and electrical systems as to the proper operation and maintenance of same, including such items as checklists, maintenance and replacement schedules, sequence of operation, equipment list, nameplate data, etc. Documentation shall be developed in accordance with the 1991 ASHRAE Applications Handbook, Chapter 38.3, "Documentation," or later revision;
 - c. Catalog cuts and shop drawings of all electrical and mechanical systems and equipment, such as switchboards, panels, pumps, air conditioning equipment, fans, air handling equipment, coils, heating equipment, ductwork, etc.;
 - d. Complete valve charts of all mechanical systems, such as cooling, heating, and plumbing. These charts shall indicate location and function of each main valve in respective systems;
 - e. The CONTRACTOR shall review and approve or disapprove all as-built drawings submitted consistent with his responsibility to provide periodic inspections of the Work. The CONTRACTOR shall incorporate all changes and as-built information on a reproducible set of drawings and electronic file, which shall be provided to the OWNER upon completion of the Work. Electronic files shall be developed in accordance with the OWNER'S Drawing Production Guide.
2. Prior to the OWNER'S issuance of a Notice of Contract Completion and Acceptance, the CONTRACTOR shall furnish to the OWNER certified As-built mylars of the construction Work and CADD disks. As-built mylars of each floor shall contain the stamp of the licensed design professional (New York State). Each mylar shall have the following statement affixed immediately

adjacent to the design professional stamp:

“THIS IS AN ACCURATE AS-BUILT REPRESENTATION OF PORTIONS OF THE PLANS OF THE BUILDING AS FILED WITH AND APPROVED BY THE MUNICIPAL OR OTHER GOVERNMENTAL SUBDIVISION HAVING JURISDICTION OVER THE ISSUANCE OF PERMITS FOR THE CONSTRUCTION OF THE BUILDINGS.”

3. The CONTRACTOR shall furnish the OWNER with As-Built mylars and in electronic storage media, including but not limited to the following drawings:

- Mechanical and Electrical drawings
- Foundation Plan(s)
- Floor Plan(s) - Electrical with activation's located
- Floor Plan(s) - Mechanical & Plumbing
- Roof Equipment Plan(s)
- Mechanical and Electrical details
- Architectural and Structural Plans, Sections and Details
- All available manufacturer's catalogs, specifications, and installation procedures and replacement parts list for equipment and products installed under the Project specifications.

All the above items are to be catalogued, indexed, and organized in accordance with the 1991 ASHRAE Applications Handbook, Chapter 38.3, "Documentation," or later revision.

4. The CONTRACTOR shall make a final inspection of the Work and upon completion of each phase of Work, represent to the OWNER and Client, in writing, that the Work is complete and in accordance with the Project Contract Documents, to the best of the CONTRACTOR'S professional judgment, information, and belief, and ready for acceptance by the OWNER. Upon completion of the Project, the CONTRACTOR or, if the CONTRACTOR is not authorized to provide professional engineering services, the CONTRACTOR'S partner or Subconsultant for professional engineering services shall represent to the OWNER, in writing, that the Work is complete and acceptable for use.
5. The CONTRACTOR shall inspect the Project ten (10) to thirty (30) days prior to the end of the one-year guarantee period, and issue a comprehensive report to the OWNER on any deficiencies noted or corrective work required.
6. Guarantee Inspections: The CONTRACTOR shall inspect the Project within ten (10) to thirty (30) days prior to the end of the one-year guarantee periods included in the General Conditions annexed to the relevant PIA(s) and notify the OWNER in writing as to defects, faults or failures to comply with such General Conditions and PIA, if any, in the material, equipment, workmanship or other part of the Work.
7. Post-Construction Deliverables Requirements
 - a. Project Cost Estimating Services: The CONTRACTOR shall provide Project Cost Estimating Services only as directed by OWNER.
 - b. Project Schedule Services: The CONTRACTOR shall provide Project Cost Estimating Services only as directed by OWNER.

ARTICLE IV: CONSULTANTS

- A. The OWNER may retain a Consultant or Consultants to provide services throughout the term of this Contract, and the CONTRACTOR shall cooperate with said Consultant or Consultants.

- B. The CONTRACTOR may propose and engage Subconsultants to perform portions of the Work required under this Contract. The CONTRACTOR shall submit the name and address of any proposed Subconsultant to the OWNER prior to subcontracting with the proposed Subconsultant. The OWNER retains the right to reject the proposed Subconsultant and, in such event the CONTRACTOR shall propose another Subconsultant for that portion of the Work under this Contract. The CONTRACTOR shall be responsible to the OWNER for the timely and efficient completion of all services performed by the approved Subconsultants. Approved Subconsultants shall not be changed without the OWNER'S approval, which approval shall not be unreasonably withheld, except, if the CONTRACTOR is not authorized to practice professional engineering in New York State, its approved partner(s) or subconsultant(s) for professional engineering and architectural services may not be changed without the OWNER'S approval and the OWNER may grant or deny its approval for such change in the OWNER'S discretion.

ARTICLE V: PROVISION FOR PAYMENT

The OWNER will pay the CONTRACTOR as follows:

A. Payment for Energy Assessment Services

1. The basis for payment by the OWNER to the CONTRACTOR shall be a negotiated fee for each EAWA. Total compensation for each EAWA shall not exceed the amount established for such EAWA per Appendix A, entitled SUMMARY OF PAYMENTS.
2. Payments for Energy Assessment Services shall be made in proportion to services performed and approved by the OWNER. Payments shall be requisitioned on the OWNER'S form, PROFESSIONAL SERVICES APPLICATION FOR PAYMENT, with accompanying copy of certified payroll for the CONTRACTOR and its Subconsultants, Compliance Report, and other appropriate backup required by the OWNER. Certified payroll shall show the names and rates of pay of all personnel performing services during the payment period, and their position classification. Only the PROFESSIONAL SERVICES APPLICATION FOR PAYMENT shall be used to requisition payment for Energy Assessment Services.
3. Authorization for Energy Assessment Services shall be made by the OWNER and the CONTRACTOR shall be notified via a Energy Assessment Order which shall be issued by the OWNER.
4. The CONTRACTOR shall provide all labor, plant, materials and other requirements necessary for provision of the required services in each Assessment Order at the specific rates set forth in Appendix B, entitled SCHEDULE OF TECHNICAL CLASSIFICATION AND HOURLY RATES.
5. At the OWNER'S discretion, the rates in Appendix B may be adjusted on the anniversary date of the Contract. Requests for increases in Approved Hourly Rates shall be submitted to the OWNER in writing and are subject to review and approval of the OWNER'S Director of Procurement. If approved, the OWNER will issue a revised Appendix B which will be an amendment to this Contract.

B. Payment for Design Phase Services

1. The basis for payment by the OWNER to the CONTRACTOR shall be a negotiated fee for each authorized Design Order. Total compensation for each Design Order shall not exceed the amount established for such Design Order per Appendix A, entitled SUMMARY OF PAYMENTS. The CONTRACTOR shall keep, and Subconsultants under this Contract shall keep, daily records of the time spent performing services hereunder by all persons whose salaries or rates will be the basis for compensation for Design Phase Services under this Contract. The records shall include the amounts of salaries and/or rates actually paid for the performance of services and also include receipts for reimbursable expenditures. The CONTRACTOR and Subconsultants shall keep all records for a period of six (6) years after final payment of all amounts under this Contract.

2. Payments for Design Phase Services shall be made in proportion to services performed and approved by the OWNER at the milestones set forth below. Payments shall be requisitioned on the OWNER'S form, PROFESSIONAL SERVICES APPLICATION FOR PAYMENT, with accompanying copy of certified payroll for the CONTRACTOR and its Subconsultants of all tiers, Compliance Report, and other appropriate backup required by the OWNER. Certified payroll shall show the names and rates of pay of all personnel performing services during the payment period, and their position classification. Only the PROFESSIONAL SERVICES APPLICATION FOR PAYMENT shall be used to requisition payment of Design Phase Services. Payment shall be made at the following intervals:

Design Phase Services

Design Development Services - 60% Submission
Construction Document Services – 100% Submission
Bid Document Services

3. Authorization for said Design Phase Services shall be made by the OWNER and the CONTRACTOR shall be notified via a Design Order that shall be issued by the OWNER. This document and a revised Appendix A will be a formal acknowledgement of a change to this Contract.
4. The CONTRACTOR shall provide all labor, plant, materials and other requirements necessary for provision of the required services in each Design Order at the specific rates set forth in Appendix B, entitled SCHEDULE OF TECHNICAL CLASSIFICATION AND HOURLY RATES.

At the OWNER'S discretion, the rates in Appendix B may be adjusted on the anniversary date of the Contract. Requests for increases in Approved Hourly Rates shall be submitted to the OWNER in writing and are subject to review and approval of the OWNER'S Director of Procurement. If approved, the OWNER will issue a revised Appendix B which will be an amendment to this Contract.

C. Payment for Performance of the Installation Order

1. The CONTRACTOR shall complete and submit to the OWNER for review and written approval, the detailed Schedule of Values prior to the CONTRACTOR's first billing request. It is understood, and the CONTRACTOR acknowledges, that the Schedule of Values is an administrative tool to illustrate a format and minimum level of detail required for billing requests, and shall not be considered as delineating the CONTRACTOR's scope of Work. The OWNER may require the CONTRACTOR to revise its Schedule of Values at no cost to the OWNER and to provide a greater level of detail. Further, the OWNER reserves the right to accept only those cost distributions which, in the OWNER's opinion, are reasonable, equitably balanced and correspond to the estimated quantities in or for the Contract Documents. OWNER'S approval of the Schedule of Values can be provided only by an authorized officer of OWNER or authorized employee of OWNER'S Project Controls Unit.
2. The CONTRACTOR, at its own expense, shall take all actions necessary to fully comply with the requirements of the Statewide Utilization Management Plan ("SUMP") of the NYS Contract System. CONTRACTOR shall require all Construction Subcontractors to comply with the requirements of SUMP and the NYS Contract System. These requirements include, but are not limited to, the CONTRACTOR's timely payment to all Construction Subcontractors and timely input in to the NYS Contract System of information, including but not limited to, information regarding Construction Subcontractor payments and compliance with Contract requirements, including but not limited to Contract requirements for participation of Minority and Women Owned Business Enterprises in the performance of the Contract.
3. The OWNER shall not approve any billing request until:
 - a. the CONTRACTOR is in full compliance with SUMP and the NYS Contract

System; and

- b. the OWNER provides approval of the Schedule of Values.
4. To request a partial or full payment for partial or full performance of the Contract, CONTRACTOR shall obtain from the OWNER a CONTRACTOR's billing request. The CONTRACTOR shall complete the billing request by entering in each line item thereof the percentage of completion of that item as of the end of the preceding business month or billing cycle and deliver the completed billing request to the OWNER. The OWNER shall review the billing request and make any changes which the OWNER, in its sole and exclusive discretion, determines to be necessary so that the percentage of completion for each line item in the billing request accurately reflects the CONTRACTOR's performance of the Contract as of the end of the preceding business month. The OWNER then delivers the OWNER's adjusted version of the billing request to the CONTRACTOR for execution by the CONTRACTOR of the certifications of the CONTRACTOR required for partial or full payment for partial or full performance of the Contract. The CONTRACTOR delivers the executed billing request to the OWNER. Any partial payment request under the Contract shall be at least thirty (30) calendar days after the preceding partial payment request under the Contract, unless the OWNER in writing signed by an authorized officer permits more frequent requests.
 5. The OWNER may make a partial payment to the CONTRACTOR for partial performance of the Contract on the basis of an Application for Payment for the Work performed during the preceding business month. The OWNER shall retain five percent (5%) of the amount of each said Application for Payment. The OWNER may make full payment to the CONTRACTOR for full performance of the Contract on the basis of an Application for Payment. Each Application for Payment shall be accompanied by all documentation required by law, including but not limited to, certified payrolls and all documentation required by the OWNER, including but not limited to documentation to establish compliance with NYS Labor Law and NYS Lien Law. The OWNER may require any documentation the OWNER determines is necessary or useful to establish that the CONTRACTOR's performance of the Work complies with the requirements of the Contract and applicable law.
 6. Any partial payment made shall not be construed as a waiver of the right of the OWNER to require the fulfillment of all the terms of the Contract. No payment, either partial or full, by the OWNER to the CONTRACTOR shall waive or excuse any failure by the CONTRACTOR to comply fully with the Contract Documents. No payment will be made for Work not performed.
 7. In preparing the CONTRACTOR's billing request, material delivered to the Site and properly stored and secured at the Site and material approved to be stored off-site under such conditions as the OWNER shall prescribe may be taken into consideration. All costs related to the storage of materials are the sole responsibility of the CONTRACTOR.
 8. The OWNER will provide an agreement for materials stored off-site and specific forms that the CONTRACTOR shall complete, execute, and submit with any billing request for such material. Required information includes, but is not limited to: a general description of the material; a detailed list of the materials; a pre-approved storage area; segregation and identification of the material; insurance covering full value against all risks of loss or damage, with non-cancellation provision; immediate replacement agreement in event of loss or damage; agreement to pay the expense of all inspections of the material; ownership provisions; delivery guarantee; project completion statement; bill of sale, releases of liens, and inventory. The OWNER, in its sole and exclusive discretion, may require the CONTRACTOR to certify in the agreement for materials stored off-site that the materials comply with one or more requirements of the Contract or to provide documentary proof acceptable to the OWNER that the materials comply with one or more requirements of the Contract.
 9. All monthly billing requests submitted by the CONTRACTOR shall only be in the form and manner approved by the OWNER. The CONTRACTOR shall furnish such affidavits,

vouchers, receipts, and other documentation as to delivery and payment for materials, payment of Construction Subcontractors, and payment of prevailing rate of wage and supplements required by NYS Labor Law as the OWNER requires to substantiate each and every billing request. CONTRACTOR shall furnish any other documentation required by OWNER to establish compliance with one or more requirements of the Contract or any statute or regulation, including but not limited to the certification required by General Conditions Section 16.02 and proof of compliance with NYS Labor Law Section 220-h (See General Conditions Section 16.03 H).

- 10. All payments received by the CONTRACTOR under or in connection with the Contract are trust funds under Article 3-A of the NYS Lien Law and shall be applied by the CONTRACTOR in accordance with such law.

ARTICLE VI: ADDITIONAL SERVICES

The OWNER reserves the right to direct the CONTRACTOR by way of a Work Authorization amendment to provide additional services in connection with any Phase of Work, and the CONTRACTOR shall provide said additional services when so directed. Payment for said additional Services shall be negotiated at the time said services are directed to be performed.

A. Payment for additional services shall be on the basis of one of the following methods as determined by the OWNER:

- 1. Negotiated lump sum; or
- 2. Actual cost. Actual cost shall include the following specific items:
 - a. Principals at the fixed rate of \$000.00 per hour. The Principal for this Project is:

[name and title]

[rate]

- b. Direct Salary of employees, other than Principals, times an approved maximum multiplier to be negotiated prior to the execution of this Contract. Multiplier must be supported by appropriate audit. Direct Salary as used herein for Design Phase Services shall be the payroll cost of salaries or wages paid directly to technical employees of the CONTRACTOR or Approved Subconsultant's employees directly on the Project, supportable by payroll copy or appropriate audit.

Technical Employees, other than Principals shall mean employees trained in areas of technical competence, such as architecture, engineering, drafting, survey and related specialties, but does not include clerical, typing or stenographic assistance. Approved pay rates for technical employees and their appropriate titles are listed in Appendix B, entitled SCHEDULE OF TECHNICAL CLASSIFICATIONS AND HOURLY RATES, which is attached to and made a part thereof;

- c. Service of Approved Subconsultant(s) pursuant to this Article, and a markup paid to the CONTRACTOR at a maximum of ten (10) percent times the actual direct salary costs of the Approved Subconsultant. This markup is for the CONTRACTOR'S administrative and coordinating efforts to solicit and contract with new Subconsultants, or for Additional Services work in which the CONTRACTOR does not participate. If the CONTRACTOR is reimbursed for his services pursuant to sections (A)(2)(a) and (A)(2)(b) of this Article VI, the 10% markup shall not apply; and

d. Specific Approved Reimbursable Expenses

- 3. The CONTRACTOR shall keep, and Subconsultants under this Contract shall keep, daily

records of the time spent performing additional services hereunder by all persons whose salaries or rates will be the basis for compensation under this Contract. The records shall include the amounts of salaries and/or rates actually paid for the performance of services and also include receipts for reimbursable expenditures. The CONTRACTOR and Subconsultants shall keep all records for a period of six (6) years after the final payment of all amounts under this Contract.

4. Notwithstanding any other provisions of this Contract, failure to keep any such records or receipts shall be a conclusive waiver of any right to compensation for such services or expenses as are otherwise compensated hereunder.

ARTICLE VII: EXTRA WORK

- A. The OWNER may make changes to the Work of each Project in a PIA by adding to or deducting from the Work of each Project by a Change Order.
- B. Changes to the Work of a Project in a PIA shall be governed by the General Conditions, at Article VII. Notwithstanding any other provision of the Project Contract Documents, no overhead and profit as described in General Conditions Section 7.02 shall be paid to the CONTRACTOR for any Change Order. If and when the OWNER issues and pays a change order which the OWNER deems necessary to address an error or omission committed by the CONTRACTOR, the OWNER expressly reserves its right to recover from the CONTRACTOR and, if the CONTRACTOR is not authorized to practice professional engineering and architectural in New York State, the CONTRACTOR'S approved partner(s) or Subconsultant(s) for professional engineering and architectural services, the OWNER'S damages attributable to the design which requires issuance of such error or omission change order.
- C. This Article applies only to Project Installation Authorizations (PIA).

ARTICLE VIII: FINAL PAYMENT AND RELEASE

Upon satisfactory completion by the CONTRACTOR and acceptance by the OWNER of a Project pursuant to a PIA to this Contract, final payment for such PIA shall be made to such CONTRACTOR. The OWNER may exercise a right of set-off against amounts due on account of a Project for incomplete or unsatisfactory work at another Project.

ARTICLE IX: INSURANCE PROVIDED BY CONTRACTOR

- A. For each EAWA, DWA or for the performance of Construction Phase Services, the CONTRACTOR'S insurance obligations are set forth in Article 8 of Chapter Three of the Contract for Professional Services, which is incorporated and annexed hereto.
 1. For purposes of this Article, in Chapter Three of the Contract for Professional Services, Professional is the CONTRACTOR and, if the CONTRACTOR is not authorized to practice professional engineering in New York State, the CONTRACTOR shall require its approved partner(s) or subconsultant(s) for professional engineering services to provide the Professional Liability Insurance as though the partner or subconsultant is the CONTRACTOR. If the CONTRACTOR is authorized to practice professional engineering in New York State but does not provide asbestos or environmental professional engineering services, the CONTRACTOR shall require its approved partner(s) or subconsultant(s) for such professional engineering services to provide the Professional Liability Insurance such services as though the partner or subconsultant is the CONTRACTOR.
 2. CONTRACTOR agrees that, to the fullest extent permitted by law, the CONTRACTOR shall protect, indemnify and hold harmless the OWNER and the OWNER'S Related Parties from and against any and all liability, loss, claims, demands, suits, costs, fees, interest and expenses (including actual fees and expenses of attorneys, expert witnesses, and other consultants), by whomsoever brought and regardless of the legal theories upon which premised, including, but not limited to those arising out of bodily injury to, or sickness or death of, any person, or property

damage or destruction (including loss of use), which may be imposed upon, incurred by or asserted against the OWNER or the OWNER's Related Parties allegedly or actually arising out of or resulting from any negligent act, error or omission or any intentional misconduct (i) of the CONTRACTOR; or (ii) of the CONTRACTOR's Subconsultants, Construction Subcontractors or suppliers; or (iii) of the agents, employees or servants of the CONTRACTOR or its Subconsultants, Subcontractors or suppliers. The CONTRACTOR shall also indemnify the OWNER for breach of contract not related to professional services. Upon the conclusion of any such action, proceeding or lawsuit, should a final binding determination of responsibility be made that allocates responsibility to the OWNER, the Client or the OWNER's related parties, the OWNER agrees that the obligation to indemnify and hold harmless shall not be applicable to the portion of any uninsured money judgment for which the OWNER is responsible, and the OWNER agrees to pay the CONTRACTOR the percentage of uninsured defense costs that the CONTRACTOR incurred based upon an apportionment of the OWNER's allocated responsibility.

3. The CONTRACTOR shall not commence work on any EAWA or DWA or Construction Phase Services under the Contract until the CONTRACTOR has obtained all the insurance applicable to the work of such EAWA or DWA required under this Contract.
- B. For each PIA performed by the CONTRACTOR, the CONTRACTOR shall at its own expense comply with the requirements of General Conditions Article 15 until final acceptance of the Project.
1. If the CONTRACTOR cannot provide the performance bond and payment bond required by the General Conditions, then a Construction Subcontractor acceptable to the OWNER may provide such bonds on a form provided by the OWNER provided that the OWNER must be the obligee on such bonds, the contract between the CONTRACTOR and the Construction Subcontractor must provide that the OWNER is a third party beneficiary of the contract and that the OWNER has the right to declare the Construction Subcontractor in default under the contract and contain any other provisions required by the OWNER to put the OWNER in the same position as the OWNER would be if the bonds were provided by the CONTRACTOR.
 2. If the CONTRACTOR cannot provide any insurance policy required by the General Conditions, then the OWNER, in its discretion, may accept an insurance policy provided by a Construction Subcontractor acceptable to the OWNER with such endorsements to such policy and such provisions in the Construction Subcontract between the CONTRACTOR and Construction Subcontractor as the OWNER deems necessary to put the OWNER in the same position as the OWNER would be if the policy was provided by the CONTRACTOR.
 3. The CONTRACTOR shall not commence performance of any PIA under the Contract until the CONTRACTOR has obtained all the insurance applicable to the Work of such PIA required under this Contract.

Sample forms of the Certificate(s) Insurance are attached to the PIA.

ARTICLE X: GENERAL CONDITIONS FOR CONSTRUCTION

The OWNER'S GENERAL CONDITIONS for CONSTRUCTION in effect at the time of issuance of a PIA (the "General Conditions") are a part of and govern such PIA and apply to each Project undertaken pursuant to the PIA.

A Construction Subcontractor under this Contract is a Subcontractor under the General Conditions; a Construction Subcontract under this Contract is a Subcontract under the General Conditions.

For this Contract, in the definition of Contract Documents in Article 1 of the General Conditions, the terms Notice to Bidders, Information for Bidders, Form of Bid and Agreement are deleted and Contract is added. Project Contract Documents include all Contract Documents. The definition of Project in this Contract includes, but is not limited to, all obligations in the definition of Project in the General Conditions; the definition of Project in this Contract includes obligations beyond those obligations in the definition of Project in the General Conditions. The General Conditions and this Contract are intended to complement each other. In the event that any term of the General Conditions conflicts directly with any term in this Contract, the term which requires a greater quantity or higher quality from the CONTRACTOR shall be given precedence unless the OWNER directs otherwise in writing.

ARTICLE XI: SUBCONSULTANT and SUBCONTRACTOR AGREEMENTS

- A. Any contract between the CONTRACTOR and a Subconsultant, Construction Subcontractor or supplier for equipment, materials and supplies shall provide that:
1. The OWNER is an intended Third-Party Beneficiary of such contract.
 2. Such contract shall not be amended without the prior written consent of the OWNER.
- B. Upon request the CONTRACTOR shall furnish to the OWNER an executed copy of all contract documents, including but not limited to all contracts, purchase orders, amendments or change orders with a Subconsultant, Construction Subcontractor or supplier.
- C. All such contracts between the CONTRACTOR and a Subconsultant, Construction Subcontractor or supplier for equipment, materials and supplies shall contain provisions ensuring the following:
1. That each Subconsultant's, Construction Subcontractor's and supplier's duties to procure insurance for, and to defend, indemnify and hold harmless the OWNER and Client, are to the fullest extent permitted by law, at least the same as the CONTRACTOR's duties to procure insurance for, and to defend, indemnify and hold harmless the OWNER and Client.

ARTICLE XII: TIME OF COMPLETION: LIQUIDATED DAMAGES AND GUARANTEES

- A. The milestone dates for the completion of each Project shall be set forth in each PIA.
- B. The Time of Completion and the Energy Guarantee Percentage (GP) for a Project shall be set forth in the PIA. Each PIA will also set forth the amount and manner in which liquidated damages other than those in subsection C of this Article will be assessed. The provisions of this Article are in addition to the provisions in the General Conditions.
- C. Guarantees

1. Definitions

Projected Energy Savings (PES) – The projected reduction in use of energy from the pre-Project baseline to the post-Project baseline to be achieved by implementation of the Work.

Guaranteed Energy Savings (GES) – The amount of the Projected Energy Savings guaranteed to the OWNER by the CONTRACTOR for the Project via the Guarantee Percentage (GP).

$$(GES) = (GP) \times (PES)$$

Post Installation Energy Savings (PIES) – The actual reduction in use of energy from the pre-Project baseline to the post-Project baseline achieved by implementation of the Work and demonstrated by the Performance Tests and Measurements established in the OWNER approved CONTRACTOR'S M&V Plan.

Discounted Guaranteed Energy Savings (DGES) – The aggregate ASHRAE equipment lifecycle present value of GES based on the OWNER approved stipulations in the Facility Energy Assessment for the Project.

Discounted Post Installation Energy Savings (DPIES) – The aggregate ASHRAE equipment lifecycle present value of PIES based on the OWNER approved stipulations in the Facility Energy Assessment for the Project.

Project(s) – The design, pursuant to a Design Order, and the implementation, pursuant to an Installation Order of the replacement or renovation of a facility or facilities at a particular designated location or locations. A Project includes, but is not limited to, an Energy Conservation Measure or Measures (ECM) which encompass the installation of equipment,

subsystems, or systems, or modification of equipment, subsystems, systems or operations, for the purpose of reducing energy and/or demand. Project includes all obligations imposed on a CONTRACTOR by a Design Order and all obligations imposed on a CONTRACTOR by a PIA.

2. Guarantee and Correction of Work

- a. The CONTRACTOR warrants and guarantees that title to all work, materials and equipment covered by an application for payment, whether incorporated into the Project or not, will pass to the OWNER upon the receipt of such payment by the CONTRACTOR, free and clear of all liens, claims, security interests or encumbrances, hereinafter referred to as "liens" and that no work, materials or equipment covered by an application for payment will have been acquired by the CONTRACTOR or by another person performing work at the site or furnishing materials and equipment for a Project, pursuant to an agreement under which an interest therein or a lien thereon is retained by the seller or otherwise imposed by the CONTRACTOR or such other person.
- b. Correction of Work
 1. The CONTRACTOR shall promptly correct all work rejected by the OWNER as defective or as failing to conform to the Project Contract Documents whether observed before or after Substantial Completion and whether or not fabricated, installed or completed. The CONTRACTOR shall bear all cost of correcting such rejected work.
 2. If within one (1) year after the Date of Substantial Completion or within such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Project Contract Documents, any of the work is found to be defective or not in accordance with the Project Contract Documents, the CONTRACTOR shall correct it promptly after receipt of a written notice from the OWNER to do so unless the OWNER has previously given the CONTRACTOR a written acceptance of such condition. The OWNER shall give such notice promptly after discovery of the condition.
 3. If the CONTRACTOR does not remove such defective or non-conforming work within a reasonable time fixed by written notice from the OWNER, the OWNER may remove it and may store the materials or equipment at the expense of the CONTRACTOR. If the CONTRACTOR does not pay the cost of such removal and storage within ten days thereafter, the OWNER may upon ten additional days written notice sell such work at auction or at private sale and shall account for the net proceeds thereof, after deducting all the costs that should have been borne by the CONTRACTOR. If such proceeds of sale do not cover all costs, which the CONTRACTOR should have borne, the difference shall be charged to the CONTRACTOR and an appropriate Change Order shall be issued.

3. Energy Guarantee and Liquidated Damages

- a. Based upon the CONTRACTOR'S Energy Guarantee Matrix developed for each Project in the Facility Energy Assessment, it is anticipated that the operation of said Project, over its ASHRAE life expectancy, will achieve the calculated Projected Energy Savings (PES). The ability of the Project to perform in a manner that will achieve such Projected Energy Savings (PES) shall be demonstrated in accordance with the OWNER approved CONTRACTOR'S M&V Plan. The following assumptions shall be stipulated for each Project in the Facility Energy Assessment, as approved by the OWNER, and shall be utilized in the calculation of both PES and PIES.
 1. Energy Rates
 2. Energy Escalation
 3. Cost of Money (if applicable)
- b. For each Project implemented through this Contract, the CONTRACTOR'S Energy Guarantee Matrix shall provide the detailed calculation of Projected Energy Savings (PES), Guarantee Energy Savings (GES) and Post Installation Energy Savings (PIES).

- c. For each Project implemented through this Contract, the CONTRACTOR guarantees that when the value of the PIES as determined by the Performance Tests and Measurements conducted in accordance with the OWNER approved CONTRACTOR'S M&V Plan, is inputted to formulas for PIES, the aggregate present value of the PIES, hereafter known as the DPIES, is not less than the aggregate present value of the GES, hereafter known as the DGES. The GES as defined is equal to the GP multiplied by the PES for the Project. The GP for the relevant Project shall be set forth in the Facility Energy Assessment, subject to the approval of the OWNER.
- d. In the event that the results of the Performance Tests and Measurements outlined in the OWNER approved CONTRACTOR'S M&V Plan are marginal, (defined as resulting in the DPIES within plus or minus (+2%) of the DGES) the OWNER shall have the right to require the CONTRACTOR to perform additional Performance Tests and Measurements. If the values obtained from such Performance Tests and Measurements result in DPIES less than DGES, the provisions of paragraph e. will apply. If the value obtained results in DPIES greater than or equal to DGES, the applicable Performance Tests and Measurements shall be deemed to have been passed.
- e. In the event the GES are not obtained pursuant to paragraphs a. and c., the CONTRACTOR shall have the option either to (i) at its sole cost and expense, make changes or adjustments in the equipment and/or systems so as to allow the Project to achieve the DGES or (ii) pay to the OWNER a Lump Sum Energy Savings Payment (LSEP). The LSEP shall be the difference between the DGES and the DPIES, (LSEP = [DGES – DPIES]) discounted to the date of Substantial Completion of the Project.
- f. Provided the CONTRACTOR diligently pursues the cure specified in section 3e(i) above, the CONTRACTOR shall have the right to carry out such a cure period of up to one (1) year after the completion of the Performance Tests and Measurements.
- g. In the event The CONTRACTOR elects to discontinue or fails to diligently pursue a cure during the aforementioned cure period or the GES have not been achieved at the end of the one-(1) year cure period; the CONTRACTOR shall be required to make the LSEP within five (5) business days of receipt of notice from the OWNER.
- h. The parties agree that the LSEP is a fair and reasonable determination of the amount of actual damages that would be suffered by the OWNER as a result of the CONTRACTOR'S failure to meet the GES, and that this amount does not constitute a penalty.

4. Performance Tests and Measurements

- a. The ability of the Project to perform in a manner that will achieve the PIES and ultimately the GES shall be demonstrated in a series of Performance Tests and Measurements as outlined in the OWNER approved CONTRACTOR'S M&V Plan.
- b. The Performance Tests and Measurements required by the OWNER approved CONTRACTORS M&V Plan shall be conducted when conditions adequate therefor are present. Data recorded from the Performance Tests and Measurements shall be utilized to demonstrate and verify the PES and GES of the Project.
- c. Notice with respect to the commencement of the Performance Tests and Measurements shall be given by the CONTRACTOR in accordance with the provisions of the GENERAL CONDITIONS and such Performance Tests and Measurements shall be conducted when conditions adequate therefore are present.

ARTICLE XIII: ADDITIONAL ITEMS

1. CONTRACT DEEMED EXECUTORY

This Contract shall be deemed executory only to the extent of the monies appropriated and available for the purpose of the contract, and no liability on account therefor shall be incurred beyond the amount of such monies. It is understood that neither this Contract nor any representation by any public employee or officer creates any legal or moral obligation to request, appropriate or make available monies for the purpose of the Contract.

2. CODES

Unless otherwise directed by the OWNER, the CONTRACTOR shall comply with all applicable codes and regulations required by law. Without limiting the generality of the foregoing, compliance with codes and regulations shall include, but shall not be limited to, those of the following which are applicable:

- A. Administrative Codes
- B. Zoning Resolutions
- C. State Building Code, NYS Uniform Fire Prevention & Building Code, latest edition
- D. Local Zoning Ordinances
- E. New York City Building Code
- F. State Hospital Code

If Federal Aid is obtained for any facilities described herein, then any and all regulations imposed by the participating Federal Agency shall be complied with in the performance of this Contract.

3. GOVERNMENT PROVISIONS

The CONTRACTOR shall comply with any applicable provisions or Acts of Congress, rules, regulations, and requirements of the Government of the United State of America. If there is a grant of money or loan of money by the Government of the United States of America for the Project, then the CONTRACTOR shall furnish any information and provide any assistance which the OWNER deems necessary for the preparation of any certificates, reports, or materials required as a result of obtaining said grant or loan.

4. COOPERATION

The CONTRACTOR shall render any assistance which the OWNER may require with respect to any claim or action in any way relating to the CONTRACTOR'S services during or subsequent to the design or construction of the Project including, without limitation, review of claims, preparation of technical reports and participation in negotiations both before and after it has otherwise completed performance of the Contract and without any additional compensation therefore.

5. INVALID PROVISIONS

If any term or provision of the Contract or the application thereof to any person, firm or corporation, or circumstance shall, to any extent, be determined to be invalid or unenforceable, the remainder of the Contract, or the application of such terms or provisions to persons, firms or corporations, or circumstances other than those to which it is held invalid or unenforceable, shall not be affected thereby and each term or provision of the Contract shall be valid and be enforced to the fullest extent permitted by law.

6. GREEN AND CLEAN STATE BUILDINGS

- 24.1** The CONTRACTOR shall, to the maximum extent practicable, follow guidelines for the construction of “Green Buildings”, including guidelines set forth in Tax Law Section 19, which created the Green Buildings Tax Credit, and the United States Green Building Council’s LEED (Leadership in Energy and Environmental Design) rating system, in all buildings subject to the requirements of New York State Executive Order 111, issued June 10, 2001.
- 24.2** The CONTRACTOR shall be required to demonstrate compliance with the New York State Executive Order 111 requirement that new buildings achieve at least a twenty (20) percent improvement in energy efficiency performance relative to levels required by the State’s Energy Conservation Construction Code, as amended. For substantial renovation of existing buildings, the buildings shall achieve at least a ten (10) percent improvement in energy performance.
- 24.3** The CONTRACTOR shall incorporate energy-efficient criteria consistent with ENERGY STAR and any other energy efficiency levels as may be designated by the New York State Energy Research and Development Authority (NYSERDA) into all specifications developed for new construction and renovation.
- 24.4** The CONTRACTOR shall use the services of a Technical Assistance Provider approved by NYSERDA. The Technical Assistance Provider shall assist the CONTRACTOR in analyzing the design and providing recommendations to maximize energy efficiency and to promote the eligibility of the capital cost incentives included in NYSERDA’s New Construction Program. Assistance shall include any requisite modeling and other requisite analysis.

IN WITNESS WHEREOF, the OWNER and **CONTRACTOR** have executed this Contract as of this

_____ day of _____ 2022.

CONTRACTOR

By _____

Title _____

DORMITORY AUTHORITY

By _____

Title _____

NEW YORK STATE ACKNOWLEDGEMENT – DASNY

STATE OF NEW YORK)
) SS
COUNTY OF ALBANY)

On the _____ day of _____ in the year 2022, before me the undersigned personally appeared:

personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Signature of Notary

NEW YORK STATE ACKNOWLEDGEMENT – Contractor/Consultant

STATE OF _____)
) SS
COUNTY OF _____)

On the _____ day of _____ in the year _____, before me the undersigned personally appeared:

personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Signature of Notary

APPENDIX "A"

SUMMARY OF PAYMENTS

ARTICLE IV: PROVISION FOR PAYMENT

MAXIMUM AMOUNT PAYABLE

Maximum Amount Payable for all Services required pursuant to the Contract shall be the total of all Projects listed below.

Date	Projects	Funding Source	Lump Sum (LS) or Not-to-Exceed (NTE)

Payments for Services shall be made in proportion to Services performed and approved by the OWNER. Payments shall be requisitioned on the OWNER'S form, **PROFESSIONAL SERVICES CONTRACT PAYMENT REQUISITION**, with accompanying backup. Only said form shall be used for reimbursement of Services.

NTE = Not to Exceed
LS = Lump Sum
AE = Actual Expense

APPENDIX "B"

SCHEDULE OF TECHNICAL CLASSIFICATIONS AND HOURLY RATES

The following is a listing of Technical Classifications and Hourly Rates associated with this Contract. Changes in Rates, Classifications or Personnel must be verified by certified payroll records/audit and have the prior approval of the OWNER before payment can be authorized.

Schedule of Technical Classifications and Hourly Rates for use with Additional Services and Extra Work of the CONTRACTOR, pursuant to Article V.A.:

<u>Technical Classifications</u>	<u>Direct Salary Rate*</u>
<u>CONTRACTOR</u>	
Sr. Vice President/Vice President	\$175.00 (Flat Rate)
Associate	\$ 50.75
Claims Manager	\$ 49.30
Construction Specialist II	\$ 31.63
Construction Manager	\$ 47.30
Construction Supervisor	\$ 35.58
Construction Superintendent	\$ 34.92
Control Engineer III	\$ 34.86
Controls Engineer	\$ 43.28
Design Architect	\$ 24.94
Design Drafter	\$ 20.00
Design Engineer	\$ 34.26
Designer	\$ 35.67
Facility Support Services Manager	\$ 51.67
Manager Estimating & Field	\$ 53.72
Managing Associate	\$ 49.97
Managing Engineer	\$ 48.12
Managing Engineer	\$ 55.61
Project Manager – Construction	\$ 55.56
Project Manager – Facility Support Svcs.	\$ 49.99
Project Associate	\$ 46.83
Project Controls III	\$ 28.84
Project Designer	\$ 39.33
Project Engineer	\$ 42.35
Project Manager	\$ 55.01
Resident Engineer	\$ 32.50
Resident Inspector	\$ 32.40
Sr. Construction Supervisor	\$ 45.00
Sr. Controls Engineer	\$ 43.69
Sr. Design Drafter	\$ 28.34
Sr. Engineer	\$ 53.59
Sr. Instrumentation Tech.	\$ 27.66
Sr. Managing Engineer	\$ 61.52
Sr. Project Designer	\$ 41.74
Sr. Project Engineer	\$ 46.87

Sr. Project Manager	\$ 63.00
Sr. Service Technician	\$ 30.97
Sr. Supervisor	\$ 69.36
Staff Designer	\$ 28.79
Staff Engineer	\$ 26.27
Startup Supervisor	\$ 25.97
Supervisor	\$ 22.30
System Integration Manager	\$ 57.82
Technical Associate	\$ 55.29
Technical Director	\$ 54.12
Technical Drafter	\$ 17.47

* Billable rates will equal the Direct Salary Rate times an approved multiplier of 2.85.

Subconsultant

Lead – Project Engineer	\$ 46.00
Senior Project Engineer	\$ 41.00
Lead Designer	\$ 41.00
Designer Engineer	\$ 35.00

* Billable rates will equal the Direct Salary Rate times an approved multiplier of 2.85.

Subconsultant

Project Manager	\$ 55.45
Asbestos Designer	\$ 47.61
Draftsperson	\$ 30.49
Asbestos Inspector/Designer	\$ 46.56
Asbestos Inspector	\$ 31.00

* Billable rates will equal the Direct Salary Rate times an approved multiplier of 2.35.

Any request for increases in CONTRACTOR'S Approved Hourly Rates shall be submitted to the OWNER in writing, and is subject to review and approval of the OWNER'S Director, Procurement. If approved, a formal amendment to this Contract is not required, provided that the total contract amount does not increase.

The Consumer Price Index for New York - Northeastern New Jersey area shall be used as a guide for any rate adjustment negotiation.

APPENDIX "C" - ADDITIONAL INSUREDS

4201 Schools - Certificates should name the specific 4201 School facility and the Dormitory Authority of the State of New York as additional insureds.

City of New York Court Facilities - Certificates should name the City of New York, the Construction Manager and the Dormitory Authority of the State of New York as additional insureds.

City University of New York (CUNY) - Certificates should name the City University of New York, the City University Construction Fund, the Construction Manager and the Dormitory Authority of the State of New York as additional insureds.

New York City Health and Hospitals Corporation (HHC) - Certificates should name the City of New York, the New York City Health and Hospitals Corporation, the Construction Manager and the Dormitory Authority of the State of New York as additional insureds.

New York City Office of the County Medical Examiner (OCME) - Certificates should name the City of New York, the New York City Health and Hospitals Corporation, the specific OCME facility, the Construction Manager and the Dormitory Authority of the State of New York as additional insureds.

New York State Department of Health (DOH) - Certificates should name the New York State Department of Health, the State of New York, the Construction Manager and the Dormitory Authority of the State of New York as additional insureds.

New York State Department of Mental Hygiene: Office of Mental Health (OMH), Office for People with Developmental Disabilities (OPWDD) and Office of Alcoholism and Substance Abuse Services (OASAS) - Certificates should name the State of New York, the Construction Manager (when applicable) and the Dormitory Authority of the State of New York as additional insureds.

New York State Education Department (SED) - Certificates should name the New York State Education Department, the State of New York, the Construction Manager and the Dormitory Authority of the State of New York as additional insureds.

Office of Court Administration (OCA) - Certificates should name the State of New York, The Unified Court System of New York, the City of Albany, the Construction Manager and the Dormitory Authority of the State of New York as additional insureds.

Roswell Park Cancer Institute - Certificates should name The Roswell Park Cancer Institute Corporation, the State of New York, the New York State Department of Health, the Construction Manager and the Dormitory Authority of the State of New York as additional insureds.

Special Acts School District (SASD) - Certificates should name the specific SASD facility and the Dormitory Authority of the State of New York as additional insureds.

State University of New York (SUNY) - Certificates should name the State University of New York, the State of New York and the Dormitory Authority of the State of New York as additional insureds.

Questions concerning Additional Insured Requirements should be directed to insurance@dasny.org