



CONTRACT FOR PROFESSIONAL SERVICES

CHAPTER TWO

PROFESSIONAL'S REQUIRED SERVICES

Contract For Professional Services • Chapter Two • Professional's Required Services

DASNY

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Client

Contract Number

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ARTICLE 1 – GENERAL PROJECT SERVICES

1.1 Essential Services

The Professional agrees to provide all necessary architectural and engineering services required to professionally accomplish the Professional's scope of services.

1.1.1 Project Description

Develop a phased, comprehensive renovation plan for Livingston Tower, Paine Hall (building G) & Zenger Hall (building H) on the quad, the connecting lower level, mezzanine floors and basement levels, and associated adjacent site areas. Livingston Tower renovation will primarily focus on interior systems and spaces. The renovations will minimize bed loss, provide standard University amenities for student housing (i.e., large laundry room, study rooms, Wi-Fi, etc.), increase natural light, provide open public spaces, and provide a desirable housing choice for students, one with a contemporary, energy efficient, comfortable, and safe living environment. The connecting lower level, mezzanine floors and basement level spaces and likely the adjacent outdoor courtyard space and site shall be programmed to accommodate future campus needs.

1.1.2 Scope of Services Description

Provide coordinated design and multiple stand-alone construction packages, phased as necessary and feasible, to renovate Livingston Tower including all components and technology, Paine (G) and Zenger (H) Halls, and the connecting lower level, mezzanine floors, basement level, and site areas. Energy modeling and hazardous materials survey and testing shall also be part of the designs. Pre-Schematic and programming development will be based on stakeholder feedback.

Provide the appropriate disciplines to be part of the consultant team, for the preparation of design and construction documents.

Provide a design that address the University goals which shall include, but are not limited to the following:

- Renovation of Livingston Hall (primarily interior components & possibly roof),
- Renovation of Paine (G) and Zenger (H) Halls (interior and exterior including but not limited to roof, windows, and doors),
- Renovation of the lower level spaces below Paine (G) and Zenger (H) Halls (interior and some exterior components as required by scope),
- Development and upgrade of adjacent site amenities and elements,

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Phases of the Project - Project Delivery

The design phase services related to the Colonial Quad Renovation Project includes: Pre-Schematic/Concept Design, Schematic Design, Design Development, Construction Documentation, Bid Negotiation, Construction Administration, Construction Field Services, and Post-Construction Close-out.

Phase I-Design – Pre-Schematic/Concept Design

Pre-Schematic/Concept Design shall include, but not limited to the following tasks:

- A. The Professional shall coordinate with the Client and Owner to schedule an initial kick-off meeting to introduce all project team members. This meeting will ensure that the team has a clear understanding of each member's responsibilities and goals for the project and will clarify expectations for reviews, presentations, submissions, and approvals. Points of discussion during this meeting will include, but is not limited to:
 - Key Goals, Expectations, and Contacts;
 - Hazardous Materials Survey and Testing;
 - Consultant Scope of Services;
 - Project Scope and Budget;
 - Project Schedule and Coordination;
 - Design Deliverables;
 - Other Factors – SEQR, Site Access, Utilities, Testing, etc.

- B. The Professional shall work with the Client, Owner, and its consultants to provide pre-schematic programming for all components of this project (Livingston Tower, Paine (G) and Zenger (H) Halls, lower levels, and site);

This will include:

- Review of existing reports, plans and information provided by the Client;
 - Conducting existing conditions survey (environmental, utilities, etc.);
 - Programming meetings with key campus staff and students;
 - Generate programming information for proposed buildings;
 - Provide conceptual programming diagrams and associated cost analysis;
 - Conclude pre-schematic phase with a summary report.
- C. The Professional shall provide all appropriate and advisable project testing requirements including, but not limited to: asbestos and hazardous material sampling, testing and design as required for the project.

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- D. The Professional shall provide a preliminary planning schedule clarifying each phase of the project including how all team members fit into the process. The Client and Owner shall agree to the schedule and coordination with ongoing activities at Colonial Quad.
- E. The Professional in conjunction with the project schedule shall prepare and submit a project budget outlining the phases of the project as required. Project scope budget and schedule shall be broken out in such a way as to delineate the major components of the project.
- F. The Professional, Client and Owner and Owner's designated teams shall meet on a bi-weekly basis. The Professional shall provide minutes of all meetings within 5 days of said meetings. The Professional shall prepare the meeting minutes using the Client and Owner's Project Management System.
- G. The Professional shall formally present the Pre-Schematic/Concept Design materials at 50% and 95% completion for comment and approval. Revisions/modifications shall be recorded and made to the Pre-Schematic/Concept Design materials as directed by the Client and Owner and the package shall be submitted at 100% for final approval.
- a. An Interim report shall be submitted at the 50% submission. The report shall include a narrative describing overall scope and extent of the project including goals, use, and concepts. Preliminary information shall also be included with respect to; site investigation & hazardous materials testing results, programming findings, schedule & phasing, construction cost estimate, SHPO coordination, code compliance including ADA, campus standards & guidelines, major building components & systems, materials & methods of construction, and other information being developed.
- H. Deliverables/Tasks:
- Review of Provided Information
- a. The Professional shall review existing reports and information provided by the Client and Owner.
- Develop Space Utilization Programming (for buildings)
- a. The Professional shall assess the impact of existing and new building spaces, their relationships and uses and confirm adequacy. Programming shall include Livingston Tower, Paine (G), Zenger (H) Halls, the connecting lower level, mezzanine floors, basement level, other spaces, and site elements to be located within the work scope area. Conceptual plans shall be developed to ascertain its feasibility and approval with stakeholders.

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Develop Site Access Programming

- a. The Professional shall assess the impact of the renovation components, and spaces within the context of the existing site spaces, elements, utilities, service access, vehicular access, pedestrian access to ascertain its feasibility and flow in a conceptual manner.

Confirm and Verify Programming

- a. The Professional shall meet with stakeholders to confirm and verify programming direction.

Evaluate and Identify Goals

- a. The Professional shall evaluate and identify goals for code compliance, sustainability and the Client and Owner's development standards including coordination with the facilities Master Plan.
- b. The Professional shall coordinate a pre-schematic/concept charrette meeting to discuss the sustainability goals of the campus and NYS that can be supported by this project. Sustainable goals can include, but are not limited to, energy efficiency and zero net energy, renewable energy, water use reductions, greenhouse gas reductions, green procurement, reduced toxins in the built environment and landscaping, green innovation, and resiliency/adaptation to climate changes.

Prepare a Scope of Work and Associated Cost Estimate

- a. The Professional shall prepare a Scope of Work and associated Cost Estimate for renovation of Livingston Tower, Paine (G), Zenger (H) Halls, and the connecting lower level, mezzanine floors, basement level and other spaces and site amenities to be located within the work scope area. The rough order of costs shall be in 2020-2022 dollars.

Prepare a Schedule and Phasing Plan

- a. The Professional shall prepare a Schedule and Phasing Plan that considers multiple stand-alone construction packages, phased and scheduled as necessary and feasible, to renovate Livingston Tower, Paine (G) and Zenger (H) Halls, and the connecting lower level, mezzanine floors, basement level, and site work. The plan shall also coordinate with other ongoing improvement projects at Colonial Quad and consider early bid packages.

Environmental Surveys and Testing

- a. The Professional shall engage an environmental consultant to provide a survey that would be required for the areas within the work scope.

New York State Historic Preservation Office (NYSHPO) Assessment

- a. The Professional shall evaluate and analyze options to determine whether the proposed action(s) will have an impact/effect on the qualities

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of the property with respect to NYSHPO and the University's Heritage Preservation Plan. Options with associated cost should be evaluated and analyzed.

Deliverables

- a. The Professional shall summarize all requested study work tasks within a report to be reviewed and approved by the Client and Owner.

Approvals

- a. The Professional shall submit Phase I - Pre-Schematic/Concept Design for approval from the Client and Owner prior to proceeding to Phase II. The Owner may at their discretion choose not to proceed to Phase II and terminate in whole or part for convenience of the Owner.

Phase II-Design – Design, Bid and Construction Phase Services

Phase II-Design shall include, but limited to, Schematic Design, Design Development, Construction Documentation, Bid Negotiation, Construction Administration, Construction Field Services, and Post-Construction Close-out as outline herein.

The Project may utilize a Construction Manager (at-Risk) for the project's delivery. The project's delivery method shall be at the sole discretion of the Client and Owner.

1.1.3 Use of Owner's Project Management System

The Professional shall record all project related information in the Owner's Project Management System (Contract Management™) in accordance with the Owner's Contract Management User Guide Manual. The Professional agrees to request user accounts to the Owner's Project Management System for each employee who will be working on the project. The Professional further agrees to have their employees attend training in the use of the owner's Project Management System, and to utilize the Owner's Contract Management User Guide Manual to perform necessary tasks. Training will be provided by the Owner.

1.2 Project Design Schedule Services

1.2.1 Definitions'

- (i) Project: Work at the Site carried out pursuant to one or more sets of Contract Documents.

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- (ii) Scope, Budget, and Schedule Confirmation Form: A standard Owner's form, executed by the Owner, the Client, the Professional and/or the Construction Manager, agreeing in principal to the Project's scope, budget, and schedule.
- (iii) Activity: A discrete part of the Contract that can be identified for planning, scheduling, monitoring, and controlling the Project. Activities included in a CPM schedule consume time and resources.
 - a. Critical Activity: An activity on the critical path that has no total float.
 - b. Predecessor Activity: An activity that precedes another activity in the network.
 - c. Successor Activity: An activity that follows another activity in the network.
- (iv) Bid Milestone Schedule: Interim milestones, included in the Contract Documents, which the Contractor utilizes to formulate the Baseline Schedule.
- (v) Baseline Schedule: Initial schedule, prepared by the Contractor, to complete the Work of the Contract in accordance with the Contract duration and starting point to which schedule updates are compared.
- (vi) CPM: Critical path method is a scheduling method used to plan and schedule construction projects where activities are arranged based on activity relationships creating a time scaled network diagram.
- (vii) PDM: Precedence diagram method follows the standard CPM calculations and allows for special logic relationships creating an interdependent relationship throughout the network.
- (viii) Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no total float.

1.2.2 Quality Assurance

- (i) Project Scheduler Qualifications: Provide an experienced person in CPM scheduling and reporting, with capability of producing CPM reports and diagrams within timeframes 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.
- (ii) Computer Scheduling Software: Prefixed by the Owner's template - prepare CPM schedules using current version of a program that has been developed specifically to manage CPM schedules and interface with the

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Owner's electronic file, utilize Primavera P6 or P3 Primavera Project Planner operating system.

- (iii) Evaluate Scheduling Requirements: Evaluate the Construction Phase Schedule for 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. Contract milestones, division of Work.

1.2.3 Scheduling Requirements

- (i) Scope, Budget, and Schedule Confirmation Form: Execute the initial Form prior to commencement of the Predesign Phase of the Project. Subsequently, the form shall be updated and executed at each planned design phase, (schematic, design development, construction documents phases), the final Form shall be updated and executed with the Bid Document phase submission.
- (ii) Construction Phase Schedule: Prepare an expanded schedule for the Construction Phase of the Project using a time-scaled PDM network diagram representing major milestone activities unique to each proposed Contract. The initial schedule shall be submitted at the Design Development Phase review (60% complete) and updated thereafter with each scheduled design submission.
 - a. Include skeleton diagram, which outlines significant construction milestone activities of each proposed Contract, which will formulate the Bid Milestone Schedule. Indicate activities such as:
 - 1. Notice to Proceed.
 - 2. Major milestone activities unique to each Contract.
 - 3. Phasing.
 - 4. Critical Path.
 - 5. Substantial Completion.
 - 6. Contracts Closeout.
 - b. Bid Milestone Schedule Preparation: Formulate the Bid Milestone Schedule from the Construction Phase Schedule requirements as indicated above. Attach a copy of the Bid Milestone Schedule to General Requirement Section 013200 – Construction Progress Documentation in the Project Manual. The Bid Milestone Schedule shall form the basis for each Contractor to prepare their Baseline Schedule.

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1.3 Project Testing Services

1.3.1 The Professional shall:

- (i) Provide all appropriate and advisable Project testing requirements including, but not limited to, geotechnical, asbestos and hazardous substances, structural, chemical, electrical, or mechanical tests and investigations, and construction materials testing;
- (ii) Prepare scopes of work, including preliminary testing parameters for geotechnical work, soil borings and load tests for soil bearing capacity, to assist the Owner in securing all necessary Project testing;
- (iii) Coordinate all testing and determine timing and order of all testing;
- (iv) Evaluate all test results; and
- (v) Recommend all necessary and advisable additional Project testing.

1.3.2 Additional Required Services or Modified Required Services, if any, included in Project Testing Services are listed in Appendix 1 of this Chapter Two and incorporated herein by reference.

1.4 Project Approval Services

1.4.1 As required for the Project, the Professional shall

- (i) Promptly assist the Owner in securing all approvals from governing authorities with jurisdiction over the Project. Without limitation, the Professional shall timely assist the Owner in making application for rezoning, site plan approval, local variances, or other approvals, including completion of all necessary applications and supporting documentation; and,
- (ii) Attend any and all meetings required to secure all approvals from governing authorities with jurisdiction over the Project if so directed by the Owner.

1.4.2 The Professional shall obtain Fire Department, Buildings Department, Highway Department and Authority Having Jurisdiction (AHJ) approval(s) when and where required.

1.4.3 The Professional shall perform all work necessary to obtain a Certificate(s) of Occupancy or Certificate(s) of Code Compliance as applicable.

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1.4.4 Additional Required Services or Modified Required Services, if any, included in Project Approval Services are listed in Appendix 1 of this Chapter Two and incorporated herein by reference.

1.5 Quality Control Services

1.5.1 The Professional shall have a written Quality Control program in place as part of the Professional's standard office practices. The Owner may review the Professional's Quality Control Program at any time. The Quality Control Program shall apply to all areas of the Professional's work, including the review of all drawings prior to submission to the Owner.

1.6 Project Management System

1.6.1 For projects with an Approved Construction Budget greater than ten million and 00/100 Dollars (\$10,000,000.00), or as directed by the Owner, the Professional shall provide all project scheduling deliverables from the current versions of Primavera P6™. The Owner will provide the Professional with templates to be used in the generation of the project schedule(s). In addition, the Professional shall use the current version of Primavera Contract Management™ (the Project Management System) in accordance with the Owner's protocol to manage all project-related correspondence, transmittals, meeting minutes, requests for information, deliverables, daily logs, project costs, change management and reporting.

1.6.2 The Owner may direct the Professional to provide all the Project Management System functions of Paragraph 1.6.1 of this Chapter Two from available web-based and/or Application Service Provider (ASP) system(s) as selected by the Owner.

ARTICLE 2 – PRESCHEMATIC SERVICES

2.1 Investigation and Analysis

The Professional shall

- (i) Visit and thoroughly inspect the Project Site, including any structures and natural or man-made features to be modified;
- (ii) Familiarize itself with the survey of the location of all existing buildings, utilities, conditions, streets, equipment, components and other attributes having or likely to have an impact on the Project;
- (iii) Familiarize itself with the Owner's layout and design requirements, conceptual design objectives and Approved Construction Budget;

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- (iv) Familiarize itself with pertinent Project information and programming needs;
- (v) Review and analyze all Project geotechnical, hazardous substance, structural, chemical, electrical, mechanical and construction materials tests, investigations and recommendations, and advise the Owner of additional testing requirements;
- (vi) Familiarize itself with, review and analyze local zoning restrictions and requirements including:
 - a. Determining the proposed structure(s) compliance (or noncompliance) with the local municipality's Planning and Zoning Codes;
- (vii) Gather any other information necessary for a thorough understanding of the Project; and
- (viii) Attend the Project kick-off meeting.

If the Project involves modifications to any existing structure(s) or other man-made feature(s) on the Project site, the Professional shall also

- (ix) Review all available as-built and record drawings, plans and specifications;
- (x) Thoroughly inspect the existing structure(s) and man-made feature(s) to identify existing deficiencies and ascertain the specific locations of pertinent structural components; and
- (xi) Complete a NYS DEC Environmental Assessment Long Form as needed.

2.2 Preliminary Design and Cost Estimate

The Professional shall, based upon its activities pursuant to Paragraph 2.1 of this Chapter Two:

- (i) In accordance with schedule requirements, provide to the Owner a series of alternate solutions that explore a full range of building and site development possibilities including alternative mechanical, electrical and structural considerations;
- (ii) Establish a basic Project strategy by addressing critical relationships among program elements;
- (iii) The Professional shall provide a cost estimate based upon measurement of physical characteristics, using costs appropriate for the type of work and design stage, based upon experience and nationally recognized

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Construction Specifications Institute (CSI) based estimating systems such as R.S. Means ®, or other generally accepted standard cost estimating system acceptable to the Owner, and including an appropriate design contingency, bidding contingency, contractor's overhead and profit, escalation and trade contractor or construction manager general conditions costs as directed by the Owner. The estimate shall be prepared using the Owner provided "Consultant Cost Estimating Workbook", which can be found on DASNY's website at www.dasny.org / Construction / Design & Construction Tools / Forms / Consultant Design / DASNY Cost Estimating Workbook. Upon prior written approval of the Owner, the Professional may prepare the estimate in an alternative format provided the estimate includes at a minimum, all information contained in the Owner supplied format;

- (iv) Select in collaboration with the Owner the overall solution or combination of solutions that best address the needs of the Owner; and
- (v) Submit to the Owner a completed Planning and Zoning Information Form as per Paragraph 2.1 Subparagraph (vi), for review and comment.

2.3 Additional or Modified Required Services

Additional Required Services or Modified Required Services, if any, included in Pre-schematic Services are listed in Appendix 1 of this Chapter Two and incorporated herein by reference.

ARTICLE 3 – SCHEMATIC SERVICES - 30% SUBMISSION

3.1 Deliverables

The Professional shall submit drawings, narratives, outline specifications, updated Scope, Budget and Schedule Confirmation form and a cost estimate to the Owner for review and approval. The Professional shall submit renderings, models or other special items as requested by the Owner per Paragraph 3.1.4 of this Chapter Two.

3.1.1 Narratives, Drawings, and Specifications:

Narratives, drawings, and specifications shall be prepared in accordance with the Owner's Design Professionals Submission Requirements located on DASNY's website at www.dasny.org / Construction / Design & Construction Tools / Guidelines / Design Professional's Submission Requirements.

3.1.2 Utility Information:

The Professional shall provide copies of all correspondence and information

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received from utility companies regarding required connections and loads for new or modified services.

3.1.3 Cost Estimate:

The Professional shall provide a cost estimate based upon measurement of physical characteristics, using costs appropriate for the type of work and design stage, based upon experience and nationally recognized Construction Specifications Institute (CSI) based estimating systems such as R.S. Means[®], or other generally accepted standard cost estimating system acceptable to the Owner, and including an appropriate design contingency, bidding contingency, contractor's overhead and profit, escalation and trade contractor or construction manager general conditions costs as directed by the Owner. The estimate shall be prepared using the Owner provided "Consultant Cost Estimating Workbook". Upon prior written approval of the Owner, the Professional may prepare the estimate in an alternative format provided the estimate includes at a minimum, all information contained in the Owner supplied format. The Professional shall provide a reconciliation to the previous cost estimate and the Approved Construction Budget. The reconciliation shall include an explanation of any variances or overall increases.

3.1.4 Renderings:

Provide renderings, models (other than working models), or other special items as required by the Owner. Requested renderings or models shall be reimbursed pursuant to the terms of Chapter One – Project Terms and Conditions, Appendix A, Item C.

3.1.5 Meetings:

Meetings shall be held on a bi-weekly basis. The Professional shall provide minutes of all meetings within 5 days of said meetings. The Professional shall prepare the meeting minutes using the Owner's Project Management System.

3.1.6 Schematic Phase Approval:

The Design Development Phase shall not be started until the Owner approves the Schematic Phase Submissions and the Owner provides the Professional with written authorization to proceed to the Design Development Phase.

3.2 Additional or Modified Required Services

Additional Required Services or Modified Required Services, if any, included in Schematic Services are listed in Appendix 1 of this Chapter Two and incorporated herein by reference.

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ARTICLE 4 – DESIGN DEVELOPMENT SERVICES – 60% SUBMISSION

This Phase shall consist of the development of the approved schematic design, including the mechanical, electrical and all other systems required for the Project, as well as recommendations for bidding packages, order of construction and timing. During this Phase, all design criteria and solutions shall be established and developed within the program requirements and budget as established by the Owner.

4.1 Deliverables

The Professional shall submit drawings, a descriptive report, specifications, updated Scope, Budget and Confirmation form, initial construction phase schedule and a cost estimate to the Owner for review and approval. The Professional shall submit renderings, models or other special items as requested by the Owner per Paragraph 4.1.4 of this Chapter Two.

4.1.1 Narratives, Drawings, and Specifications:

Narratives, drawings, and specifications shall be prepared in accordance with the Owner's Design Professionals Submission Requirements located on DASNY's website at www.dasny.org / Construction / Design & Construction Tools / Guidelines / Design Professional's Submission Requirements.

4.1.2 Utility Information:

The Professional shall provide copies of all correspondence and information received from utility companies regarding required connections and loads for new or modified services.

4.1.3 Cost Estimate:

Provide a cost estimate based upon a detailed take-off of labor, materials and equipment, based upon experience and nationally recognized Construction Specifications Institute (CSI) based estimating systems such as R.S. Means[®] or other generally accepted standard cost estimating system acceptable to the Owner, and including an appropriate design contingency, bidding contingency, contractor's overhead and profit, escalation and trade contractor or construction manager general conditions costs as directed by the Owner. The estimate shall be prepared using the Owner provided "Consultant Cost Estimating Workbook". Upon prior written approval of the Owner, the Professional may prepare the estimate in an alternative format provided the estimate includes at a minimum, all information contained in the Owner supplied format. The Professional shall provide a reconciliation to the previous cost estimate and the Approved Construction Budget. The reconciliation shall include an explanation of any variances or overall increases.

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4.1.4 Renderings:

Provide renderings, models (other than working models), or other special items as required by the Owner. Requested renderings or models shall be reimbursed pursuant to the terms of Chapter One – Project Terms and Conditions, Appendix A, Item C.

4.1.5 Meetings:

Meetings shall be held on a bi-weekly basis. The Professional shall provide minutes of all meetings within 5 days of said meetings. The Professional shall prepare the meeting minutes using the Owner's Project Management System.

4.1.6 Testing:

The 60% Construction Documents prepared by the Professional shall include specifications for testing services as required by the Owner. The testing services shall be provided by an approved laboratory or engineer through a direct contract with the Owner.

4.1.7 Design Reviews:

The Professional shall provide typewritten responses to all comments provided by the Owner and the Owner's Consultants.

4.1.8 Design Development Phase Approval:

The Construction Documents Phase shall not be started until the Owner approves the Design Development Phase Submissions and the Owner provides the Professional with written authorization to proceed to the Construction Documents Phase.

4.2 Additional or Modified Required Services

Additional Required Services or Modified Required Services, if any, included in Design Development Services are listed in Appendix 1 of this Chapter Two and incorporated herein by reference.

ARTICLE 5 – CONSTRUCTION DOCUMENT SERVICES – 100% SUBMISSION

5.1 Deliverables

5.1.1 Construction Documents – 100% Submission:

Based on the information obtained during its activities pursuant to Articles 1, 2, 3 and 4 of this Chapter Two, the Bid Milestone Schedule, any modifications

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authorized by the Owner, and upon written approval of the Design Development Phase 60% Submissions by the Owner, the Professional shall prepare Construction Documents that detail the Work within the Approved Construction Budget, if and as adjusted. The Construction Documents shall:

- (i) be complete, incorporating all comments from the previous design review, with all drawings finished so that no additional data, changes, or information are required, and with all specifications completed so that no additional data, information, or changes are required;
- (ii) be fully coordinated, biddable, and constructible for the Owner's Contractors, and include all architectural and engineering drawings, plot plans, all floor plans, sections, elevations, details, soil exploration data, schedules and other data required to obtain complete bids;
- (iii) take into account existing Site features and structures, and safely and efficiently integrate the Work into existing Site features and structures;
- (iv) include all labor, material, and equipment necessary to complete the Work;
- (v) portray Work which meets the Owner's disclosed, demonstrated or documented aesthetic, functional and operational objectives;
- (vi) comply with all applicable laws, statutes, building codes, rules and regulations of all governmental, public and quasi-public authorities and agencies having jurisdiction over the Project in effect on the date the documents are delivered to the Owner;
- (vii) bear the signature and seal of the Professional evidencing full responsibility for all designs and contract documents provided for under this Contract for Professional Services;
- (viii) 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;
- (ix) show all required Site Plans, Floor Plans, Reflected Ceiling Plans, Roof Plans, Elevations, Sections, Schedules, Diagrams, Details and other items as necessary to show all materials and systems required by the Project and to clearly delineate the work required for each Contract for Construction; and
- (x) include a quality assurance plan for each seismic system and main wind force-resisting system in accordance with the Building Code of the State of New York.

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5.1.2 Narratives, Drawings, and Specifications:

Narratives, drawings, and specifications shall be prepared in accordance with the Owner's Design Professionals Submission Requirements located on DASNY's website at www.dasny.org / Construction / Design & Construction Tools / Guidelines / Design Professional's Submission Requirements.

5.1.3 Utility Information

The Professional shall provide copies of all correspondence and information received from utility companies regarding required connections and loads for new or modified services.

5.1.4 Certifications and Approvals

Upon completion of the Construction Documents, the Professional shall certify, in writing, to the Owner that all Contract 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.

5.1.5 Cost Estimates:

The Professional shall provide a final cost estimate based upon a detailed take-off of labor, materials and equipment, based upon experience and nationally recognized Construction Specifications Institute (CSI) based estimating systems such as R.S. Means[®] or other generally accepted standard cost estimating system acceptable to the Owner. The cost estimate shall provide quantities, unit costs for materials and equipment, labor units for the installation of the materials and equipment, and wage rates (including base rate, taxes, insurance and fringe benefits) for the installation of the materials and equipment. The cost estimate shall include an appropriate design contingency, bidding contingency, contractor's overhead and profit, escalation and trade contractor or construction manager general conditions costs as directed by the Owner. The estimate shall be prepared using the Owner provided "Consultant Cost Estimating Workbook". Upon prior written approval of the Owner, the Professional may prepare the estimate in an alternative format provided the estimate includes at a minimum, all information contained in the Owner supplied format. The Professional shall provide a reconciliation to the previous cost estimate and the Approved Construction Budget. The reconciliation shall include an explanation of any variances or overall increases. The cost estimate shall be in the same format as the Owner's Schedule of Values.

5.1.6 Schedule of Values:

The Professional shall develop a schedule of values containing information

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required by the Owner to be included in the bid documents for each Contract for Construction. The schedule of values shall be transmitted electronically in a file type, layout and format specified by the Owner.

5.1.7 Shop Drawings and Submittals

The Professional shall develop a list of shop drawings and submittals, required by the specifications, to be included in the Bid Documents for each Contract for Construction. The Professional agrees to develop the contractor's submittal list and enter submittals in the Owner's Project Management System. In addition to the submittals required by the technical specifications, the Professional shall include pre and post construction submittals including: special guarantees, warranties, drawings, operation and maintenance manuals, etc. turn over material quantity, special tool turn over item, certificate of compliance, test result, Owner training, and/or other close out item required for each specification section.

5.1.8 Testing:

The Construction Documents prepared by the Professional shall include specifications for testing services as required by the Owner. The testing services shall be provided by an approved laboratory or engineer through a direct contract with the Owner.

5.1.9 Meetings:

Meetings shall be held on a bi-weekly basis. The Professional shall provide minutes of all meetings within 5 days of said meetings. The Professional shall prepare the meeting minutes using the Owner's Project Management System.

5.1.10 Design Reviews:

The Professional shall provide typewritten responses to all Design Development design review comments provided by the Owner and the Owner's Consultants.

5.1.11 Code Compliance:

The Professional shall prepare and provide an updated copy of the Owner's Code Compliance Form, including any revisions due to changes in Project scope from the Design Development phase.

5.2 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

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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 contract drawings and specifications will be the responsibility of the Professional 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.

5.3 Additional or Modified Required Services

Additional Required Services or Modified Required Services, if any, included in Construction Documents Services – 100% Submission are listed in Appendix 1 of this Chapter Two and incorporated herein by reference.

ARTICLE 6 – BID DOCUMENT SERVICES

6.1 Bid Document Packages

The Professional shall prepare and supply the necessary original set(s) of Bid Document Packages, bearing the seal and signature of the Professional, to the printing contractor designated by the Owner for printing, bidding and eventual award of contracts between the Owner and the Contractors for ____ separate bid document packages. The Professional shall solicit contractor interest to ensure competitive bidding and shall keep account of and distribute bid document packages to prospective bidders and provide the Owner with a report of the bid document packages distribution.

6.2 Bid Questions and Clarifications

The Professional 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 addendum.

6.3 Pre-Bid Meetings

The Professional shall attend any pre-bid meeting(s) scheduled by the Owner.

6.4 Bid Reviews

The Professional 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 all bid requirements, and make recommendations to the Owner as to the award of the contracts.

6.5 Construction Permits

6.5.1 The Owner as the Authority Having Jurisdiction

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For Projects for which the Owner is the permitting agency, the Professional shall prepare and submit the Owner's *Construction Permit Application* form and all required supplemental forms. The Professional shall meet all requirements and obtain a permit from the Authority.

6.5.2 Other Entities as the Authority Having Jurisdiction

For Projects where the Owner is not the Authority Having Jurisdiction requiring a construction permit, the Professional shall submit documentation evidencing a building permit or an approval of the project to have a permit issued from the Authority Having Jurisdiction.

6.6 Additional or Modified Required Services

Additional Required Services or Modified Required Services, if any, included in Bid Document Services are listed in Appendix 1 of this Chapter Two and incorporated herein by reference.

ARTICLE 7 – CONSTRUCTION PHASE SERVICES

7.1 Administration

The Professional shall (i) be the Owner's design representative during performance of the Work; (ii) consult with and advise the Owner on all design and technical matters; and, (iii) resolve Contractors' questions concerning the Construction Documents. The Professional shall supply the Owner with copies of all correspondence, reports, comments, transmittals, requests, acted-upon shop drawings, and other submittals and all other information relating to the Project.

7.2 Interpretations and Clarifications

The Professional shall render written or graphic interpretations and decisions necessary for the proper execution of the Work. The Professional's interpretations and decisions relating to artistic effect shall be final if not inconsistent with the Contracts for Construction.

7.3 Submittals and Shop Drawings

The Professional shall, review, certify, approve, reject, or take other appropriate action on, and return all submittals such as shop drawings, product data and samples. The Professional shall not approve any such submittals unless such submittals conform to (i) the Project design concept; (ii) the Construction Documents; (iii) the Contracts for Construction; and (iv) the Owner's Approved Construction Budget. The professional shall use the Owner's Project Management System to record the dates received from or

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returned to the contractor, the findings of the Professional's review, and other pertinent information pertaining to each submittal.

7.4 Equals

The Professional shall promptly and in accordance with all Project schedule requirements, review and approve, reject, or take other appropriate action on proposed substitutions or "equal materials or equipment". The Professional shall not approve any such proposed equal materials or equipment unless such equals conform to (i) the Project design concept; (ii) the Construction Documents; (iii) the Contracts for Construction; and (iv) the Owner's Approved Construction Budget.

7.5 Testing

The Professional shall promptly, and in accordance with all Project schedule requirements, review and evaluate the results of all inspections, tests and written reports required by the Owner and by any governmental entity having jurisdiction over the Project. The Professional shall take appropriate action on test results, including acceptance, rejection, requiring additional testing or corrective work, or such other action the Professional deems appropriate. The Professional shall promptly reject Work that does not conform to and comply with testing requirements.

7.6 Special Testing

The Professional 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 Professional shall take appropriate action on all such special testing and inspection reports, including acceptance, rejection, requiring additional testing or corrective work, or such other action the Professional deems appropriate. The Professional shall promptly reject Work that does not conform to and comply with testing requirements.

7.7 Interpretation of Construction Documents

The Professional shall act as initial interpreter of the requirements of the Contract Documents. The Professional shall render any assistance that the Owner may require with respect to any claim or action in any way relating to the Professional'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 For Professional Services and without any additional compensation therefore, except for those services specified in Subparagraph 10.2.4 of this Chapter Two.

7.8 Visits to the Site, Construction Inspections, and Rejection of Work

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- 7.8.1 The Professional shall visit the Project Site with sufficient frequency to familiarize itself with the progress and quality of the Work and to inspect the Work to determine compliance of the Work with
- (i) the Construction Documents, including approved shop drawings and other submittals;
 - (ii) the Construction Schedule; and
 - (iii) applicable laws, statutes, building codes, rules or regulations of all governmental, public, and quasi-public authorities and agencies having jurisdiction over the Project.
- 7.8.2 The Professional shall attend the Construction kick-off meeting. The Professional shall attend regular job site meetings with the Owner's Consultant(s), Contractors and other necessary parties and shall record the minutes of such job site meetings. The Professional shall provide minutes of all meetings within 5 days of said meetings. In all cases the Professional shall prepare the meeting minutes using the owner's Project Management System.
- 7.8.3 Each on-site construction inspection shall be conducted by an experienced, qualified representative of the Professional who is knowledgeable about the Project and competent in each discipline which has trade activities in progress at the time of the inspection. The Professional shall prepare a record of each site inspection within 48 hours of the inspection utilizing the Owner's Project Management System.
- 7.8.4 The Professional shall exercise care and diligence in discovering and reporting to the Owner and shall record their findings in the Owner's Project Management System 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.
- 7.8.5 The Professional shall promptly disapprove or reject Work that does not comply with:
- (i) the Contract Documents including approved shop drawings and other submittals; or
 - (ii) applicable laws, statutes, building codes, rules or regulations of all governmental, public, and quasi-public authorities and agencies having jurisdiction over the Project.
- 7.8.6 The Professional shall immediately notify the Owner and the Contractor(s) and shall issue a Notice of Non-Compliance using the Owner's Project Management System when it has disapproved or rejected any Work.

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7.8.7 The Professional shall perform structural observation for all projects that require structural observation in accordance with the Building Code of the State of New York.

7.8.8 During each visit to the site, the Professional shall verify the Contractor's progress on updating the as-built drawings. The Professional shall include a status of the as-built drawings in the site construction inspection report. The professional shall immediately notify the Owner if inadequate progress is noted on as-built documents.

7.9 Minor Changes, Change Order Requests, and Change Orders

7.9.1 The Professional shall review all field orders and change orders for their effect on design criteria and perform an analysis of the quantity of materials in such orders and make recommendations to the Owner.

7.9.2 The Professional shall promptly prepare required drawings, specifications, and other supporting data as necessary in connection with minor changes, change order requests and change orders. The Professional shall not be responsible for the economic evaluation, accounting or processing of change orders.

7.10 Construction Completion

7.10.1 When the Contractor believes that the Work is finally complete, the Contractor will notify the Owner and the Professional that the Work is ready for final inspection. Upon receipt of such notification, the Professional shall coordinate with the Owner and the Contractor a date for the inspection.

7.10.2 At the Construction Completion inspection, the Professional shall:

- (i) inspect the Work;
- (ii) determine whether the Contractor has satisfactorily completed all items of Work;
- (iii) determine whether the Work complies with (a) the Contract Documents, (b) applicable laws, statutes, building codes, rules or regulations of all governmental, public and quasi-public authorities and agencies having jurisdiction over the Project, and (c) applicable installation and workmanship standards;
- (iv) determine whether required inspections and approvals by the official(s) having jurisdiction over the Project have been satisfactorily completed; and
- (v) determine, in consultation with the Owner, whether the Work is finally

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complete.

7.10.3 If the Work is not finally complete, the process shall be repeated until the Work is finally complete.

7.10.4 The Professional shall complete the Owner's *Notice of Construction Completion* form, including a list of exceptions, if any, and a schedule for their completion.

7.10.5 The Professional shall, at the completion of the Project, issue a written certification to the Owner that the required HVAC system tests and system balancing have been performed, and that in the Professional's opinion the HVAC system is operating as designed.

7.11 Professional's Submittals to Owner

The Professional shall provide to the Owner, at the time it submits a signed certificate of final payment, all Final Completion close-out documents and one (1) set of record drawings accurately depicting all as-built construction, in the form required by the Owner, based upon the as-built and markups submitted by the Contractors, and two (2) sets of electronic record drawings utilizing the latest release of AutoCAD as directed by the Owner. One electronic set will go to the client.

7.12 Guarantee Inspection

The Professional shall inspect the Project within ten (10) to thirty (30) days prior to the end of the one-year guarantee periods included in the Contracts for Construction and notify the Owner in writing as to defects or faults, if any, in the material, equipment, workmanship, or other part of the Work.

7.13 Professional's Documentation

The Professional shall prepare and deliver, prior to final acceptance of any identified phase of construction, operation and maintenance documentation as outlined in Appendix 1 of this Chapter Two.

7.14 Additional or Modified Required Services

Additional Required Services or Modified Required Services, if any, included in Construction Services are listed in Appendix 1 of this Chapter Two and incorporated herein by reference.

7.15 Design Delegation

7.15.1 The Professional 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 Professional may not delegate professional

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services to a contractor or other entity not authorized to provide professional services in the State of New York. These professional services shall only be ancillary to the project. The Owner reserves the right to determine what is ancillary and may disallow this action if the Owner deems the work as not ancillary or not to be in accordance with the terms identified below. The Professional may elect to delegate only ancillary components of a project to the delegatee under the terms and limitations listed below. The Owner reserves the right to determine what is ancillary.

- (i) such specifically defined design work shall be limited to project components ancillary to the main components of the project;
- (ii) the design professional shall specify in writing to the delegatee all parameters which the design must satisfy. In the Contract Documents the Design Professional must clearly delineate between the Design Professional's and the delegatee's design responsibilities. The Design Professional must review the delegatee's design, substantiated by signed and sealed calculations, and fully coordinate the delegatee's design with the overall design of the project;
- (iii) the design function shall be required to be performed in accordance with performance specifications established by the design professional and with all 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 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 design professional. The delegate shall be required to submit all of their work product to the reviewer;
- (v) the design professional shall be required to review and approve the design submitted by the delegatee for conformance with the established specifications and parameters and such determination shall be in writing to the Owner;
- (vi) the design professional 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 design professional shall retain overall design responsibility for the Work in accordance with this Contract document and may not assign or delegate that responsibility. The design professional shall remain responsible for delegatee's adherence to the overall design intent and for

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reviewing delegatee's work relative to its impact on the base structure;

- (viii) if professional design services related to systems, materials or equipment are specifically required of the Contractor by the Contract Documents, the Design Professional shall specify the performance and design criteria that such services must satisfy. The Design Professional shall notify the Owner, in writing, of these elements delegated for design by the delegatee. This notification shall take place during the Design Development Phase of the project. For information, Design Professional shall submit to Owner a listing of all submittals for which design has been delegated under Section 7.15 of this Contract. A copy of the approved submittals must then be provided to the Owner on a timely basis, immediately following the Design Professional's approval of these documents. The Owner may also request the Design Professional to arrange for a Design Delegation Coordination meeting; and
- (ix) the Design Professional must clearly indicate in the Contract Documents the line of demarcation between the Design Professional's and the delegatee's design responsibilities.

7.15.2 Should the Professional delegate any portion of the design to a delegatee then the Professional must ascertain that the delegatee has professional liability insurance and is licensed to practice in the State of New York. The Professional shall, as part of the submittal process, require proof of insurance from the delegatee. This proof shall be a required submittal as part of the submittal process, anytime work is delegated. In addition, the Professional shall require, as part of the submittal process, a copy of the delegatee's Certification of Authorization to practice Engineering in the State of New York, anytime the delegated work involves Engineering.

7.15.3 The proof of insurance and the Certification of Authorization shall be forwarded to the Owner via a cover letter from the Professional. The proof of insurance and the Certification of Authorization shall be obtained and forwarded to the Owner prior to any Work being performed by the delegatee.

ARTICLE 8 – SUSTAINABLE DESIGN

8.1 The Professional shall provide an integrative design approach to deliver a sustainable design for all projects.

The integrative design approach shall be a collaborative and iterative process involving all project team members. The Professional shall assemble the members of this integrative design project team and shall meet throughout the various design phases and periodically during construction to ensure follow-through. The Professional, as the leader of the integrative design project team, shall employ strategies, tools and software as needed to optimize building performance. The Professional shall assess the many attributes of the building design including orientation, solar gain, on-site wind, shading

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and daylighting/glare design and control to optimize building performance.

For new buildings, additions, and substantial renovations or reconstructions the Professional shall at a minimum design to LEED Gold standards with the goals under the LEED rating system included in the Owner's Project Requirements (OPR) document. The term "substantial renovations/reconstructions" shall mean a capital project in which the scope of work includes work affecting at least two of the primary building systems and the building area is unable to remain occupied due to the nature of the construction for 30 days or more. Primary building systems are defined for purposes of this explanation as: 1) HVAC, 2) Electrical and/or lighting, 3) Exterior Walls and/or Windows, 4) Roof and/or ceilings 5) Plumbing. These projects shall be referred to as DASNY LEED™ projects. DASNY LEED projects include the need for Building Energy Modeling (BEM) intended to measure the predicted building energy performance by analyzing systems together for balance and cost effective design decisions. BEM submissions are to include the base code-compliant model and design runs informing design decisions.

For all other project types (those projects which are not new buildings, additions, and substantial renovations/reconstructions) the Professional shall integrate sustainable design goals as they relate to the project scope and include these in the OPR or in project meeting notes as applicable. These projects shall be referred to as DASNY Sustainable Projects.

8.1.1. For DASNY LEED™ Projects the Professional shall:

- (i) Begin the integrated design process at the earliest design stages by defining specific sustainable goals for inclusion in programming, budget and schedule.
- (ii) DASNY shall register the project in the LEED™ online Internet based system with the USGBC and grant the Professional access to the LEED™ online Internet based system.
 - a. When more than one applicable LEED rating system version is available for registration, DASNY will indicate which LEED rating system will be utilized.
- (iii) Lead at least two sustainable design charrettes,
 - a. one prior to beginning schematic design work which will develop and confirm information in the OPR.
 - b. one prior to design development document submission which will develop the Basis of Design (BoD) including what systems/approaches were selected for inclusion and why they were chosen over other systems.
- (iv) Evaluate interactions within and between building and natural systems using tools, strategies and software in the conceptual and schematic design phases to inform design decisions.

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- (v) Incorporate specific performance objectives into the contract documents to work toward a minimum LEED™ Silver rating.
- (vi) At the completion of the 60% and 100% design phases, BEM shall be performed and submitted to confirm the predicted energy performance of the project.
 - a. 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.
 - b. 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.
- (vii) Utilize life-cycle cost assessment of options to inform design.
- (viii) Include the goal to maximize energy efficiency, along with other defined criteria, when evaluating alternative systems and components.
- (ix) Coordinate and assemble documentation of all applicable LEED™ credits during the design and construction phases of the project in preparation for submission to the USGBC for rating review.
- (x) Provide guidance to contractors, subcontractors and suppliers on completion and assembly of documents of all LEED™ credits during the construction phase. Interface directly with these entities to facilitate materials selection, establishment of required logs, completion of required documentation, etc. in preparation of submission to the USGBC for certification.
- (xi) Coordinate contract documents with the Commissioning Authority.
 - a. If Enhanced Cx is included in the project, this coordination includes Cx Authority involvement in specification writing, sequencing review as well as submittal reviews and testing/Cx processes during construction.
 - b. If Building Enclosure Cx (BECx) is included in the OPR, the Cx documents must also be coordinated with enclosure performance drawings, details, spec and detail reviews and on-site testing as required to meet established performance goals.
- (xii) Submit project, including all required documentation, to the USGBC for rating using the LEED™ online Internet based system.
 - a. Note documentation and tracking are part of the base fee while the

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associated USGBC review fee is a reimbursable expense.

- (xiii) Provide all additional information to the USGBC for credit interpretation and reconsideration if additional clarification is requested.
- (xiv) In addition, make use of other design tools that are applicable to the project type such as Passive House, Labs21, and ASHRAE Design Guides, to name a few. In any instance where there is a conflict between the design tools noted in this paragraph and LEED™ requirements, LEED™ requirements shall govern. The Professional shall notify the Owner of any such conflict and the Professional shall provide a recommendation as to resolution.

8.1.2 For DASNY Sustainable Projects the Professional shall:

- (i) Begin the integrative design process at the earliest design stages by defining specific sustainable goals for inclusion in programming, budget, and schedule.
- (ii) Incorporate specific performance objectives into the contract documents to achieve sustainable attributes.
- (iii) Utilize life-cycle cost assessment of options to inform design.
- (iv) Include the goal to maximize energy efficiency, along with other defined criteria, when evaluating alternative systems and components.
- (v) Coordinate and assemble documentation of all sustainable design attributes.
- (vi) Coordinate contract documents with the Commissioning Authority if Commissioning is to be performed.
- (vii) In addition, make use of other design tools that are applicable to the project type, including sustainable strategies, tools and software and design guideline tools, including but not limited to Passive House, Labs21, and ASHRAE Design Guides.

8.1.3 In addition to the requirements delineated in 8.1.1, the Professional shall demonstrate compliance with the following requirements:

- (i) Executive Orders of NYS calling for energy efficiency achievement, reduction in waste, reduction in toxins or other sustainable goals.
- (ii) All NYC Local Laws if the project is located in the jurisdiction of NYC or subject to financial support from NYC.

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- (iii) Commitments the campus or owner entity has obligated themselves to, such as the ACUPCC (American Colleges and University President's Climate Commitment) or other goals for climate neutral planning, achievement of ZNE buildings or increase in renewable energy development.

8.2 The Professional 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 DASNY LEED™ and DASNY Sustainable projects.

8.3 By the conclusion of schematic design the Professional shall ascertain and communicate the availability of grants, incentives, and other financial remuneration for green, sustainable and energy saving attributes of the project from:

- (i) US Department of Energy (DOE)
- (ii) New York State Energy Research and Development Authority (NYSERDA) (Note that NYSEERDA needs to be notified of the project prior to the end of schematic design in order to maximize potential incentives.)
- (iii) New York State Department of Environmental Conservation (DEC)
- (iv) Other entities that may have financial incentives available for sustainable buildings.

8.4 The Professional shall assist in the application for grants, incentives and other financial remuneration determined by the Owner to be viable for the project.

ARTICLE 9 – COMMISSIONING

9.1 The Professional 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.

9.2 The Professional 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.

9.3 The Professional shall perform the specific task(s) and provide the specific work

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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 Professional's services shall include, but not be limited to the following:

- (i) the Professional 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;
- (ii) provide commissioning specifications;
- (iii) monitor and review systems commissioning and related documentation and coordinate resolution of design issues related to the commissioning process;
- (iv) review the commissioning plan;
- (v) assist with and review pre-functional and functional performance test procedures and test results;
- (vi) assist with and review start-up, check-out procedures and checklists;
- (vii) assist with, review and approve the systems & energy management manual and the commissioning report; and
- (viii) provide all systems information as identified in Chapter Two, Appendix 1 of this contract in an electronic format on CDROM media.

9.4 The Professional 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.

ARTICLE 10 – PROFESSIONAL'S EXTRA SERVICES

10.1 Initiation of Extra Services

The Professional shall provide such extra services as are initiated and authorized in writing by the Owner prior to performance. The services described in this Article 10 are not included in Required Services unless identified as an "Additional Required Service or Modified Required Service".

10.2 Definition of Extra Services

Extra services include, but are not limited to:

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- 10.2.1 Services necessary to significantly revise a final set of Construction Documents when such revisions are (i) inconsistent with approvals or instructions previously given by the Owner; (ii) required by the enactment or revision of applicable laws, statutes, building codes, rules and regulations of any governmental, public and quasi-public authority or agency having jurisdiction over the Project subsequent to the completion of such documents; or (iii) required by the Owner's election to revise the scope of the Work when such revisions are not necessitated by (i) deficiencies or conflicts in, or discrepancies between, the Construction Documents; (ii) the Professional's failure to perform its duties or substantially perform in accordance with the terms of this Contract For Professional Services; or (iii) other acts or omissions of the Professional.
- 10.2.2 Structural, mechanical, chemical and other laboratory tests, inspections and reports required by law or the Construction Documents, or otherwise necessary, not otherwise obtained by the Owner or the Contractor, at the Professional's documented cost.
- 10.2.3 Services required in connection with replacement of Work damaged by natural catastrophe or intentional acts of parties other than the Professional or employees, agents or subcontractors of the Professional during construction.
- 10.2.4 Services for preparation for and attendance at deposition, discovery or court or other dispute resolution proceedings on behalf of the Owner, except when such proceedings involve issues of fault, neglect or alleged liability of the Professional, or its agents, employees, or consultants.
- 10.2.5 Services required by any failure to adequately perform contractual responsibilities by any (i) Contractor; (ii) any Contractor's subcontractor(s) or supplier(s); or (iii) the Owner.
- 10.2.6 Services required by change orders initiated by the Owner, including as applicable, those services specified in Paragraph 7.9 of this Chapter Two.
- 10.2.7 Other services not included in Required Services mutually agreed to by the Owner and the Professional in writing.
- 10.2.8 Payment of the Professional for Extra Services shall be in accordance with the provisions of Chapter One – Project Terms and Conditions, Paragraph 5.2.

APPENDIX 1 – ADDITIONAL REQUIRED SERVICES OR MODIFIED REQUIRED SERVICES

PROJECT DESIGN SCHEDULE SERVICES [¶ 1.2.3]

None

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PROJECT TESTING SERVICES [¶ 1.3.2]

None

Asbestos Containing Materials

For alteration, renovation, rehabilitation, and demolition work performed in existing buildings, the Professional shall retain a qualified asbestos sub consultant to determine the presence of asbestos containing materials (ACM). If ACM is present, and the Owner determines that the ACM should be abated, the Professional shall provide the design for the abatement of the ACM, and to monitor the abatement of the ACM by the Owner's Contractor – if directed by the Owner.

PROJECT APPROVAL SERVICES [¶ 1.4.2]

None

GENERAL PROJECT SERVICES [¶ 1.6]

None

PRESCHEMATIC SERVICES [¶ 2.3]

Geotechnical Services

For projects requiring geotechnical services, the Professional shall be responsible for hiring a geotechnical engineer involved to perform an investigation of the site subsurface conditions and prepare a report. The geotechnical engineer will be responsible for determining the scope of the required investigation, which will also be subject to review by the Owner. At a minimum, the geotechnical investigation and report shall meet the requirements outlined in Chapter 18 of the applicable Building Code. See also the Owner's Design Professional's Submission Requirements document for information related to the timing and scope of these services. The geotechnical engineer shall be part of the project team and remain involved at various intermediate stages in the process to review the construction documents, interact with the structural engineer and architect, and confirm that their recommendations are being interpreted as intended.

SCHEMATIC SERVICES – 30% SUBMISSION [¶ 3.2]

None

DESIGN DEVELOPMENT SERVICES – 60% SUBMISSION [¶ 4.2]

None

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CONSTRUCTION DOCUMENT SERVICES – 100% SUBMISSION [¶ 5.3]

None

BID DOCUMENT SERVICES [¶ 6.6]

None

CONSTRUCTION PHASE SERVICES [¶ 7.14]

None

OTHER REQUIREMENTS/SERVICES

None

Professional's Documentation [¶ 7.13]

The Professional shall compile and provide operation and maintenance documentation to support design and construction activities, and to train operation and maintenance staff. The operation and maintenance manual must be edited to include only data for equipment and systems that are actually installed. The Professional shall compile and provide complete operation and maintenance documentation consisting of the following:

- (i) Complete set of design criteria and summary results;
- (ii) Complete set of specifications, including all addenda and all approved and applied changes in electronic format (PDF);
- (iii) Complete set of approved shop drawings, including all subsequent modifications;
- (iv) Complete set of record drawings both in paper and electronic format (AutoCAD);
- (v) Operation Manual(s), including control sequences of operation, and if there is direct digital control, a flowchart and hard copy of the software code and database;
- (vi) Maintenance Manual(s), including proposed equipment maintenance programs to facilitate staffing;
- (vii) Electrical power coordination report;
- (viii) Air and water balancing report;

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- (ix) Performance verification report;
- (x) Copies of all certificates by the inspectors representing authorities having jurisdiction;

- (xi) Copy of the commissioning report;
- (xii) Copy of the system and energy management manual;
- (xiii) Copy of the documentation for off-seasonal deferred testing and post-occupancy review; and

- (xiv) Copy of the statement of certification of work.

Refer to the Building Commissioning Guidelines, which can be found on DASNY's website at www.dasny.org / Construction / Design & Construction Tools / Guidelines / Building Commissioning Guidelines.

(Preparation of Operating and Maintenance Documentation for Building Systems); latest revision, for a detailed description of the requirement for operation and maintenance documentation.

Operation Manual

The Professional shall compile and provide an Operation Manual consisting of two parts:

Part One *Operation Instruction* shall contain all information a qualified operator needs to:

- (i) start and stop equipment;
- (ii) control and monitor the performance of the equipment in normal modes of operation;
- (iii) change from one mode of operation to another; and
- (iv) operate equipment in emergency situations.

Part One shall include operation procedures with flowcharts for all integrated systems, with system functions represented pictorially and in writing.

Part Two *Performance Verification Procedures* shall contain all information a qualified operator needs to verify equipment and overall system performance at the design load as well as at part loads, where applicable. The design calculations necessary for performance verification shall be included in this manual.

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Maintenance Manual

The Professional shall compile and provide a Maintenance Manual consisting of two parts:

Part One *Inventory* shall contain a list of all systems and pieces of equipment to be maintained, and the technical information necessary to order spare parts. Manufacturer's catalogs are considered useful adjuncts, but should not be substituted for the *Inventory* section of the Maintenance Manual.

Part Two *Maintenance Program* shall contain the information necessary to perform breakdown, preventative and predictive maintenance, including written information regarding when and how often to perform maintenance in the most efficient and economical fashion to satisfy tenant needs.

Owner's Requirements

The Professional shall provide complete plans and specifications suitable for securing competitive bids for all items of furniture and equipment that are indicated in the following CSI Divisions, unless expressly excluded:

- (i) Division 10 – Specialties
- (ii) Division 11 – Equipment
- (iii) Division 12 – Furnishings
- (iv) Division 13 – Special Construction

The following table lists the items within the levels of CSI Divisions 10, 11, 12 and 13 that the Owner shall select. Unless otherwise noted, the Owner shall be responsible for selecting only the items that are not connected to the structure. Any items that occupy floor space shall be included on the drawings produced by the Professional and provided to the Owner for the purposes of developing detailed specifications.

CSI Number	Description	Item(s) that the Owner will Select
10110	Chalkboards	Portable Chalkboards
10115	Markerboards	Portable Markerboards
10120	Tackboard and Visual Aid Boards	Portable Tackboard and Visual Aid Boards
12050	Fabrics	Fabrics that are component parts of movable furniture, system furniture partitions or window treatments that are not contained within or between the panes of glass or other glazing material.
12100	Art	All portable and fixed items in this category, except 12170 Art Glass.
12400	Furnishings and Accessories	All portable items in this category. (Item

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CSI Number	Description	Item(s) that the Owner will Select
		12480 Rugs and Mats shall not include carpet that is affixed to the structure.)
12500	Furniture	All portable items in this category.
12620	Portable Audience Seating	All portable items in this category.
12900	Furniture Restoration and Repair	All portable items in this category.

Preliminary Drawings

The Professional shall be responsible for indicating on its preliminary drawings and listing in its project manual, a preliminary layout of all furniture and equipment for each room, including space and utilities requirements. The project manual list shall be supplemented by a listing of items for other areas such as directory boards and display cases for lobby and corridors, janitorial equipment, etc.

The Owner shall make modifications and refinements to the drawings, when applicable, in order to accommodate the needs of the end-users, to account for variations that arise during the specification process or in recognition of other conditions that will require modification to the furnishings and equipment layouts. Any drawings that are modified pursuant to this section will be provided to the Professional for review and coordination with building services, applicable codes and other design elements that the modifications may have impacted. Upon completion of the detailed specifications, the Owner will provide a detailed furniture and equipment list to the Professional. The Professional shall review the list to confirm, where appropriate, that the furniture and equipment will fit in the spaces intended. The Professional will consult with the Owner concerning furniture types, colors, and finishes.

The Professional shall provide complete plans and specifications suitable for securing competitive bids for all equipment. All equipment that is specified by the Professional must meet the provisions set forth in New York State Executive Order 88 and Section 5-108-a of the New York State Energy Law.

The Owner will develop a specification for Systems Furniture (12700). The Professional will be responsible for coordinating the required connections to building services for the Systems Furniture and other equipment or furniture requiring electric power, data connections, telephone service, plumbing or any other service or utility that will be distributed through the structure.

Medical and Laboratory Equipment

For facilities requiring medical or laboratory equipment, the Professional shall provide specifications of such medical or laboratory equipment, coordinate the required building services with the Professional, inspect the equipment for missing components and defects upon delivery and supervise the testing of the equipment upon installation. All services must be provided by staff of the Professional or a sub-consultant competent and experienced in the specification of medical and laboratory equipment.