

ATTACHMENT J.1

ATTACHMENT-A1

SCOPE OF WORK Title-I Services

DISTRICT OF COLUMBIA DEPARTMENT OF GENERAL SERVICES

PROJECT: Elevator Upgrade at DC General Core Building

TITLE-I SERVICES

1. SERVICES TO BE PERFORMED:

The Contractor shall provide services and prepare and submit to the District of Columbia Government for the construction of the items listed in this scope of work. It will be the responsibility of the Contractor to review all existing documentation, conduct site visits and assessments as required to prepare the required documents.

2. COORDINATION TO BE PERFORMED:

The Contractor shall meet with all the appropriate regulatory agencies to ascertain requirements for compliance. Upon complying with the aforementioned requirements and satisfactorily addressing all comments in the reviews noted below, the Contractor shall submit the final permitted documents for editing by the Department of General Services (DGS).

3. SCOPE OF WORK:

3.1. Project Summary: The District of Columbia (District), DGS, is issuing this Request for Proposals (RFP) to engage a Contractor to provide all labor, materials, design, supervision and other services as necessary to upgrade the existing 2 Elevators at DC General for the Department of Human Services (DHS),(the "Project"). In general the project will include removal and replacement of the existing motors, controls, machines, ropes encoders and wirings for 2 Elevators in accordance with report (Attachment J.1), and in accordance with the Government of the District of Columbia Standard Contract Provisions For Use With Specifications for District of Columbia Construction Projects Revised March 2011, incorporated herein as Attachment J.4. All work, documentation, correspondence, schedule, management, etc, concerning the listed project(s) shall be made full use of by the Districts Electronic Project Management Software named Prolog and Primavera P6.

3.1. Building Location: 1900 Massachusetts Ave, SE Washington DC

3.2. DC Green Building Act: N/A

3.3. Cost Estimate. N/A

3.4. Project Communications. The Contractor shall be responsible for developing and implementing a communications plan for the project to include production and distribution of status reports to stakeholders, preparation for public meetings and

presentations, and briefings to District and other government officials. Develop a computer generated rendering if applicable. All design-related scheduling shall be completed in generically defined Required Scheduling Software as determined appropriate by the COTR.

- 3.5. Bidding and Permitting Stage. The Contractor shall be responsible for obtaining any such building permits and clearances in accordance with Attachment-A3.
- 3.6. Document Preparation: The final submission of required drawings will be on Computerized Graphic Software and specifications shall be provided electronically in MS Word format or such other word processing format as may be specified in writing by the Contracting Officer.
- 3.7. Design Submissions. Make design submissions in accordance with “Attachment-A3, Technical Requirements and Submittal Guide” requirements as follows:

25% - Schematic Design Phase - Total	[]	Days after receipt of the Notice to Proceed (NTP)
10% - Preliminary Evaluation and Design Phase	[2]	Days after receipt of NTP
10% - Preliminary Design Phase DGS Review	[1]	Days
15% - Schematic Design Phase	[]	Days after receipt of 10% comments
15% - Schematic Design Phase DGS Review	[]	Days
15% - Schematic Design Phase Special Review (e.g. Fine Arts Commission)	[]	Days
50% - Design Development Phase	[]	Days after receipt of 25% comments
50% - Design Development Phase DGS Review	[]	Days
100% - Construction Document Phase	[10]	Days after receipt of 50% comments
DGS 50% Construction Document Review	[]	Days
100% - Construction Document Phase DGS Review	[]	Days
Final Compliance Phase	[30]	Days after receipt of 100% comments
Final Compliance Phase DGS Review	[1]	Days

Total duration is: [44] **Days.**

3.8. Title I Services are deemed complete when the Contractor obtains the required building permits (building permit fee only is reimbursable) and the construction has started.

4. DOCUMENTS AND DATA TO BE FURNISHED BY THE DEPARTMENT OF GENERAL SERVICES:

4.1. The District will provide if readily available, documentation for the Project including geotechnical surveys performed by the District's consultants. Copies of the selected drawings, if needed and available will be provided at no cost to the Contractor for use in developing the needed drawings to comply with the scope of work. However, the Contractor shall visit the site and be responsible for performing a visual field verification of the actual existing conditions (see Attachment-A3). Any documents provided by the District that indicates the existing conditions will be used for information purposes only.

4.2. Attachment-A3, "Technical Requirements and Submittal Guide" is made a part of this Contract.

5. INSURANCE:

5.1. In accordance with Attachment-B, General Provisions, Section 18.2, the Contractor shall maintain insurance coverage as specified in Attachment-A1, Exhibit "A", herein.

6. PROJECT SPECIFIC REQUIREMENTS:

Contractor Services	Title I					Title II
	Schematic Design Phase	• Prelim Eval. & Dsgn. Phase	• Schematic Design Phase	Design Development Phase	Construction Documents Phase	
• Plat Map						
• Topographic Survey						
• Soils Data						
○ Hazardous Material & Contamination		X				
• Architecture		X			X	
• Civil						
• Structural					X	
• Electrical					X	
• Mechanical (HVAC)					X	
• Plumbing					X	
• Color Charts						
• Computerized Design Analysis						
• Reviews						
○ Architectural Model						
• Specifications						X
• Rendering						
• Cost Estimate						
• Photos		X	X	X		X
• Construction Administration – Title II Services						X

* To be completed by COTR if necessary.

EXHIBIT "A"

CONTRACTOR-ENGINEER'S INSURANCE

The Contractor shall maintain at its expense such insurance as is specified herein. All insurance will be subject to the approval of the District as to coverages, terms and insurance carriers. The following are minimum coverages for insurance required to be maintained under this Contract: (If there are any questions regarding the insurance requirements feel free to ask DGS)

1. Contractor-Engineer's Professional Liability Insurance (Errors and Omissions):
 - A. Limit of Liability: Two Million (\$2,000,000) per claim; Four Million (\$4,000,000) annual aggregate; with a combined deductible not to exceed one Hundred Fifty Thousand Dollars (\$150,000).
 - B. Form: The Contractor-Engineer's policy insuring claims made arising from design, engineering, Architectural or other services or activities performed by any Contractors, engineers, consultants or other design professionals (and their respective officers, directors, employees or agents) in connection with the Project. There will be no pollution or environmental impact exclusion.
 - C. Specific Coverage:
 - 1) The Contractor shall maintain such policy, without interruption for a period of five (5) years from the date of Substantial Completion.
 - 2) Cancellation provisions as described herein.
2. Commercial General Liability:
 - A. Limit of Liability: **A-E Services:**

Projects Under \$20M in total Construction Costs: One Million Dollars (\$1,000,000) per occurrence; Two Million Dollars (\$2,000,000); umbrella excess liability.

Projects \$20M-\$50M in total Construction Costs: Two Million Dollars (\$2,000,000) per occurrence; Four Million Dollars (\$4,000,000); umbrella excess liability.

Projects Over \$50M in total Construction Costs: Five Million

Dollars (\$5,000,000) per occurrence; Seven Million Dollars (\$7,000,000); umbrella excess liability.

Structural & MEP Services (if separate from A-E Contract):

Projects Under \$10M in total Construction Costs: One Million Dollars (\$1,000,000) per occurrence; Two Million Dollars (\$2,000,000); umbrella excess liability.

Projects \$10M-\$20M in total Construction Costs: Two Million Dollars (\$2,000,000) per occurrence; Four Million Dollars (\$4,000,000); umbrella excess liability.

Projects Over \$20M in total Construction Costs: Five Million Dollars (\$5,000,000) per occurrence; Seven Million Dollars (\$7,000,000); umbrella excess liability.

B. Form: Comprehensive General Liability (specify form on certificate of insurance).

- C. Specific Coverage Requirements
- 1) Coverage for products/completed operations.
 - 2) Blanket contractual liability.
 - 3) Coverage for liability arising from the acts of independent contractors.
 - 4) Personal injury liability.
 - 5) Coverage for property damage arising from explosion, collapse, or underground hazards.
 - 6) Broad form property damage coverage, including completed operations.
 - 7) Such policy will be maintained in full force and effect for five (5) years following the date of Final Payment.
 - 8) Cancellation provisions as described herein.

3. Business Automobile Policy:

A. Limit of Liability: One Million Dollars (\$1,000,000) per person; One Million Dollars (\$1,000,000) per occurrence for property damage; umbrella excess liability of Five Million Dollars (\$5,000,000).

B. Form: Business Automobile Policy.

C. Specific Coverage 1) Coverage for any auto operated in conjunction with Project.

Requirements: 2) Cancellation provisions as described herein.

4. Workers' Compensation and Employer's Liability.

A. Limits of Liability

- 1) Workers' Compensation Statutory
- 2) Employers' Liability:

One Million Dollars (\$1,000,000) each accident/accident (where applicable).

B. Specific Coverage

- Requirements:
- 1) Other states' endorsement.
 - 2) United States Longshore and Harbour Workers' Act endorsement.
 - 3) Cancellation provisions as described herein.

General.

The Contractor shall purchase and maintain the insurance required hereunder from companies authorized to do business in the District of Columbia, with an AM Best's rating of "A" as to management; and no less than "Class X" as to strength or better.

The insurance coverage provided for in paragraphs 2 and 3 above, without liability on the part of the District for premiums thereof, will include the endorsements as additional insured of the District and its directors, officers, employees, affiliates, parent, subsidiaries, agents and representatives, and lender(s), if any.

All policies and certificates of insurance will carry the policy number, expiration dates and policy limits required above and will expressly provide that no less than sixty (60) days prior written notice will be given to the District in the event of material alteration, cancellation, non-renewal or expiration of the coverage contained in such policy or as evidenced by such certificate of insurance.

Notwithstanding anything else contained herein to the contrary, the Contractor shall bear all costs of all deductibles or any self-insured retention and will remain solely and fully liable for the full amount of any claim or item not compensated by insurance (including any settlement made with the prior approval of the District) to the extent such claim or

item arises out of or relates to the performance of, or any error, omissions, or discrepancy in the services or documents provided by the Contractor or its consultants.

The Contractor shall provide the District with certificates of insurance evidencing the coverages and conditions required at anytime requested by District. Upon request, Contractor shall also provide the District with copies of any and all insurance policies (including all binders, endorsements, and other documents as may be requested by the District).

Should the Contractor engage any Consultants or independent contractors, it will require such consultants or independent contractors to purchase or maintain insurance as required herein and in the Contract. If such Consultant or independent contractor fails to purchase and maintain such insurance, the District may, but will not be obligated to upon five (5) days written notice to the Contractor-Engineer, purchase such insurance on behalf of the Contractor and will be entitled to be reimbursed by Contractor promptly upon demand or deduct the amount of such premiums from any compensation due to the Contractor-Engineer.

The insurance required hereunder is primary and direct and will apply to loss prior to any coverage carried by the District or any other party.

ATTACHMENT-A2

SCOPE OF WORK Title-II Services

DISTRICT OF COLUMBIA DEPARTMENT OF GENERAL SERVICES

PROJECT: Elevator Upgrade at DC General Core Building

OPTION FOR TITLE-II SERVICES

1. COMPENSATION:

1.1. For the Contractor's Architect-Engineer's Title-II Services described herein, the District shall compensate the Contractor amount not to exceed 20% of the total Design Phase services unless specific "additional services" outside the basic services describe herein are identified.

2. EVALUATION OF THE WORK:

2.1. SERVICES TO BE FURNISHED BY CONTRACTOR. The Contractor shall:

- 2.1.1. Render professional judgments and recommendations as regards to work for which the Contractor was responsible during the preparation of the contract documents for the subject project.
- 2.1.2. Advise and/or recommend to the Contracting Officer's Technical Representative (COTR) construction changes deemed necessary during construction. The Contractor will not make changes in plan, specifications, or other contract documents, nor waive any contract requirement, except as directed by the Contracting Officer.
- 2.1.3. Prepare Change Order drawings, related specifications, and cost estimates when requested. Performance of this work will be recognized as justification for additional fees unless same shall be required due to errors and/or omissions on the part of the Contractor-Engineer.
- 2.1.4. Consult with and technically advise the COTR regarding questions and disputes which may arise as a result of the Contractor-Engineer's Title I Services and subsequent advice.
- 2.1.5. Observe or review, when requested, tests of work, equipment and utility systems for conformance with contract plans and specifications.
- 2.1.6. Observe or review, when requested, the testing of installed equipment and utility systems for conformance with contract plans and specifications.

- 2.1.7. Upon the request of the COTR, the Contractor shall prepare a punch list itemizing incomplete, omitted and unacceptable work to be done for satisfactory conformance to the contract.
- 2.1.8. Within five (5) days after each visit, provide the COTR with a written report regarding the subject of the above visit with detailed minutes of the visit; and any items that may assist the COTR in administering the contract.
- 2.1.9. Render to the COTR a Final Report containing the Contractor's Architect-Engineer's narrative evaluation of the performance of the Contractor, a chronological log of all inspection visits performed by the Contractor and copies in chronological order of all reports with the corresponding minutes previously rendered to the COTR.
- 2.1.10. The Contractor in his capacity as adviser to the COTR shall deal directly with the COTR or his representative and have no communication with the Contractor, except as designated by the Contracting Officer.
- 2.1.11. The Contractor's Architect-Engineer, in cooperation with the District or any independent inspectors retained by the District, shall review and certify pencil copy and final invoice amounts owing to the Contractor based on observations at the site and on evaluations of the Contractor's Applications for Payment and the Contract Documents.

3. REVIEW AND CHECKING OF SHOP DRAWINGS AND SAMPLES:

- 3.1. SERVICES TO BE FURNISH BY ARCHITECT-ENGINEER. The Contractor shall:
 - 3.1.1. Review and Check Submittals. Review and check all submittals issued to the COTR, such as shop and related drawings together with such samples and product data submitted by the Contractor in connection with the Work, to assure that they conform with the Contract Documents and Specifications, recommending to the COTR those items which are found satisfactory, and furnishing exceptions in writing as to those for which disapproval is recommended.
 - 3.1.2. Advise the COTR of any construction changes deemed necessary, but not to make changes in plans and specifications or other contract requirements; nor waive any contract requirement. The Contractor-Engineer, in its capacity as adviser to the COTR, will deal directly with the COTR, unless directed otherwise by the COTR.
 - 3.1.3. The Contractor shall be a representative of the COTR during the Title II Services phase, and will advise and consult with the COTR, and COTR's consultants. The Contractor shall review the Project Schedules and consult with the Contractor, and the COTR, with respect thereto. The Contractor shall have authority to act on behalf of the COTR only to the extent provided in the

Contract unless otherwise modified by written instrument. The Contractor shall not be authorized to order any change in the Work which would modify the Design Schedules, the Project Schedule, or the dates specified for completion of the Work or any Phase of the Work, or the contract price of the Work or any Phase of the Work (as specified in the Contract Documents), without specific written approval from the COTR. All design-related scheduling shall be completed in generically defined Required Scheduling Software as determined appropriate by the COTR.

- 3.1.4. Consult with and technically advise the COTR regarding questions and disputes which may arise in connection with shop and/or related drawings submitted by the Contractor.
- 3.1.5. Perform all required services in a professional and timely manner and promptly notify the COTR of any anticipated or actual delays resulting from Contractor submissions which may delay the progress of construction.
- 3.1.6. Render to the COTR a Final Report containing the Contractor-Engineer's narrative evaluation of the performance of the Contractor and a chronological log of all submittals will contain, but not be limited to: dates received and returned, identity of items, and Contractor-Engineer's recommended disposition.
- 3.1.7. The Contractor will submit all Shop Drawings with letter of transmittal directly to the Contractor-Engineer. Copy of Shop Drawings letter of transmittal shall be sent to the Department of General Services Construction Division by the Contractor. All Shop Drawings from the Contractor will be submitted at a minimum and unless otherwise noted in two (2) hard-copies and one (1) copy in electronic pdf format.

Complete sets of Shop Drawings, to include Shop Drawings for builder's hardware, doors, jams and color/texture selections, will be delivered to the Contractor by the Contractor, who shall establish and maintain a Shop Drawings log by number, using an approved web-based project management system such as Prolog.

The Contractor shall deliver Shop Drawings submittals to DGS in accordance with the following time table:

- Projects with an estimated cost of less than \$1.0 million, 5 days
- Projects estimated between \$1.0 million and \$5.0 million, 7 days
- Projects between \$5.0 million and \$10.0 million, 10 days
- Projects over \$10.0 million, 14 days

The Contractor shall retain on file one (1) copy of all Shop Drawing submittals.

The Contractor shall fill out and attach to each Shop Drawing submittal an approved form suitable for the record. All Shop Drawings will be stamped with the Contractor-Engineer's stamps and noted for appropriate action.

Shop Drawings will be marked for compliance with Contract Documents only. Should a change be required, the Contractor shall so indicate in writing. The Contractor shall maintain a Change Order Drawing log using an approved web-based project management system such as Prolog.

4. PERIOD OF SERVICE:

- 4.1. The work and services to be provided by the Contractor under Title II of this contract will be performed concurrently during the entire period of construction resulting from the Title I design and through acceptance by the District. When the Contractor contract is terminated prior to completion, payment will be made for only that portion of the work actually accomplished by the Contractor and approved by the COTR.

5. PREPARATION OF RECORD DRAWINGS:

- 5.1. Upon completion of the Construction Phase, the Contractor shall prepare and deliver to the Owner one set of Project record drawings and specifications in an electronic format acceptable to the District, incorporating revisions made by the Contractor during the Construction Phase and field changes noted on the Contractor's marked-up field set (reference: AIA B101 - 2007).

GOVERNMENT OF THE DISTRICT OF COLUMBIA

**DEPARTMENT OF GENERAL SERVICES
CONSTRUCTION DIVISION**

“TECHNICAL REQUIREMENTS AND SUBMITTAL GUIDE”

APPLICABILITY OF ATTACHMENT-A3

Unless otherwise stipulated, the Contractor shall be responsible to comply with only those Sections and Sub-Sections of the Attachment-A3 as shall be applicable to and usually or customarily found necessary for performing the “Scope-of-Work Services” described herein, and required by Attachment-A1 and Attachment-A2.

Revision: November 2010
August 2000
June 1988
February 1986
June 1985
June 1981

CONTRACT NO. _____

INDEX

<u>Section Numbers</u>	<u>Section Title</u>	<u>Page</u>
1.	General Information	3
2.	Scope and Definition	3
3.	Surveys and Hazardous Materials	7
4.	Basic Services	9
5.	Design Phases	12
5.1.	Schematic Design Phase	12
5.1.1.	Preliminary Evaluation and Design Phase	12
5.1.2.	Schematic Design Phase	17
5.2.	Design Development Phase	24
5.3.	Construction Document Phase	32
5.4.	Compliance Phase	41
5.5.	Certification of Drawings	42
5.6.	Contractor Responsibility to Obtain Building Permits	42

DISTRICT OF COLUMBIA DEPARTMENT OF GENERAL SERVICES
“TECHNICAL REQUIREMENTS AND SUBMITTAL GUIDE”

1. GENERAL INFORMATION:

- 1.1. All written requests or correspondence regarding this Contract shall be addressed to the Construction Division, Department of General Services (DGS), 2000 14th Street – 8th Floor, Washington, D.C. 20009. In all matters pertaining to this Appendix, information and coordination shall be through the DGS Construction Division.
- 1.2. All final decisions relating to design are within the purview of the Interim Director, DGS or the Director’s authorized representative.
- 1.3. During the construction period of the facility for which services are to be performed under this Contract, the Contractor shall, without additional cost to the District of Columbia (District), be available for complete consulting services on errors, omissions and discrepancies in drawings and specifications for all phases of the design.
- 1.4. Changes in this Attachment-A3 may be made from time to time to accommodate modifications in the requirements of the District, or the requirements for the particular project set forth in the Scope of Work (SOW) of the Contract. Such changes, when required, shall be identified as a Supplement and/or Errata Sheet and numbered sequentially, and/or specifically amended. Changes applicable only to a specific project and Contract shall be identified as supplement and/or specifically amended in the SOW, and be applicable to have effect only with respect to the project and Contract number to which attached and made a part thereof.

2. SCOPE AND DEFINITION:

This Attachment-A3 defines both the technical requirements and the submittal schedules as required for the District

2.1. Technical Requirements:

It is expressly understood and agreed that requirements set forth hereafter are minimum requirements only, not intended to be all inclusive, and that, notwithstanding the absence of any provision of this Attachment-A3. Therefore it is the responsibility of the Contractor to provide all services necessary for a complete and integrated design of the facility specified in the SOW. This will include all design and engineering features, equipment, system, etc., usually or customarily found in or necessary for the design of a structure or facility of the kind and type described therein, together with technical specification, design analyses, construction cost estimates, renderings, photographs, and scale models.

2.2. **Submittal Schedule:**

The preparation of the documents for construction work is complex, exacting, and time-consuming. In each project there is a minimum of three interested parties: the end user, the DGS and the Contractor. The establishment of a mutually acceptable design with the minimum effort will be accomplished by graphic and textual design solutions to be submitted for critical review and comment at certain development stages. The quantity and the development stage of these submissions will vary according to complexity of the work. Following are the submissions for most projects and their minimum contents, unless specifically amended in supplement(s) and/or Scope of Work Attachment-A1:

<u>NO.</u>	<u>Submission</u>	<u>% Completed</u>
I.	Schematic Design Phase.....	25% Completed
	a. Preliminary Evaluation and Design Phase.....	10%
	b. Schematic Design Phase.....	15%
II.	Design Development Phase.....	50% Completed
III.	Construction Documents Phase.....	100% Completed
IV.	Compliance Phase.....	Final

2.3. **Document Preparation:**

All documents to be prepared under this Contract will be:

- 2.3.1. Accomplished by the Contractor in a clear, orderly, intelligible and professional manner; suitable for reproduction; and
- 2.3.2. Identified by the appropriate project name and number assigned by the DGS.
- 2.3.3. Prior to the submittal of any design drawings, specifications, engineering analyses, construction cost estimates, and studies, the Contractor shall completely check and coordinate same for accuracy, compliance with the District of Columbia Building Codes, other applicable codes and regulations, and for compliance with the additional requirements outlined hereafter.

2.3.4. **Review Time:** In accordance with the Schedule of Work specified in the Contract General Provisions, Attachment-B, Section 3, Progress Schedules and Reports included hereof, the Contractor shall submit to the DGS, a schedule (Monthly Progress Report) showing the salient features of the Work and its start and finish dates. The Contractor will develop a “Monthly Progress Report Guide” for approval by the COTR. In preparing the Schedule of Work, the Contractor shall allow time for each review by the DGS/Construction Division. The review time allowance in calendar days to be measured from time of receipt until return in the DGS, will be as follows unless otherwise altered in the SOW:

<u>NO.</u>	<u>SUBMISSION</u>	<u>REVIEW TIME</u>
		(calendar days)
I.	Schematic Design Phase	
	a. Preliminary Evaluation and Design Phase-----	7
	b. Schematic Design Phase-----	14
II.	Design Development Phase-----	14
III.	Construction Documents Phase-----	21
IV.	Compliance Phase Final Submission-----	14

Note: The above submissions and schedules may be amended by Scope of Work Attachment-A1 and / or Supplement(s) for specific Contract.

2.3.4.1. **Monthly Progress Report:** See General Provisions, Section 3.

2.3.4.2. **Time:**

It is understood and agreed that time is of the essence for the performance of the Services provided or required by this Contract. The Contractor shall assist the District in preparing, modifying and updating a schedule which will provide for the timely provision of the Contractor’s Services, the DGS reviews and approvals, and the review and approval of governmental authorities having jurisdiction over the Project and the orderly progress of the design and development of the Project and each Phase thereof (the “Project Schedule”). The Project Schedule will be prepared so as to coordinate with the dates and objectives of the District’s schedules, and the Design Schedules, the Construction Phase Schedule, and will provide for the expeditious, timely, and practical execution of the Contractor’s Services in such a manner as to facilitate (and not delay) the construction and completion of the Project and each Phase thereof in accordance with said Project Schedule and the documents. Should the Contractor become aware of delays from any source caused by the Contractor or others, it will, within three (3) days of becoming aware of such delays, provide written notice to the COTR of such delays.

2.4. **Reviews:**

- 2.4.1. The preparation of construction documents is a combined effort of the professional Contractor, the DGS, the user and other assignees that are expert in their disciplines. The documents must accurately and completely reflect the design concept if the project is to be aesthetically appealing, efficient and carefully planned for maximum usage, and economical in construction, operation and maintenance costs. The DGS retains private professional Contractors and engineers to accomplish this work, confident that their expertise and experience will yield proper documents for the construction of a complete project.
- 2.4.2. The District will provide reviews to aid in the correct interpretation of the users' requirements, to encourage appropriate creativity in design, to corroborate the selected engineering system, and to assess the synthesis of the project. The DGS does not consider checking and cross-checking for accuracy of the document to be its obligation. The Contractor is totally responsible for all facets of the development of the documents constructability reviews. The constructability review process should assure that:
- 2.4.2.1. The project, as detailed in the plans and specifications, can be constructed using standard construction methods, materials and techniques;
- 2.4.2.2. The plans and specifications provide the contractor with clear, concise information that can be utilized to prepare a competitive, cost-effective bid; and
- 2.4.2.3. The Work, when constructed in accordance with the plans and specifications, will result in a project that can be maintained in a cost-effective manner by the District over the life of the project.
- 2.4.3. "On-Board" Reviews: When authorized as being necessary, the DGS may include On-Board (over the shoulder) Reviews to accommodate an accelerated schedule or to address issues best resolved in that manner. The review is typically held at the Contractor's office and is used to review progress of the design with respect to scope, schedule, and maximum allowable construction cost. The review will consist of discussion, questions, answers, action-item assignments, and follow-up of outstanding issues. Items identified for action by the Contractor shall be shown in subsequent deliverables. The Contractor will issue date-stamped documents to the COTR at least five (5) days prior to the review. At a minimum, participants will include the Contractor team, sub-consultants and the COTR. The Contractor shall prepare and distribute minutes of each meeting documenting all resolutions of Project issues and/or features, and open action items identifying persons responsible for action items with due dates, to all attendees within three (3) working days of each meeting.

3. SURVEYS AND HAZARDOUS MATERIALS:

3.1. Surveys:

3.1.1. Plat Map:

A “Plat Map” for the project site will be secured by the Contractor from the District of Columbia Surveyor and incorporated in the construction documents.

3.1.2. Topographic Survey:

The Contractor shall order the topographic survey immediately after receiving the commission for the work. He shall prepare and submit one (1) reproducible copy of a topographic survey map of the site of the facility in sufficient detail to permit the proper and efficient execution for the work required by this Contract, unless notified otherwise. The area to be surveyed will include a 50 feet wide strip around the entire perimeter except where there is no right of entry. The topographic survey map will be at a scale of not less than 1” = 20’-0”, and will show and/or include: (i) contours at 1’-0” vertical intervals where slopes are 10% or less, contours at 2’-0” vertical intervals where slopes are greater than 10% (ii) all natural and artificial features including, but not limited to, the following: (a) building, sheds and other structures, both existing and previously demolished, where possible; (b) elevation of basements, areaways, vault floors, etc.; (c) retaining walls, terrace walls, steps, curbs, etc., with top, bottom and adjacent grade elevations; (d) roads, walks, driveways, and other paved areas (Indicate kind); (e) fences, gratings and drainage structures; (g) water, sewer and utility lines, manholes, vaults and both rim elevation and invert elevation; (h) telephone, power and light poles; (i) grass, lawn, weed, bush, and wooded areas; (j) trees, 3” diameter and over, and (k) fields, bare earth and exposed rock areas. The boundary, as indicated by the “Plat Map” and the location of existing markers will be shown on the topographic map. The marker location will be obtained from the D.C. Surveyor’s office. At least one boundary line extending the full length of the site will be located from existing markers and defined by a new marker at each end. All topographic features and all new construction will be accurately located from this boundary line. This will be a survey of record and must be sufficiently accurate for building design to be developed with out necessitating any major plan change when the official survey is prepared.

3.1.3. Zoning Report:

Prepare a zoning analysis and site map that describes what the current site allows and requires in terms of the site setbacks, height restrictions, FAR, Use Groups and Prohibited Uses. Identify any site easements or rights of way as well as any special restrictions or considerations that may have an impact on how the site may be used.

3.1.4. Soils Data:

The Contractor shall confer with the COTR within five (5) days after NTP and also immediately after acceptance of the Schematic Phase by the DGS on the location, quantity and depth of soil identification holes.

3.1.3.1. The Contractor shall provide with each required soil evaluation: Soil boring, soil samples and certified boring logs. The boring logs will show strata description, resistance to penetration of standard sampling spoons, ground water levels and other pertinent data, [two (2) copies required].

3.1.3.2. The Contractor shall provide the following as needed but only upon authorized approval (payable by the District):

3.1.3.2.1. Perforated pipes for water level readings.

3.1.3.2.2. Core drilling in rock, core samples and drilling logs.

3.1.3.2.3. Test pits, test caissons, test piles, load tests, bearing tests and certified records of all pertinent test data.

3.1.3.2.4. Laboratory tests of soil strata and such borings and samples as may be needed in addition to 3.1.3.1. above.

3.1.3.2.5. Two (2) copies of analysis and recommendations from professional soil mechanics and foundation engineer.

3.1.3.3. The Contractor shall utilize all soils data secured under 3.1.3.1. above as an aid in his determination for designs of foundations, sub-structures, retaining walls, etc., and for all earthwork such as cuts, fills and embankments.

3.1.3.4. The scope and sequence of various phases of soils investigations under 3.1.3.2. above will be established by consultations and mutual agreement between the Contractor and the DGS.

3.1.3.5. The Contractor shall provide all administrative and engineering services as needed to secure adequate soils data including the preparation of boring location plans and specifications, supervision of boring operation and evaluation of soils data during progress of the borings. He shall also provide a drawing (or drawings) to be included with the drawings to be furnished under 4.3.2.5. showing:

3.1.3.5.1. Locations of test borings and test pits.

3.1.3.5.2. Description and location of soil strata encountered in borings and test pits.

- 3.1.3.5.3. Record of blow counts on sampling spoons when taking soil samples.
- 3.1.3.5.4. Water level reading with time and date the record taken.
- 3.1.3.5.5. Any other data pertinent to the construction of foundations and/or earthwork.

3.2. Hazardous Materials & Contamination:

Removal, Encapsulation, or Enclosure: For any project wherein the Scope-of-Work Attachment-A1 calls for the alteration and/or modernization of any part or all of any existing building or facility, including any replacement or improvements to HVAC and Plumbing System, the Contractor shall prepare and furnish a report as set forth below:

- 3.2.1. The Contractor shall be responsible to determine by initial field check, and to report promptly to the Contracting Officer's Technical Representative (COTR) whether or not asbestos exists on the premises. If findings are positive, the CONTRACTOR shall determine and photograph the locations and the extent, and furnish a comparative budget type cost estimate for each (1) removal and (2) encapsulation, and (3) enclosure; all to be in accord with the current Public Law and OSHA standards and regulations. Contractor will notify COTR of any suspicion of hazardous materials or contamination.
- 3.2.2. When Asbestos exists on the premises, the report from the Contractor shall contain inspection photographs as follows:

Requirements for Asbestos Inspection Photographs:

- 3.2.2.1.1. Photographs will be created digitally and reproducible in enough detail to clearly delineate the issue.
- 3.2.2.1.2. Each photo will be uniquely identified so as to clearly identify the location of the issue, the name/number of the Project, date taken, and other pertinent information as necessary.

4. BASIC SERVICES:

The Contractor's Basic Services consist of all services included in and attendant to the stages as described hereinafter in this Section. It is the responsibility of the Contractor to provide all services necessary for a complete and integrated design of the facility specified in the SOW. This may include, without limitation, all Architectural, engineering, technical, interior design, administrative, and other services related to all Architectural, structural, mechanical, electrical, plumbing, fire protection, life safety systems, civil engineering, interior design, FF&E, landscape design, vertical transportation (including elevators and pneumatic tubes), IT and telecommunications, medical equipment planning, acoustical, vibration and noise, audio/visual design, lighting design, security system design, graphics/signage/way finding

design, materials management, roofing and waterproofing, traffic and parking, hardware materials, and other elements and services as typically provided by an Contractor and its consultants for similar projects in similar locations necessary to fully and properly complete the Project, and any and all other services identified in any other provision of this Contract as Basic Services. The Contractor recognizes, agrees and accepts that the District is relying upon it for the complete and total design, development, implementation and administration of the design of the Project and each Phase thereof and, notwithstanding the specific listing of services contained in this Section.

4.1. Review Comments:

All review comments from the DGS will be in writing. As these comments are incorporated in the documents, the Contractor shall carefully indicate the action taken. If incorporated, the word “done”, “complied” or “not complied” will be written adjacent to the comment; if the comment is not acceptable to the Contractor, the Contractor shall note that the request is “not done or not complied because [insert reason].” The Contractor and the DGS shall discuss within ten (10) days after each review, and agree to a mutually acceptable action. The final decision, in every instance, remains with the DGS. If the Contractor cannot concur, the Contractor shall modify the work in accordance with the DGS directive, then write to the DGS that “the work has been done but not in accordance with his professional judgment because [insert reason].”

4.2. Consultations:

In addition to these required submissions, the DGS is available for consultation at any time during the contract. This office urges understanding and agreement throughout the job by frequent consultation via telephone, email or in person.

4.3. Conferences:

The Contractor (CONTRACTOR) shall furnish all information material necessary to coordinate the project with all agencies and with the DGS. The Contractor or its authorized representative shall attend all meetings, arranged by other agencies or community groups or the COTR, to obtain the necessary approval of such agencies or groups. The CONTRACTOR shall furnish all information, data and exhibits required for such meetings or reviews.

4.4. Small Scale Drawings:

The Contractor shall provide small scale drawings of floor plans for the new additions and existing buildings and the site along with the final submission of the contract drawings. Drawings will be 1” = 30’ scale. Minimum sheet size is 11” x 17”, Site plans will be drawn at a scale of 1” = 50’. Record square foot area on each floor plan as well as the square feet area on the site plan. Submit the originals reproducible and one (1) set of prints.

4.5. Submission Copies:

At each submission the Contractor shall submit blue line prints and loaded computer disk (s) in quantities as detailed hereunder unless modified in Scope of Work Attachment-A1:

<u>PHASE</u>	<u>DISK(S)</u>	<u>PRINTS</u>
I Schematic Design Phase		
a. Preliminary Evaluation and Design Phase	1 set	4 sets (four full-size; two half-size)
b. Schematic Design Phase	1 set	4 sets (four full-size; two half-size)
II Design Development Phase	1 set	4 sets (four full-size; two half-size)
III Construction Documents Phase	1 set	4 sets (four full-size; two half-size)
a. Set for Permitting	1 set	4 sets (four full size; two half size)
b. Approved Permit Set (Bid Set)	1 set	4 sets (four full size; two half size)
IV Compliance Phase	1 set	4 sets and the signed drawings
Specifications, Preliminary (SD Phase)	1 set	4 sets
Specifications, Outline (DD Phase)	1 set	4 sets
Specifications, Draft (CD Phase)	1 set	4 sets
Specifications, Final (Compliance Phase)	1 set	4 sets

When the contemplated design of the facility is expected to involve Architectural features that are likely to have impact on the use by physically handicapped, the number of sets of prints required for submission of the Schematic, and Design Development Phases will be increased by one (1) set. That is to say, three (7) sets will be required instead of the two (6) sets indicated in the chart.

4.6. Computerized Drafting:

All design drafting will be prepared utilizing Computerized Graphic Software as specified by the COTR.

5. DESIGN PHASES:

5.1. Schematic Design Phase:

The purpose of this phase is to arrive at an approved design scheme that fully addresses the program requirements and other information furnished by the District, and that responds to applicable laws, codes and regulations pertaining to the use and location of the project. The work is divided into two phases: Preliminary evaluation and Design and Schematic Design. These phases will prepare sufficient information for the client to select an approach to the design and to reach a documented understanding with the Contractor regarding the requirements of the project. Further, consistent with the Preliminary Design, a complete Schematic Design will be prepared and presented for Client's written approval.

5.1.1. Preliminary Evaluation and Design Phase:

The goal of this sub-phase is the evaluation of the program, District Standards – including environmental considerations -- schedule, budget, and applicable laws, codes and regulations that pertain to the project. Informed by this evaluation, alternative approaches to design and construction will be explored, and a Project Requirements document prepared for sign-off by the Client.

5.1.1.1. The Contractor shall prepare a preliminary evaluation of the District's Standards, program, schedule, budget for the Cost of Work, site, and the proposed procurement or delivery method and other Initial Information, each in terms of the other, to ascertain the requirements of the Project. The Contractor shall promptly notify the DGS of (1) any inconsistencies discovered in the information, and (2) other information or consulting services that may be reasonably needed for the Project.

5.1.1.2. The Contractor shall present its preliminary evaluation to the DGS and shall discuss with the DGS alternative approaches to design and construction of the Project, including the feasibility of incorporating environmentally responsible design approaches. The Contractor shall reach an understanding with the DGS regarding the requirements of the Project.

5.1.1.3. Based on the Project's requirements agreed upon with the DGS, the Contractor shall prepare and present for the DGS's approval a preliminary design illustrating the scale and relationship of the Project components.

5.1.1.4. The Contractor shall consider environmentally responsible design alternatives, such as material choices and building orientation, together with other considerations based on program and aesthetics, in developing a design that is consistent with the DGS's program,

schedule and budget for the Cost of the Work. The Contractor shall prepare a written report discussing energy conservation measures and techniques to be employed consistent with the DGS's Standards or the Contractor's proposed variances from the DGS's Standards. Such written report shall include an analysis of the cost savings attributable to the incorporation of such measures and techniques.

5.1.1.5. Project Requirements Document:

5.1.1.5.1. A group of drawings and documents manifesting the Contractor's understanding of the client's requirements as defined in the documents and an assessment of the context (conditions, codes, and requirements) within those requirements must be met.

5.1.1.5.2. The drawing size will be variable on a reproducible medium.

5.1.1.6. Subject Matter:

5.1.1.6.1. Existing Condition report

5.1.1.6.1.1. Review Condition Assessment Reports prepared by the DGS and critically review and assess the findings.

5.1.1.6.1.2. Site visits to verify existing site information and data collection.

5.1.1.6.1.3. For the site provide drawings that fully describe existing conditions and locations of existing utilities.

5.1.1.6.1.4. Provide digital and hard copy graphic documentation of existing site conditions, i.e., photos.

5.1.1.6.1.5. Identify areas that require additional investigation, e.g., geotechnical, structural defects, etc.

5.1.1.6.2. Site Survey (See Section 3.1.)

5.1.1.6.3. Hazardous Materials Report (See Section 3.2.)

5.1.1.6.4. MEP Assessment (where applicable)

- 5.1.1.6.4.1. Prepare detailed Mechanical, Electrical and Plumbing (MEP) Systems Assessments, including electrical capacity, plumbing capacity, lifecycle assessment and existing energy utilization (baseline) assessment. Develop acceptable Engineering strategies to be considered within the Design Phase.
- 5.1.1.6.5. Program. The programs for the facility may consist of the following:
 - 5.1.1.6.5.1. Replace and/or upgrade mechanical, electrical and plumbing systems as needed to meet current International Building Code (IBC) and all applicable code requirements. Replace non-functioning and outdated equipment to improve the efficiency of the MEP systems. Determine lifecycle costs of existing and replacement MEP equipment.
 - 5.1.1.6.5.2. Renovation of interior spaces will be in conjunction with MEP upgrades.
 - 5.1.1.6.5.3. All proposed work to be designed to be maintained by the current staff and/or similar levels of capability.
 - 5.1.1.6.5.4. Bring buildings into full ADA compliance, based on the value and extent of the work and the code requirements. This provision will not be construed to increase program requirements. Design tactile signage, doors and door hardware and other items as may be required.

To address the program the Contractor shall:

- 5.1.1.6.5.5. Hold 'Programming Meetings' and conduct fact finding meetings with the DGS, its Client Agency and other stakeholders as necessary, to clarify and define programmatic requirements. Use "block and stacking" technique to clarify programmatic relationships.
- 5.1.1.6.5.6. All developed solutions must not hinder existing shelter programs that are to remain in

place. The Contractor shall confirm that the programmatic and functional requirements of the facilities are met, and that any deficiencies are remedied by the scope of the program.

5.1.1.6.5.7. Provide Program Analyses, including defined programmatic requirements.

5.1.1.6.6. Code and Regulatory Requirements

5.1.1.6.6.1. Contractor will provide initial Code reviews and summaries. Contractor shall prepare a report listing all required submission set DCRA permitting and approval by applicable oversight agencies. Contractor shall update its schedule to reflect any time frame duration changes resulting from this review.

5.1.1.6.7. UFAS/ADAAG Compliance Report

5.1.1.6.7.1. Identify any aspects of the above work that may have impacts on UFAS/ADAAG compliance for the facility.

5.1.1.6.8. DC Green Building Act of 2006/LEED

5.1.1.6.8.1. Report what may be addressed/accomplished in this facility (LEED/Green Communities) based on requirements and standards included in the subject act.

5.1.1.6.9. Summary of Options

5.1.1.6.9.1. Taking the Existing Conditions and other Reports into consideration, prepare a summary of strategies or approaches to the developments that successfully address the programs and reconciles the above findings.

5.1.1.6.10. Permit Requirements:

5.1.1.6.10.1. Floor plan(s), two (2) elevations, one (1) each longitudinal and transverse sections, and site plan.

5.1.1.6.10.2. Drawing dimensions should be to the appropriate scale. Minimum scale will be 1/8" = 1'-0" for plans and elevation, 1/4" = 1'-

0" for sections, and 1" = 50' for the site plan(s). North arrow and Building Identification Number (BIN) will be shown on all floor and site plan(s). The sheet size is variable, but must be adequate for a clear submission. Approval of sheet size and bin will be obtained from the COTR prior to start of design.

5.1.1.6.10.3. Notes and dimensions will be sufficient to enable the reviewer(s) to analyze the submission for conformance to the project requirement and to evaluate the quality of design. Include tentative elevations of finish grade and each floor.

5.1.1.6.10.4. Material of construction will be identified in a general manner, i.e. masonry, concrete, curtain wall, steel, etc.

5.1.1.6.10.5. Required egress information:

5.1.1.6.10.5.1. Square footage of all interior spaces.

5.1.1.6.10.5.2. Square footage of all interior spaces as allotted per Scope of Work Attachment-A1.

5.1.1.6.10.5.3. Egress requirements showing calculated population, egress flow diagram, required exit units and area classification.

5.1.1.6.11. Reviews:

5.1.1.6.11.1. This submission will be made to the DGS for review by the user, the Construction Division and the COTR. Others may review for program conformance.

5.1.1.6.11.2. More than one (1) submission may be required before acceptance.

5.1.1.6.12. Budget Review:

5.1.1.6.12.1. Review construction budget to ensure Project Scope is consistent with budget amount.

5.1.1.6.12.2. The Contractor is required to design within budget at every stage of design unless otherwise authorized. If the design is over the budgeted amount, the Contractor will redesign the submittal until the scope and budget differences are resolved to the satisfaction of the DGS.

5.1.1.7. Deliverables:

- 5.1.1.7.1. Preliminary Evaluation
- 5.1.1.7.2. Preliminary Design
- 5.1.1.7.3. Existing Conditions Report
- 5.1.1.7.4. Site Survey
- 5.1.1.7.5. Hazardous Material Report
- 5.1.1.7.6. MEP Assessment
- 5.1.1.7.7. Project Program
- 5.1.1.7.8. Code and Regulatory Report
- 5.1.1.7.9. DC Green Building Act/LEED Report
- 5.1.1.7.10. Summary of Options
- 5.1.1.7.11. Budget Review
- 5.1.1.7.12. Other items as required in the Scope of Work

5.1.2. Schematic Design Phase:

The goal of this sub-phase is the preparation and approval of Schematic Design documents. These shall consist of Architectural drawings, and 2D, 3D and digital modeling, as necessary, to fully describe a design that is consistent with the District's Program, and meets all issues raised in the Project Requirements document. It shall also include a schedule and a Cost Estimate. The Schematic Design documents shall be submitted for the Client's written approval.

If required, the completed Schematic Design shall be submitted as the "Concept Design" submission for preliminary design review by oversight agencies such as DCRA, CFA, NCPC and Zoning/BZA.

5.1.2.1. Definition:

The Schematic Design Phase consists of drawings, description of materials, area tabulations and all other graphic representations necessary to convey the project's concept. The Contractor will schedule a pre-design conference immediately after approval of the Preliminary Evaluation and Design Phase. The purpose is to establish both a mutual understanding of the project and a common acceptance of the proposed engineering system(s). In-depth discussion will require simple plans and will develop acceptable Engineering solutions to be included within the Construction Documents.

5.1.2.1.1. The Schematic drawings will be developed from the annotated Preliminary Evaluation and Design Phase drawings. These drawings will be accurate, sufficiently complete Architecturally to enable an exhaustive check for conformance to the Scope of Work. All pertinent information must be included. These documents should confirm that all items identified in the Preliminary Report have been addressed, including but not limited to:

5.1.2.1.1.1. Existing Conditions (Site and MEP)

5.1.2.1.1.2. Site Survey

5.1.2.1.1.3. Hazardous Materials

5.1.2.1.1.4. MEP Assessment

5.1.2.1.1.5. Project Program

5.1.2.1.1.6. Code/ADAAG

5.1.2.1.1.7. Green/LEED, including fully completed LEED Checklist

5.1.2.1.1.8. Summary of Options

5.1.2.1.1.9. Budget Review

5.1.2.1.2. The Contractor will schedule a pre-design conference immediately after approval of the Preliminary Evaluation and Design Phase. The purpose is to establish both a mutual understanding of the project and a common acceptance of the proposed engineering system(s). In-depth discussion will require simple plans and will develop acceptable Engineering solutions to be included within the Construction Documents.

5.1.2.1.3. The Engineering drawings prepared in the Schematic Design Phase will include information and written comments that will be sufficiently complete to portray, on sheets for each discipline, the proposed engineering systems. The drawings for this phase may be prepared to a convenient and easily read scale.

5.1.2.2. Subject Matter:

5.1.2.2.1. Floor plan(s), four (4) elevations, one (1) each longitudinal and transverse sections and site plan.

5.1.2.2.2. Drawing dimensions should be to the appropriate scale. Minimum scale will be 1/8" = 1'-0" for floor plans and elevations, 1/4" = 1'-0" for section, 1/2" = 1'-0" for typical wall sections, and 1' = 50" for plot plan. North-arrow will be shown on all floor and site plans(s). The sheet size is 29" x 41" (unless modified in Scope of Work Attachment-A1), and must be legible, clear, and easily read.

5.1.2.2.3. Notes and dimensions will be adequate for the information required.

5.1.2.2.4. All rooms will be identified and sized, typical furnishing and equipment to be named and location, elevations to be developed identifying façade to include fenestration types and openings, site development, overall dimensions, approximate floor and finish grade elevations.

5.1.2.2.5. A description of materials in which will be included the proposed engineering systems (structural, mechanical and electrical), materials of construction, and other information describing the project. This will include indicating intended locations and provisions for mechanical systems, meter rooms, duct chases, etc.

5.1.2.2.6. Provide on the drawings (within the confines of the area delineated), the seating capacity of assembly halls, auditoriums, gymnasiums and stadiums, plus any other spaces when identification of capacity is essential to the determination of compliance with the Code and Scope of Work.

5.1.2.2.7. The requirements of the Building Code will be equaled or exceeded. For egress, show the calculated population, egress flow diagram (complex system), identify required, existing and the area classification. Also identify the type

of occupancy, type of construction, fire safety requirements, etc.

5.1.2.2.7.1. Include ADA diagrams confirming code and ADA compliance, and any special provisions required.

5.1.2.2.8. LEED Assessment (See Scope of Work Attachment-A1, Section 3)

5.1.2.2.9. General Submission Requirements for All Projects: The Contractor must provide on each plan drawing, the gross square foot area of each plan or plans on the sheet. On the cover or index sheet, provide the gross square footage of the complete building project. The area of the site is to be expressed separately in terms of gross area.

5.1.2.2.9.1. The required information is applicable to each review submission and will be prominently called out and shown as follows:

5.1.2.2.9.1.1. When a single floor plan only is shown, the square footage is to be placed in proximity of the Title Block. If more than one floor plan is shown on a sheet, show square footage as a part of floor plan identification. For example: (2nd Floor Plan; Area = _____ square feet, etc.).

5.1.2.2.9.1.2. On the Cover or Index Sheet, the required information may be shown by “Key Plan” or schedule. The Contractor shall prepare, but need not submit, computations in support or aggregate figures. unless requested.

5.1.2.2.9.1.3. Area will be computed as set forth in item 4.4.11.

5.1.2.3. Architectural:

- 5.1.2.3.1. The sheets will incorporate Preliminary Evaluation and Design Phase comments and additional sheets as may be required for the Contractor to accomplish its work.
- 5.1.2.3.2. Topographic survey information, either official or taken by Contractor.
- 5.1.2.3.3. The computation developed to determine egress requirements.
- 5.1.2.3.4. Descriptive Specifications, not in detail, but that describe the project, its intent, and its systems and identifies key areas for consideration or that will require additional study.
- 5.1.2.3.5. Preliminary Cost Estimate representing the likely cost, possibly established on a per-system or per-square foot basis, of the Schematic design. This should accompany each Schematic Option if there is more than one.

5.1.2.4. Structural:

- 5.1.2.4.1. Live and dead loads.
- 5.1.2.4.2. Proposed Structural system with the back-up information use to make the selection.
- 5.1.2.4.3. Foundation system based on sub-soil data.
- 5.1.2.4.4. The proposed structural system to be shown on the plans in a legible, simple manner.

5.1.2.5. Electrical:

- 5.1.2.5.1. Lighting level, based on Illumination Engineering Society (IES) standard, listing of security, fire alarm, telephone and data communication systems.
- 5.1.2.5.2. Luminaire types, in general.
- 5.1.2.5.3. Preliminary electrical load, selected voltage level to be applied.
- 5.1.2.5.4. The major components and services to be drawn on the plans in a legible, simple manner. Include room and approximate area requirements for control panels.

- 5.1.2.5.5. Written analysis, when applicable, explaining the comparative advantages of one or more systems and the reasons for selection of the recommended system.
- 5.1.2.5.6. Prior to this meeting, the consultant shall have conferred with all utility organizations and have their comments regarding availability of service, their recommendation for type, etc.
- 5.1.2.6. **Mechanical (HVAC):**
 - 5.1.2.6.1. Heat loss/heat gain load calculations (Block Load) for the building as a whole.
 - 5.1.2.6.2. Assumed quantity and approximate area requirement for boilers, chillers, air handling units, compactors, elevators, and all other equipment to be installed in mechanical room(s) and other rooms or spaces.
 - 5.1.2.6.3. Draw on the plan in a legible and simple manner all rooms and spaces for the required equipment. Show the equipment layout to scale in its proper relationship.
 - 5.1.2.6.4. Written analysis explaining the comparative advantages of one or more systems and the reason for selection of the recommended system.
- 5.1.2.7. **Plumbing:**
 - 5.1.2.7.1. Draw in the plans in a legible and simple manner all rooms and spaces identifying all plumbing fixtures.
 - 5.1.2.7.2. Prior to the pre-design meeting the consultant shall have conferred with all utility organizations and have their comments regarding availability of service, their recommendations for type, etc.
- 5.1.2.8. **Specifications:**
 - 5.1.2.8.1. Outline Specifications including all of the likely relevant CSI sections, with basic scope identified (e.g., CSI Section 8: Windows shall include replacement ‘monumental’ metal windows for all existing exterior walls, and new ‘residential’ wood windows for the North wing extension. Windows surrounding the main entry shall be repaired and restored.)

5.1.2.9. Reviews:

- 5.1.2.9.1. The review submission(s) will be delivered to the DGS for review by the user and the COTR. Others may review for aesthetics, orientation and placement.
- 5.1.2.9.2. If the project is to be submitted to either the US Commission of Fine Arts (CFA), the Historic Preservation Review Board (HPRB), the National Capital Planning Commission (NCPC) or the Community, the Contractor shall prepare a set of plans for a formal presentation by mounting on board stock (board mounting not required for NCPC), by shading, by crisp black lines and bold, clear lettering. The submissions may be reviewed by Commission members from a distance of ten to twelve feet; hence prepare this submission accordingly. At the option of the Contractor, a rendering may be prepared for submission to CFA; if the work is accepted and the rendering remains correct, it may be used as the one for which the DGS has contracted. A model is optional except as specified in Scope of Work Attachment-A1. If the Contractor has prepared a study model for office use, it may be submitted in both Commissions' scheduled monthly meetings. The dates for these meetings may be obtained from the COTR.
- 5.1.2.9.3. If the submission is rejected by the DGS, the Contractor may revise and resubmit promptly; if CFA or NCPC rejects the submission, the earliest resubmission time is one (1) month. It is incumbent upon the Contractor to carefully and completely prepare the submission.
- 5.1.2.9.4. It is entirely the Contractor's responsibility to prepare a design acceptable to all authorized review agencies.
- 5.1.2.9.5. The Contractor is required to design within budget at every stage of design unless otherwise authorized. If the design is over the budgeted amount, the Contractor will redesign the submittal until the scope and budget differences are resolved to the satisfaction of the DGS.
- 5.1.2.9.6. Acceptance of this submission by the authorized review agencies establishes the aesthetics and the configuration of the project. Only minor refinements of these items will be permitted thereafter. However, interior spaces and operating systems continue to be subjected to intensive review and adjustment.

5.1.2.10. Deliverables:

- 5.1.2.10.1. Schematic Design Drawings
- 5.1.2.10.2. Area Tabulations
- 5.1.2.10.3. LEED Assessment
- 5.1.2.10.4. Preliminary Cost Estimate
- 5.1.2.10.5. Structural loads and systems
- 5.1.2.10.6. Electrical loads and written analysis as needed
- 5.1.2.10.7. Heat loss/gain load and written analysis as needed
- 5.1.2.10.8. Descriptive Specifications
- 5.1.2.10.9. Special Reports as required (e.g., Commission of Fine Arts)
- 5.1.2.10.10. Other items as required in the Scope of Work

5.2. Design Development Phase:

The purpose of this phase is to develop the design approved in the Schematic Design phase, and complete all design-related decisions – esthetic or technical – for the Client’s approval. During this phase, the AE shall illustrate and describe the developed design and its systems, and prepare Architectural drawings and other documents required to fix and describe the size and character of the Project, with outline specifications that identify major materials and systems, and establish their quality levels. All studies and technical models necessary to fully develop the environmental design aspects of the project, and an updated cost estimate shall be completed during Design Development as well. The Design Development documents shall be submitted for the Client’s written approval.

5.2.1. Definition:

The Design Development Phase consists of basic plans, elevations, sections and details with computation and analyses of all disciplines required for the project.

5.2.2. Subject Matter:

5.2.2.1. Typical submissions for the review of the Design Development phase will include the following suggested features. The plans and specifications will include all information necessary to enable a valid judgment of the final design as developed by the Contractor.

- 5.2.2.2. Existing Conditions Plan showing locations of previously demolished structures, structures to be demolished by others and any other changes that are expected to occur on the site between the time the topo survey is made and the time the site is released to the Contractor for its construction operations. Information shown on this drawing will include, but not necessarily be limited to, the following: (i) outline of proposed structures; (ii) locations of demolished structures and rubble fills in basements, areaways, vaults, etc.; (iii) locations of all structures, wall, walks, curbs, trees, paved areas, etc., remaining on the site; (iv) a complete scope and clear definition of all site work to be performed by the contractor related to existing conditions that involve demolition and removal of existing structures, retaining walls, areaways, vaults, walks, footings, basement slabs, paving, etc., removal of rubble and other fills, removal of trees, etc. Existing conditions plan will show relationship of existing conditions to new construction in both horizontal and vertical planes of reference.
- 5.2.2.3. Site Plan at a scale not less than 1 " = 20'-0" showing and/or including location and dimensions of: (i) proposed building(s); (ii) existing proposed sidewalks, street, exterior utilities, property lines, paved areas, play areas, service and parking areas; (iii) existing streets or alleys to be closed; (iv) total square feet; (v) extent of contract lines, and (vi) Building identification number (to be furnished by the DGS), include street address, lot and square feet numbers (for all projects).
- 5.2.2.4. Reflected ceiling plans – structural members both heads, horizontal and vertical, luminaires, HVAC registers, sprinkler heads, electronic devices, all other exposed items, and ceiling material layout. Wherever, in the ceiling space, ducts, conduits, beams, etc. indicate possible acute congestion, a vertical section will be included establishing adequate clearances.
- 5.2.2.5. Elevations – fully completed indicating materials, fenestration, finish grade, etc.
- 5.2.2.6. Sections – identification, longitudinal and transverse sections, all wall sections, stair sections, vertical transportation sections, and all other sections, as needed.
- 5.2.2.7. Details – door and window, all other as needed.
- 5.2.2.8. Schedule – completed.

5.2.3. Architectural:

- 5.2.3.1. All floor plans sufficiently complete for exterior building dimensions and interior dimensions of all major partitions; floor elevations; all

windows, openings, door and door swing; other items in keeping with this degree of completion.

5.2.3.2. Site plans sufficiently complete for location of improvements showing the existing topography, point elevations for finish grade in the vicinity of the improvements, location of all existing utilities and clearly identifying each with its capacity, other items in keeping with this degree of completion.

5.2.3.3. All elevations sufficiently complete to show all prominent features of the building, i.e., doors, windows, steps, roofs, projections, eaves; other items in keeping with this degree of completion.

5.2.3.4. Sections sufficiently complete to show foundation support, foundation, exterior walls, interior floors, roof, etc.; dimensions vertically and all walls and partitions horizontally; sections to be shown are longitudinal, transverse, others of all major elements, stairs outlined; other items in keeping with this degrees of completion.

5.2.3.5. Contractor's selection of details to be sufficiently complete in keeping with this degree of completion.

5.2.3.6. Room finish schedule identifying basic materials.

5.2.4. **Structural:**

5.2.4.1. All floor plans, foundations plan and roof plan sufficiently complete for all major structural components to be dimensioned and sized; other items in keeping with this degree of completion.

5.2.4.2. Soil boring plan and log; both complete.

5.2.4.3. Sections sufficiently complete to show foundation support, foundation, walls, columns, beams, girders, joists, floors, roof; all typical and major atypical conditions; other items in keeping with this degree of completion.

5.2.4.4. Schedules completed and coordinated for all typical and major atypical elements.

5.2.4.5. Complete and coordinated computations for all typical and major atypical members.

5.2.5. **Electrical:**

5.2.5.1. All floor plans with luminaires, convenience outlets, power outlets, and all other electronic communication, and all attendant systems that are to be provided.

5.2.5.2. Required equipment rooms to be shown with location of major components and services; service equipment, panel-boards, motor starter centers, substations, switchboards, transformers.

5.2.5.3. Computerized computations for correct lighting levels; lighting levels tabulated for the various spaces; total estimated power requirements; calculations indicating selection of voltage; other items in keeping with this degree of completion.

5.2.6. Mechanical (HVAC):

5.2.6.1. All floor plans showing heating and cooling equipment to scale; all other equipment previously named will be drawn to scale.

5.2.6.2. Computerized computations for each room, area and zone, with design factors and assumptions. Provide all reference for data used.

5.2.6.3. A baseline energy model will be developed, reflecting the accepted Schematic Design. During Design Development, the baseline is what “improved performance” will be measured against.

5.2.6.4. Other items in keeping with this degree of completion.

5.2.7. Plumbing:

5.2.7.1. All floor plans showing the plumbing equipment to scale.

5.2.7.2. Computations for determining equipment and piping sizes.

5.2.7.3. Other items in keeping with this degree of completion.

5.2.8. Color Charts:

Color charts will be submitted as follows:

5.2.8.1. Color charts will be prepared and submitted with Color Design Section of specifications.

5.2.8.2. Individual boards will be approximately 12” x 15”. Display an actual sample whenever practicable of each color specified for every material used. Number of display boards will depend on site and quantity of samples.

5.2.8.3. Miniature samples should be used if possible. Lithographs generally are not acceptable. For ceramic floor tiles, use sufficient individual tiles to show pattern.

- 5.2.8.4. Paper reproductions of items such as metal partitions, steel equipment, laminated plastics, porcelain enamels, and similar facsimiles which appear to be actual finishes specified are acceptable.
- 5.2.8.5. Where large and/or heavy samples (e.g. brick, cast stones, etc.) are required, it is not necessary to mount these on display boards; however, they must be properly identified with project name and number, D.C. Color Code and manufacturer's identification.

5.2.9. Computerized Design Analyses:

5.2.9.1. The Contractor shall prepare design analyses in reproducible form complete in such detail as to accurately reflect the development of all engineering design, and sufficient to support all design work prepared to date. Mechanical and Plumbing Design Analysis will: (i) be complete and will include detailed room by room heat loss and heat gain calculations; (ii) load summaries; (iii) detailed equipment selection calculations with major performance data and dimensions of all major equipment items; (iv) air balance calculations; (v) ventilation calculations; and (vi) pipe and duct sizing, diagrams, etc.

5.2.9.2. Computer Software:

Software to be used for HVAC Design Analysis will be either Carrier Co.'s "E-20" or Trane Co.'s "Trace" program or other approved. For Plumbing Design Analysis, use Elite software or other approved. Approval must be obtained from the DGS prior start of Design analyses.

5.2.10. Preliminary Draft Specifications:

The Contractor shall prepare and submit outline specifications using the current CSI MasterFormat, giving principal characteristics of construction materials and finishes to be used in each principal area and for each feature of construction, together with types and capacities of equipment. Specifications may be included on each drawing to which they are pertinent, or they may be prepared on letter size sheets and properly keyed for identification with areas to which they are pertinent as illustrated on the drawings.

5.2.10.1. For all projects involving repairs, restoration, alterations or additions, and/or unless otherwise stipulated in the Scope of Work, or subject construction documents, it is the requirement that all walls, ceilings and floor finishes will "MATCH EXISTING" with respect to color, texture, quality of material and all Architectural details contained within and utilized in a space or area. This requirement will also apply to contiguous areas and spaces when visual continuity and aesthetic consideration dictate a "MATCH OF EXISTING".

- 5.2.10.2. The requirement set forth above will also apply to all types of fixtures, trim, sash, doors, cabinetry, and hardware, unless same will no longer be manufactured or meet code requirements. In this event, it will be incumbent upon the Contractor to call out and present alternate solutions with cost estimates to the Director of the DGS, or the authorized representative, for consideration.
- 5.2.10.3. Historic facilities listed in the Federal and/or District Register are subject to the constraints of Public Law as pertains to HISTORIC PRESERVATION. Projects in this category will receive special consideration and are subject to special reviews and approval by Agencies and Commissions established for this purpose such as the Historic Preservation Review Board (HPRB). Consult with the COTR for details.
- 5.2.10.4. Reference is made to sections 4.3. "Construction Documents Phase" and 4.4. "Compliance Submission Phase". The Contractor, in preparing these documents, will make sure that the intent and specific features and requirements called-out in the "Approved Outline Specifications" are properly and fully translated into these documents. No significant deviation will be permitted unless prior approval has been granted by the DGS.
- 5.2.10.5. Responsibility of the Contractor is stipulated in Section 4 of the General Provisions, Attachment-B. The Contractor is cautioned that notwithstanding its receipt of documents from the COTR such as "Original Bid Documents", "As-Built", etc., the Contractor will be held fully responsible to make a comprehensive site investigation to confirm and/or determine actual EXISTING CONDITIONS in every significant detail. The importance of this effort cannot be overemphasized where the design objective is to "MATCH THE EXISTING" and avoid conflict of new work with the existing.

5.2.11. Rendering:

The Contractor shall submit one (1) perspective rendering in color, when required by Scope of Work Attachment-A1. Rendering will be of professional quality and will be furnished matted, suitably framed, protected with non-glare glass, and ready for 'hang' mounting. Additionally, the Contractor shall be guided by the following:

- 5.2.11.1. Preliminary Sketch Submission: A preliminary sketch of the proposed rendering will be submitted for the DGS review and approval with respect to items 4.2.12.2., and 4.2.12.3., below prior to proceeding for finalization.

- 5.2.11.2. Size: The rendering will be appropriate for the scale of the building portrayed and as may otherwise be dictated by good practice and pleasing proportions. Generally, any overall dimensions (including frame) in excess of approximately 30" x 40" will not be considered necessary.
- 5.2.11.3. Perspective Viewpoint: It may be either eye-level or bird's-eye view taken from a point which will best show the scope and aesthetic quality of the project. At least one full principal façade must be shown. Foregrounds for purposes of relating to scale, may show persons, landscaping, vehicles, equipment, etc., provided they do not obscure important Architectural elements or otherwise invite attention away from the primary purpose of the rendering which is the delineation of the Architectural quality of the building. Shade and shadows will be used to emphasize Architectural and other features as appropriate.
- 5.2.11.4. Medium: Renderings will be computer generated unless otherwise specified.
- 5.2.11.5. Project Title and Credits: The title of the project (not project number) will be appropriately placed on the lower portion of the matted area along with name of the Contractor of record. If the project has, or is to have, a "dedicated" name, use same for the title. The delineator may Sign and date his work in a discreet manner directly on the rendering.

5.2.12. Construction Cost Estimate:

- 5.2.12.1. The estimating procedure will be in accordance with CSI (Construction Specifications Institute) MasterFormat standards. In preparing the estimate at this stage, it is recognized that many items will not have been ascertained to a point where a quantity survey is possible. Nevertheless, a number of the general construction features will have been selected which will permit an itemization of basic quantities under the major branches of work, such as: general excavation, concrete, masonry, etc. In those instances where insufficient information has been developed to determine specific quantities, systems, fixtures, or equipment, an appropriate allowance may be indicated. For each allowance, an explanation of its development will be included. This preliminary estimate will show separately (a) the cost of each new building or addition, (b) the work in existing buildings, and (c) costs of all work outside the buildings. The estimate will be broken down to show the cost analyses or allowances (noted as such) based on these units. As example: building construction cost will be shown separately from mechanical and equipment costs and these will be separated into the various trades and types in the summary sheets to the degree practical at this stage of development. Similarly, outside work will show components of

grading, roads and sidewalks, landscaping, sanitary and electrical services, etc. Computer software such as “Means” or other approved software will be used in developing construction cost estimates.

5.2.13. Reviews:

- 5.2.13.1. This review submission will be delivered to the DGS for review by the user, Design and Engineer Division/DGS and other agencies that have a required input.
- 5.2.13.2. This scheduled review submission must be complete to the degree described. If any discipline is not completed thus, the entire submission will be returned. It is the Contractor’s responsibility to ascertain that all work is done to this level, qualitatively and quantitatively, prior to making a submission. The DGS will usually decide the adequacy of a submission by the working day from the date submission is made.
- 5.2.13.3. The Contractor is required to design within budget at every stage of design unless otherwise authorized. If the design is over the budgeted amount, the Contractor will redesign the submittal until the scope and budget differences are resolved to the satisfaction of the DGS.
- 5.2.13.4. Acceptance of this submission by the authorized review agencies establishes the project’s structural, mechanical, electrical, HVAC, plumbing and other systems as required. Additionally, site, landscaping, Architectural, structural, mechanical, plumbing and electrical plans; sections; elevations; typical construction details; and exterior and interior materials and finishes are defined to fix and describe the size and character of the Project as may be appropriate. The budget estimate is now based on comprehensive design and systems. Outline specifications are provided to establish in general their quality levels.

5.2.14. Deliverables:

- 5.2.14.1. Design Development Drawings (including all technical sections described above)
- 5.2.14.2. Baseline Energy Study Update
- 5.2.14.3. Color Charts
- 5.2.14.4. Computerized Design Analysis
- 5.2.14.5. Preliminary Draft Specifications
- 5.2.14.6. Rendering as required by Scope of Work

5.2.14.7. Construction Cost Estimate

5.2.14.8. Other items as required in the Scope of Work

5.3. Construction Documents Phase:

The purpose of this phase is to prepare the Construction Documents for the District's the DGS and DCRA Approval. The Construction Documents shall illustrate and describe the complete development of the approved Design Development Documents and shall consist of a complete set of Drawings and Final Specifications setting forth in detail the quality levels of materials and systems and other requirements for the construction of the work. A detailed Cost Estimate of the work will be prepared. The Construction Documents and the Cost Estimate shall be submitted for the Client's written authorization before permitting. Upon receipt of that authorization, the Contractor shall submit to appropriate governmental authorities having jurisdiction over the Project, and acquire their permit(s). Further, the Contractor shall provide the permitted sets and specifications to the District, which will prepare the documents for bidding.

5.3.1. Definition:

5.3.1.1. This review will be at the completion of the construction documents and known as Construction Documents Phase. This is the development of the documents that constitute the Contract for Construction. Included for this review will be complete plans, specifications in draft form, final estimate, and final detail computations. This submission requires that the plans be complete and ready for issue to bidders including the specifications.

5.3.1.2. Notes and dimensions will be adequate for the information required.

5.3.1.3. The Contractor is required to design within budget at every stage of design unless otherwise authorized. If the design is over the budgeted amount, the Contractor will redesign the submittal until the scope and budget differences are resolved to the satisfaction of the DGS.

5.3.1.4. Drawings will be complete and prepared using Computerized Graphic Software as specified by the COTR as specified in the Scope of Work Attachment-A1.

5.3.1.5. The plans will be printed as follows:

5.3.1.5.1. Size 29" x 41" trim line unless stipulated otherwise in Scope of Work Attachment-A1, inside border 1-1/2" on binding edge, 1/2" on other edges.

5.3.1.5.2. Optimum readability is a requirement at full size reproduction.

- 5.3.1.5.3. A graphic scale will be shown on each drawing for each scale used.
 - 5.3.1.5.4. The quality and spacing of lines on the drawings must be carefully controlled. Clear space between parallel lines should always be of greater width than the adjoining lines.
 - 5.3.1.5.5. All lettering will be vertical capitals with an open quality and will be not less than 1/8" high.
 - 5.3.1.5.6. Material symbols must be bold and not dense.
 - 5.3.1.5.7. Do not use any kind of half tone or opaque shading or hatch except solid black on the face of the drawings where applicable for small or thin sections.
 - 5.3.1.5.8. Drawings will be of the best quality for possible scanning reproduction.
 - 5.3.1.5.9. The format and wording of the title block to be used on the drawings will be approved by the DGS before proceeding with printing of blank reproducible sheets.
- 5.3.1.6. Specifications will follow MasterSpec (Latest Version) to be used as a guide; deleted, appended and corrected by the Contractor. The DGS will review and note the comments with required changes prior to its return to the Contractor.

5.3.2. Subject Matter:

The minimum work accomplished for the review will have progressed to the levels hereinafter described:

- 5.3.2.1. Site
- 5.3.2.2. Topographical Survey of site (section 3.1.2.).
- 5.3.2.3. Existing Conditions Plan showing locations of previously demolished structures, structures to be demolished by others and any other changes that are expected to occur on the site between the time the topo survey is made and the time the site is released to the Contractor for its construction operations. Information shown on this drawing will include, but not necessarily be limited to, the following: (i) outline of proposed structures; (ii) locations of demolished structures and rubble fills in basements, areaways, vaults, etc.; (iii) locations of all structures, wall, walks, curbs, trees, paved areas, etc., remaining on the site; (iv) a complete scope and clear definition of all site work to be performed by the contractor related to existing conditions that involve

demolition and removal of existing structures, retaining walls, areaways, vaults, walks, footings, basement slabs, paving, etc., removal of rubble and other fills, removal of trees, etc. Existing conditions plan will show relationship of existing conditions to new construction in both horizontal and vertical planes of reference.

- 5.3.2.4. Site Plan at a scale not less than 1" = 20'-0" showing and/or including location and dimensions of: (i) proposed building(s); (ii) existing and proposed sidewalks, street, exterior utilities, property lines, paved areas, play areas, service and parking areas; (iii) existing streets or alleys to be closed; (iv) total square feet; (v) extent of contract lines, and (vi) Building identification number (to be furnished by the DGS). Include street address, lot and square feet numbers (for all projects).
- 5.3.2.5. Sub-soil information drawing (see Section 3.1.3.)
- 5.3.2.6. Landscape Plan at a scale not less than 1"= 20'-0", identifying plant material and location of same and including a list of materials.
- 5.3.2.7. Architectural: (min. scale 1/8"=1'-0") at appropriate scales to adequately describe the work.
- 5.3.2.8. Floor plans – dimensioned, completely referenced partitions and fixed equipment located, doors and windows, egress location and identification of sections, details, and other pertinent data.
- 5.3.2.9. Reflected ceiling plans – structural members both heads, horizontal and vertical, luminaires, HV AC registers, sprinkler heads, electronic devices, all other exposed items, and ceiling material layout. Wherever, in the ceiling space, ducts, conduits, beams, etc. indicate possible acute congestion, a vertical section will be included establishing adequate clearances.
- 5.3.2.10. Elevations – fully completed indicating materials, fenestration, finish grade, etc.
- 5.3.2.11. Sections – identification, longitudinal and transverse sections, all wall sections, stair sections, vertical transportation sections, and all other sections, as needed.
- 5.3.2.12. Details – door and window, all other as needed.
- 5.3.2.13. Schedule – completed.
- 5.3.2.14. All other – fully complete in keeping with the spirit and intent of the plans.

5.3.2.15. Marked-up plans, computations, notes and a copy of the DGS review comments (with annotated action taken by Contractor) from the previous submission.

5.3.3. Civil:

5.3.3.1. Plans - existing, removal, finish, all complete. Particularly the location and identification of all utility lines both existing and new. This information will be shown on the site plans.

5.3.3.2. A copy of the DGS review comments on the previous submission.

5.3.4. Structural:

5.3.4.1. Floor Plans, foundation plan, roof plan – dimensioned, all structural members and/or system(s), location and identification of section(s) and details, and other pertinent data.

5.3.4.2. Sections – identification, longitudinal and transverse sections, wall sections, stair sections foundation and foundation support sections, and all other major sections.

5.3.4.3. Details – all details as needed.

5.3.4.4. Schedules – completed.

5.3.4.5. Computerized Analysis – all computations including corrections necessitated at original submission review and changes made as the work progressed, as well as located on computer disk(s) with label(s) to show project number, project title and date.

5.3.4.6. Review comments (with annotated action taken by Contractor) on the previous submission.

5.3.4.7. All other: completed as needed.

5.3.5. Electrical:

5.3.5.1. Floor plans, ceiling and roof plans - locations of luminaires, switches, wiring panels, switch gear and electrical room, service entrance, transformers, etc. All systems will be shown fully complete.

5.3.5.2. Riser diagrams – all systems.

5.3.5.3. Schedules – panels, fixtures, switchboard, etc.

- 5.3.5.4. Computerized Analysis – complete lighting and final power load calculations including PEPCO information regarding available short circuit current and maximum permissible inrush current.
- 5.3.5.5. All other – communications, security alarm, etc.
- 5.3.5.6. Manufacturer’s catalogue cuts of power equipment, wiring devices and lighting fixtures.
- 5.3.5.7. Marked-up plans, computations, notes and a copy of the DGS review comments (with annotated action take by Contractor) from the previous submission.
- 5.3.5.8. Miscellaneous utilities information from suppliers.
- 5.3.6. **Mechanical HVAC:**
 - 5.3.6.1. Floor plans, roof plan – all HVAC units, registers, louvers, controls, piping, ductwork and their sizes etc.
 - 5.3.6.2. Risers, control diagrams and description, all mechanical notes and details.
 - 5.3.6.3. Capacities of boilers, chillers, fans, pipe sizes, valves, expansion tanks, and other associated equipment, accessories and data as well as schematic flow diagram(s).
 - 5.3.6.4. Complete computerized Analysis for each room – heat loss, heat gain, ventilation, and total building load with air supply/return and outside air.
 - 5.3.6.5. Fuel tanks, piping, and sizes etc.
 - 5.3.6.6. Equipment schedules, catalogue cuts.
 - 5.3.6.7. Boiler and equipment room size and layout. Room layout and vertical sections (where needed) at 1/4” scale, minimum.
 - 5.3.6.8. Marked-up plans, computations, notes and copy of the DGS review comments (with annotated action taken by Contractor) from the previous submission.
- 5.3.7. **Plumbing:**
 - 5.3.7.1. Floor plans, roof plan with vent, equipment locations and roof drains, all fixtures, hot and cold water with distribution, recirculation and waste piping, vents, drains, sprinkler system pumps, etc.

- 5.3.7.2. All riser diagram(s) to include water, sanitary, gas, sprinkler system, projection (option).
- 5.3.7.3. Schedules – completed and catalogue cuts.
- 5.3.7.4. Toilet and equipment room layouts at ¼” scale, minimum.
- 5.3.7.5. Computerized load analyses and sizing calculations.
- 5.3.7.6. Marked-up plans, computations, notes and a copy of the DGS review comments (with annotated action taken by Contractor) from the previous submission.

5.3.8. 50% Specifications:

The Contractor shall be required to submit full Draft Specifications at the 50% Construction Document Phase.

The Contractor shall prepare and submit one (1) copy of the Architectural, structural, mechanical, plumbing and electrical specifications for review and comment. Preparation of specifications will be accomplished by marking-up a copy of the latest version of the AIA ARCOM MASTERSPEC Specifications (as a guide) in accordance with the requirements set forth below, and with the addition of double spaced typed inserts and pages, bound in loose leaf folders, as well as loaded on computer disk (or CD) properly labeled with Project Number, Project Title and Date.

- 5.3.8.1. The Contractor shall procure latest version of AIA ARCOM MASTERSPEC Specification and use it as a guide. The Contractor shall modify the AIA ARCOM MASTERSPEC Specification as may be needed to meet the project requirement. Items appearing therein, which are not included in the project, will be omitted. New paragraphs and sections will be developed as required and will conform to the standard format, using section numbers format of the MASTERSPEC.
- 5.3.8.2. Proprietary materials and systems will not be indicated or specified without prior written approval of the Director, Department of General Services or the Director’s authorized representative.
- 5.3.8.3. The use of trade and manufacturer’s names to describe a product, material, fixture or type of construction will be avoided. If and when it becomes necessary to make such a reference, the specifications will state that the reference is made to establish a standard of quality and performance only, and not for the purpose of limiting competition.
- 5.3.8.4. Specifications for materials, equipment and fixtures will be written in terms of physical characteristics, chemical composition tests, performance, or any combination of these as may be applicable.

5.3.8.5. Specify only such articles, materials, and supplies as have been manufactured in the United States substantially from articles, materials, or supplies mined, produced, or manufactured (as the case may be) in the United States. This provision will not apply to such articles, materials, or supplies of the class or kind to be used or such articles, material, or supplies from which they are manufactured, as are not mined, produced, or manufactured, as the case may be, in the United States in sufficient and reasonably available commercial quantities and of a satisfactory quality, or to such articles, materials, or supplies as may be expected under the provisions of Title-III, Section 3, of the Act approved March 3, 1933, 47 Stat. 1520 (U.S. Code, Title 41, Sec. 10b), as amended.

5.3.8.6. One (1) copy of all manufacturers' catalogs, specifications or similar materials referred to in the specifications and/or plans will be submitted when requested by the DGS.

5.3.9. Final Specifications:

The Contractor shall submit Final Specifications at the end of the Construction Document Phase. Final Specifications will reflect all the DGS comments from the 50% Specification review and any missing elements not included in the 50% Specifications.

The Contractor shall prepare and submit two (2) copies of the complete specifications for review and comment. Preparation of specifications will be accomplished by marking-up a copy of the latest version of the AIA ARCOM MASTERSPEC Specifications (as a guide) in accordance with the requirements set forth above in the 50% submission, and with the addition of double spaced typed inserts and pages, bound in loose leaf folders, as well as loaded on computer disk (or CD) properly labeled with Project Number, Project Title and date.

5.3.10. Miscellaneous:

5.3.10.1. Elevators, escalators, dumb-waiters, pneumatic tube, waste and other transportation systems.

5.3.10.2. Special equipment - swimming pools, food services, etc.

5.3.10.3. Trash and disposal equipment.

5.3.11. Construction Cost Estimates:

5.3.11.1. The cost will be based on an accurate detailed quantity survey of both labor and material. Any approved standard estimating procedure will be acceptable provided that the conclusions are presented in the order

and detail shown on the CSI MasterFormat. Lump sums or allowances for major items of the estimates will not be used. However, quantity surveys that could be used to order materials, while desirable from a cost control viewpoint, are not necessary. For example concrete formwork may be priced on the basis of square area for slabs, walls, beams, etc., rather than the actual quantity of lumber or metal formwork required. Plumbing take-offs will show the linear feet of various pipe sizes, but need not itemize fittings. Fittings may be calculated as a percentage allowance. The same procedure may be used for fittings on ductwork and electric conduit where appropriate.

5.3.11.2. Bidding Alternates are to be indicated on the Recapitulation Form by adding an additional column or columns and adjusting the appropriate items.

5.3.11.3. Explanation of Terms on Recapitulation Form:

Gross Building Area: The gross square foot areas will include all spaces (including all openings in floors) measured to the exterior surfaces of the enclosing walls for all floors, basements, balconies, mezzanines, usable attics, service and equipment rooms, penthouse(s), enclosed passages, and tunnels. The total will include ½ the gross area for pitched roof space (not usable attic), roof enclosures, cornices, areaways, pipe spaces, crawl spaces, covered areas, such as open play areas under buildings, and all other unfinished excavated spaces. The item 1.0 "General Expenses" on the Recapitulation Form: These are the costs experienced by the General Contractor, which are not covered in the other items enumerated on the Recapitulation Form.

5.3.11.4. The computation copy will be sharp and legible.

5.3.12. **Reviews:**

5.3.12.1. This review submission will be delivered to the DGS for review by the user, Design and Engineer Division/DGS and other agencies that have a required input.

5.3.12.2. This scheduled review submission must be complete to the degree described. If any discipline is not completed thus the entire submission will be returned. It is the Contractor's responsibility to ascertain that all work is done to this level, qualitatively and quantitatively, prior to making a submission. The Department of General Services will usually decide the adequacy of a submission by the working day from the date submission is made.

5.3.12.3. The Contractor is required to design within budget at every stage of design unless otherwise authorized. If the design is over the budgeted

amount, the Contractor will redesign the submittal until the scope and budget differences are resolved to the satisfaction of the DGS.

5.3.12.4. Acceptance of this submission by the authorized review agencies establishes the project's further development of the approved Design Development Documents and shall consist of Drawings and Specifications setting forth in detail the quality levels of materials and systems and other requirements for the construction of the Work. The Contractor shall also incorporate into the Construction Documents the design requirements of government authorities having jurisdiction over the Project. Any adjustments to the budget estimate shall be reviewed and resolved.

5.3.13. Deliverables:

5.3.13.1. Construction Document Drawings

5.3.13.2. Topographic survey

5.3.13.3. Architectural - marked-up DGS review comments from previous submission

5.3.13.4. Civil –marked-up DGS review comments from previous submission

5.3.13.5. Structural computerized analyses and marked-up DGS review comments from previous submission

5.3.13.6. Electrical computerized analyses, catalogue cuts and marked-up DGS review comments from previous submission

5.3.13.7. Mechanical computerized analyses, equipment schedules, catalogue cuts and marked-up DGS review comments from previous submission

5.3.13.8. Plumbing computerized load analyses, sizing calculations and marked-up DGS review comments from previous submission

5.3.13.9. 50% Specifications

5.3.13.10. Final Specifications

5.3.13.11. Miscellaneous Reports (elevators, transportation, etc.)

5.3.13.12. Construction Cost Estimate

5.3.13.13. Other items as required in the Scope of Work

5.4. Compliance Phase:

5.4.1. Definition:

- 5.4.1.1. The Compliance Phase will consist of all documents fully completed, signed and ready to print.
- 5.4.1.2. The plans will be in accordance with Section 4.3.1.2. as approved by the COTR prior to start of design, as well as accompanied by computer disk (or CD) loaded with the entire design work and with proper labels. The labels will identify project number(s), project title and date as well as agreement number.

5.4.2. Technical Specifications:

In accordance with the approved Draft, the Final Specifications will be prepared for reproduction by Photocopy. The electronic word processing file will be formatted for printing on sheets of 8-1/2" x 11" bond paper with margin for side binding, Times New Roman font type and black imprint. The Contractor shall submit in electronic format unless otherwise specified by the COTR. Wherever in the specification an item is designated to be installed or performed "where indicated" or "as shown on the drawings" or words of like import, it will be the responsibility of the Contractor to check such drawings and determine if such requirement is in fact shown and/or indicated with sufficient clarity so as to preclude the possibility of disagreement as to contract requirement during the actual construction of the facility as designed.

5.4.3. Design Analysis:

The Contractor shall submit two (2) copies of all final corrected design analyses, complete in every respect and one (1) set of electronic files with the entire Design Analysis. The electronic files will be labeled as indicated for previous submission.

5.4.4. Photographs:

The Contractor shall submit electronic digital images of the rendering in format specified by the COTR.

5.4.5. Completion:

Upon acceptance of this submission, the Contractor has fulfilled the initial terms of the contract.

5.6. Certification Of Drawings:

The Contractor shall certify that the drawings were prepared under the Contractor's supervision and that the Contractor acknowledges responsibility for their correctness by

placing its professional license stamp and signing the final documents at the completion of Compliance Phase and again by stamping and signing those prints that will be submitted to the Department of Consumer and Regulatory Affairs, Permit Processing Center for a building permit.

5.7. Contractor Responsibility To Obtain Building Permits:

- 5.7.1. The Contractor shall be responsible for obtaining any such building permits and clearance as may be required for the construction of the Project(s). Permits and clearances are required by Public Law and D.C. Regulations. For example, if the project is located in a historic area or is a property listed on the register of historic places, clearances to proceed must be provided by either the Joint Committee on Landmarks or the Commission of Fine Arts. The conduct of preliminary reviews at the conceptual design stage in conjunction with the Permit Center is encouraged and recommended, particularly, when complex or high cost projects are involved. Step 1 in the procedure for review and permit issuance is to initially contact the Permit Information Counter (the location and telephone number can be obtained from the COTR). Other examples of permits and clearances are DCARA, DDOT, DDOE, DOH, SHPO, WASA, etc. The Contractor shall develop a responsibility matrix listing all permits and clearances for the Project, including timing, responsibility, who pays and status.
- 5.7.2. The Contractor shall submit five (5) sets of drawings to the Permit Processing Center. The Center will retain one (1) set for their permanent file. The remaining four (4) sets of Approved Drawings and the Permit will be given to the Contractor who in turn will deliver the same to the COTR.
- 5.7.3. Be it known that the Contractor, for no additional fee, shall be responsible to make any and all such changes and/or corrections as may be required by the Department of Consumer and Regulatory Affairs; compliance being a mandatory requirement prior to the issuance of a Permit.
- 5.7.4. Contractor compensation for performing these services shall be included as a part of the Title-I portion of the fee. The Permit to be applied for is not for private construction, but will be for District Owned, Department of General Services. The Contractor/Engineer will pay the permit fee and be reimbursed by the District unless otherwise directed by the COTR.
- 5.7.5. Title-I Services will only be considered 100% complete pending satisfactory accomplishment of the requirements set forth as above.