Attachment C
Technical Provisions

Contents

ATTACHMENT C

Technical Provisions

C.5.1 Obligations of Contract

C.5.1.1 Performance Requirements

Refer to Attachment B – Design Build Agreement for details regarding performance requirements.

C.5.1.2 General Obligations of Contractor

Refer to Attachment B – Design Build Agreement for details regarding general obligations of Contractor.

C.5.1.3 Representations, Warranties, and Covenants

Refer to Attachment B – Design Build Agreement for details regarding representations, warranties, and covenants.

C.5.2 Information Supplied to Contractor; Responsibility for Design Disclaimer

C.5.2.1 Information Supplied

The District has made available to the Contractor information (Attachment A), which is described in the Contract Documents as certain CDRs & RIDs regarding the Project, and has agreed to allow the Contractor access to the Site for purposes of inspection and testing.

C.5.2.2 Responsibility for Final Design

Refer to Attachment B – Design Build Agreement for details regarding responsibility for final design.

C.5.2.3 Professional Licensing Laws

The District shall not contract for, pay for, or receive any design services that are in violation of any professional licensing laws. The Contractor shall be fully responsible for furnishing the final design of the Project, although the fully licensed design firm(s) or individuals designated herein will perform the final design services required by the Contract Documents. Any references in the Contract Documents to the Contractor's responsibilities or obligations to "perform" the final design portions of the Work shall be deemed to mean that the Contractor shall "furnish" the final design for the Project.

C.5.3 Time within Which Project Shall be Completed; Scheduling

Refer to Attachment B – Design Build Agreement for details regarding Time within which project shall be completed and scheduling.

C.5.4 Control of Work

Refer to Attachment B – Design Build Agreement for details regarding Control of Work.

C.5.5 Access to Site, Utility Relocations, and Environmental Compliance

C.5.5.1 Access to Right-of-Way Identified on Right-of-Way Drawings

C.5.5.1.1 Obligation to Provide Access to Right-of-Way

The District has identified certain ROW to be used for permanent improvements included in the Intermediate Plans, which are depicted in the CDRs & RIDs. The District will provide right of access to the ROW identified on the ROW drawings in accordance with the Contract Documents, and associated work areas necessary for the installation of staged infrastructure improvements in the performance of Work.

C.5.5.1.2 Right-of-Way Access Requirements

Concurrently with review of the Original Baseline Schedule, the Contractor and the District shall discuss the access requirements for the ROW identified on the intermediate infrastructure plans and develop a schedule. Access requirements will be coordinated with the phased MOT plans for sequencing of the construction, as included in the RIDs.

C.5.5.1.3 Delay in Providing Access

If the District at any time determines it will be unable to provide access to a particular parcel in accordance with the ROW schedule, the District shall notify the Contractor regarding any revised sequencing for delivery of access. The Contractor shall take appropriate action to minimize any cost and time impact and shall work around such parcel until access can be provided, including rescheduling and re-sequencing Work to avoid any delay to the Project. To the extent that a delay to the Critical Path cannot be avoided due to not providing access to a parcel(s) in accordance with the ROW schedule, the Contractor shall be entitled to additional compensation and/or time only as allowed and in accordance with the Contract Documents. The Stage 1 Phase 1 improvements are to be constructed in a minimum of four sub-phases, as indicated in the RIDs.

C.5.5.1.4 Obligation to Provide Written Notice

As a necessary condition for obtaining any increase in the Contract Price or extension of a Completion Date related to the District's delivery of access to the parcels identified on the ROW

drawings, the Contractor shall provide the District written notice within 5 Business Days after receipt of a revised projected date if the lack of availability will result in an impact to the cost or schedule.

C.5.5.1.5 Access to Right-of-Way Not Identified on Right-of-Way Drawings

The cost of obtaining any ROW not identified on the ROW drawings associated with a Value Engineering Change Proposal (VECP) will be included in calculating the Contract Price adjustment under the provisions of the Contract Documents.

The Contractor shall reimburse the District for any costs (including attorneys', accountants' and expert witness fees and costs) of acquiring any real property that is not the District's responsibility and that the Contractor determines is necessary or advisable to acquire to complete the Project, including obtaining any temporary easements. The District may deduct such amounts from payments otherwise owing hereunder, or may invoice the Contractor. The Contractor shall reimburse the District for any such amounts paid by the District within thirty (30) days after receipt of an invoice from the District therefor.

C.5.5.1.6 Failure to Have Necessary Rights of Access

If the Contractor enters any property in connection with the Project without having all necessary rights of access, the District may, in its sole discretion, obtain consent from the landowner for the Contractor's access. The Contractor shall be responsible for all costs incurred by the District as a result thereof.

C.5.5.2 Utility Relocations

This section C.5.5.2 describes how the risk of delays associated with the Utility Work is allocated between the District and the Contractor through the Change Order process, and contains certain additional terms relating to Utility Work. The Contractor agrees that: (i) the Contract Price covers all of the Utility Work to be furnished or performed by the Contractor described by the Contract Documents; and (ii) it is feasible to obtain and/or perform all necessary Utility Work (for both public Utilities and private Utilities) within the time deadlines of the Contract Documents. Accordingly, the Contractor shall be entitled to receive a Change Order for additional costs and delays associated with the Utility Work only as permitted by the Contract Documents or in circumstances for which such a Change Order is otherwise permitted under the provisions of the Contract Documents (such as for District-Directed Changes that increase the Utility Work to be furnished or performed by the Contractor). A deductive Change Order for reductions in the Utility Work to be furnished or performed by the Contractor shall be issued only in circumstances for which a deductive Change Order is otherwise permitted under the provisions of the Contract Documents.

C.5.5.2.1 Betterments

Utility Betterments may be added to the Work pursuant to provisions described in the Contract Documents.

If any Betterment has been added to the Work and the Contract Price has been increased accordingly by Change Order, but subsequently for any reason the Betterment is deleted from the Work, or the scope of the Contractor's Work with regard to such Betterment is materially reduced, the District shall be entitled to issue a Change Order reducing the Contract Price to reflect the value of any reduction in the costs of the Work that is directly attributable to such deletion or reduction. Such Change Order shall be equal to the amount added to the Contract Price.

Any change in the scope of the Work pursuant to this Section C.5.5.2.1 shall not be considered a District-Directed Change.

C.5.5.2.2 Utility Delays

The Contractor shall not be entitled to any extension of any Completion Deadline on account of any Utility delay unless all of the following conditions are satisfied:

1. The Contractor has provided evidence reasonably satisfactory to the District that: (i) the Contractor has fulfilled its obligation under the contract to coordinate with the Utility Company (ies) to prevent or reduce such delays; and (ii) the Contractor has otherwise made diligent efforts to obtain the timely cooperation of the Utility Company (ies) but has been unable to obtain such timely cooperation.
2. If the Contractor is responsible for the Relocation, the Contractor has provided a reasonable Relocation plan to the Utility Company and the Contractor has obtained, or is in a position to timely obtain, all applicable approvals, authorizations, certifications, consents, exemptions, filings, leases, licenses, permits, registrations, options, and/or rulings required by or with any Governmental Person in order to design and construct such Relocations.
3. No circumstances exist that have delayed or are delaying the affected Relocation, other than those which fit within the definition of a utility delay.

The Contractor shall not be entitled to Delay or Disruption Damages for Utility delays.

C.5.5.2.3 Certain Obligations of Contractor; Utility-Related Right-of-Way Costs

The Contractor shall endeavor to avoid multiple Relocations of the same Utility, whether by the Utility Company or by the Contractor. Accordingly, after a Utility has been relocated once in order to accommodate the Project based on the Contractor’s design, the Contractor shall be responsible for all costs incurred by either the Contractor or the Utility Company to subsequently relocate such Utility to accommodate the Project. If the Utility Company performs such subsequent Relocation at the District’s expense, the Contractor shall reimburse the District for all

amounts paid by the District to such Utility Company in reimbursement for such subsequent Relocation. If the Contractor performs such subsequent Relocation, the Contractor shall not receive any extension of the Completion Deadline or increase in the Contract Price on account of the performance of such subsequent Relocation.

In designing and constructing the Project, the Contractor shall take all reasonable steps to minimize costs to the Utility Companies that will be subject to reimbursement by the District, to the extent practicable and otherwise consistent with other requirements of the Contract Documents. For Relocations, the Contractor shall bear the burden of proving that the Relocation cannot reasonably be avoided.

C.5.5.2.4 Coordination Costs

The Contractor shall not be entitled to an increase in the Contract Price for any costs of coordinating with Utility Companies or for assisting the District in coordinating with Utility Companies.

C.5.5.2.5 Voluntary Action by Contractor

If the Contractor elects to make payments to Utility Companies or to undertake any other efforts not required by the terms of the Contract Documents, the Contractor shall not be entitled to a Change Order in connection therewith. The Contractor shall promptly notify the District of the terms of any such arrangements.

C.5.5.3 Environmental Compliance

In performance of the Work, the Contractor shall comply with all requirements of all applicable Environmental Laws and Governmental Approvals issued thereunder, whether obtained by the District or the Contractor. The Contractor acknowledges and agrees that it will be responsible for all fines and penalties that may be assessed in connection with its failure to comply with such requirements.

C.5.5.3.1 Mitigation Requirements

The Contractor shall perform all environmental mitigation measures (which term shall be deemed to include all requirements of the Environmental Approvals and similar Governmental Approvals, regardless of whether such requirements would be considered to fall within a strict definition of the term) for the Project as agreed upon by the District and the Contractor in accordance with the requirements set forth in the Contract Documents. The Contract Price includes compensation for the Contractor’s performance of all such mitigation measures that are included in the Contract, for performance of all mitigation measures arising from New Environmental Approvals designated as the Contractor’s responsibility, for mitigation measures required by any Governmental Approvals, and for all other Activities to be performed by the Contractor as described in the Contract Documents.

C.5.5.3.2 New Environmental Approvals to be Obtained by the District

The District will be responsible for obtaining any New Environmental Approvals necessitated by a time and money Change Order described in the Contract Documents. The Contractor shall provide support services to the District with respect to obtaining any such New Environmental Approval.

C.5.5.3.3 New Environmental Approvals to be Obtained by Contractor

If a New Environmental Approval becomes necessary for any reason other than those specified in the Contract Documents, the Contractor shall be fully responsible for obtaining the New Environmental Approval and any other environmental approvals that may be necessary, and for all resulting requirements, as well as for any litigation arising in connection therewith. The District will reasonably assist the Contractor in obtaining any New Environmental Approvals. If the New Environmental Approval is associated with a VECP or other Contractor- requested Change Order, the costs of obtaining and complying with the terms of the New Environmental Approval shall be considered in calculating the Contract Price adjustment in accordance with the Contract Documents.

C.5.6 Risk of Loss

C.5.6.1 Site Security

The Contractor shall provide appropriate security for the Site, including securing any buildings from entry, and shall take all reasonable precautions and provide protection to prevent damage, injury, or loss to the Work, as well as all other property at the Site, whether owned by the Contractor, the District, or any other Person.

C.5.6.2 Maintenance and Repair of Work and On-Site Property

C.5.6.2.1 Responsibility of Contractor

The Contractor shall maintain, rebuild, repair, restore, or replace all Work (including Design Documents, Released for Construction Documents, As-Built Documents, materials, equipment, supplies, and maintenance equipment that are purchased for permanent installation in, or for use during construction of, the Project, regardless of whether the District has title thereto under the Contract Documents) that is injured or damaged before the date of Acceptance of Maintenance Liability by the District or third parties, as specified in Section C.5.6.2.2. All such Work shall be at no additional cost to the District except to the extent that the District is responsible for such costs as provided in the Contract Documents

C.5.6.2.2 Relief from Liability for Maintenance

Effective as of the date of Final Acceptance by the District of the Project, the District is responsible for maintenance for all elements of the Project that have been Accepted. Notwithstanding the foregoing, all elements of the Work that will be owned by Persons other

than the District (such as Utility Companies) will be considered accepted for purposes of maintenance responsibility only as of the date of acceptance of maintenance responsibilities by such Persons.

C.5.6.3 Damage to Off-Site Property

The Contractor shall take all required precautions and provide protection to prevent damage, injury, or loss to property adjacent to the Site or likely to be affected by the Work. The Contractor shall restore damaged, injured, or lost property caused by an act or omission of any Contractor-Related Entity to a condition similar or equal to that existing before the damage, injury, or loss occurred.

C.5.6.4 Third-party Agreements and District-obtained Permits

The Contractor shall comply with all provisions in the third-party agreements and District-obtained permits required for performance of the Work.

C.5.6.5 Title

The Contractor warrants that it owns, or will own, and has, or will have, good and marketable title to all materials, equipment, tools and supplies furnished, or to be furnished, by it and its Subcontractors that become part of the Project or are purchased for the District for the operation, maintenance, or repair thereof, free and clear of all Liens. Title to all of such materials, equipment, tools and supplies that have been delivered to the Site shall pass to the District, free and clear of all Liens, upon the sooner of: (i) incorporation into the Project; or (ii) payment by the District to the Contractor of invoiced amounts pertaining thereto. Notwithstanding any such passage of title, and subject to Section C.5.6.1, the Contractor shall retain sole care, custody, and control of such materials, equipment, tools, and supplies, and shall exercise due care with respect thereto as part of the Work until Final Acceptance or until the Contractor is removed from the Project.

C.5.7 Damages

C.5.7.1 Liquidated Damages

C.5.7.1.1 Failure to Meet Contract Requirements

The Contractor understands and agrees that if the Contractor fails to complete the Work in accordance with the Contract Documents, the District will suffer substantial losses and damages. The Contractor agrees that it shall be liable for all such losses and damages. The Contractor acknowledges and agrees that because of the unique nature of the Project, the fact that it is an essential part of the St. Elizabeths East Campus Master Plan and the fact that inconvenience to the Hospital and St. Elizabeths East Campus development will be one of the significant impacts of any completion delay, it is impracticable and extremely difficult to ascertain and determine the actual damages which would accrue to the District and the public in the event of the Contractor's failure to achieve completion and Final Acceptance by the applicable Project

Completion Dates. Therefore, the Contractor and the District have agreed to stipulate the amount payable by the Contractor in the event of its failure to meet the Project Completion Date. The Contractor acknowledges and agrees that such Liquidated Damages are intended to compensate the District solely for the Contractor's failure to meet these Contract Document requirements, and shall not excuse the Contractor from liability from any other breach of Contract requirements, including any failure of the Work to conform to applicable requirements.

C.5.7.1.2 Failure to Meet Completion Date

If the Contractor fails to achieve Project completion by the applicable Project Completion Date, the Contractor agrees to pay the District Liquidated Damages in the following amounts: $10,000 per Day (or portion of a Day) for the Contractor's failure to achieve Final Completion by the Project Completion Date.

C.5.7.1.3 Maximum Damage Amounts/Consequential Damages

There is no maximum cap on cumulative Liquidated Damages under this Section C.5.7.1. Both the Contractor and the District agree that they are not entitled to consequential damages.

C.5.7.1.4 Multiple Assessments of Liquidated Damages

If the Contractor sustains Liquidated Damages under more than one subsection under Section C.5.7.1 for the same delay event, only the greater amount of Liquidated Damages under the above subsections will be assessed.

C.5.7.1.5 Reasonableness of Liquidated Damage Amounts

The Contractor acknowledges and agrees that the foregoing damages have been set based on an evaluation by the District of damages, which it will incur in each of the above events, including additional interest expense as well as administrative costs. The Contractor and the District agree that the amount of such damages are impossible to ascertain as of the date of execution hereof and the parties have agreed to such Liquidated Damages in order to fix the Contractor's costs and to avoid later Disputes over which items are properly chargeable to the Contractor. The Contractor understands and agrees that any Liquidated Damages payable in accordance with Section C.5.7.1 are in the nature of Liquidated Damages and not a penalty, and that such sums are reasonable under the circumstances existing as of the date of execution and delivery of the Contract. The Contractor further acknowledges and agrees that Liquidated Damages may owe even though no event of default has occurred.

C.5.7.2 Offset and Waiver

C.5.7.2.1 Offset

The District shall have the right to deduct any amount the District has a good faith claim is owed by the Contractor to the District hereunder from any amounts owed by the District to the Contractor under this Contract.

C.5.7.2.2 No Waiver

Permitting or requiring the Contractor to continue and finish the Work or any part thereof after a Project Completion Date shall not act as a waiver of the District's right to receive Liquidated Damages hereunder or any rights or remedies otherwise available to the District.

C.5.7.3 Payment of Liquidated Damages

To the extent Liquidated Damages are not deducted in a monthly progress report payment from any amount owed to the District by the Contractor, the District may send the Contractor an invoice, and the Liquidated Damages shall be payable by the Contractor to the District within 30 Calendar Days after the Contractor's receipt of the invoice therefor.

C.5.8 General

C.5.8.1 Project Scope

The Project scope components include the completion of final designs and construction of the Project in a manner consistent with DMPED & DGS's goals and objectives. This includes building the infrastructure in four sequential MOT sub-phases, as shown in the RIDs listed in Attachment A.

C.5.8.2 Facility Description

The Project is a proposed combination of new construction, demolition, and upgrade of the St. Elizabeths East Campus transportation infrastructure and utility facilities by providing connectivity and access to adjacent neighborhoods as part of the St. Elizabeths East Redevelopment Master Plan. A description of the proposed Work to be performed for the Project as presented in the intermediate design plans dated February 05, 2016 consists of the following:

- Architectural demolition for buildings 125, 127, 127 A and 129.
- Site demolition & Site Utility demolition within the limits shown, including disposal of materials,
- Roadway and signalization final design and construction,
- Stormwater conveyance final design and construction,
- Sanitary sewer final design and construction,
- Potable waterline final design and construction,
- Electrical, Intelligent Transportation System (ITS) and telecommunications final design and construction including duct banks, manholes, and appurtenances,
- Coordination with Washington Gas for final design and construction of gas mains (third party),
- Street lighting final design and construction,

- Associated grading and landscaping final design and construction.

More detailed technical provisions for the infrastructure improvements are included in later sections of this Attachment C.

C.5.8.2.1 Mandatory Scope

Scope of Work for Architectural Demolition

Architectural demolition shall be performed in accordance with the final (released for construction) design plans and other Contract Documents and will include, at a minimum, the following: final design plans, permit acquisition, hazardous materials inspection/testing, hazardous materials abatement, materials recycling, building/structure demolition, legal disposal of demolished materials, backfilling demolished basements, and Site grading; and all labor, equipment, and materials needed to perform the Work. All incidentals associated with the complete removal of noted buildings/structures as detailed will also be performed and include the following:

- Building 125 and three adjacent chillers,
- Buildings 127, 127 A, and the small sheds adjacent to these structures,
- Building 129,

Scope of Work for Site Demolition

Site demolition shall be performed as detailed in the final (released for construction) design plans, to include at a minimum: final design plans, permit acquisition, existing streets, parking lots, trees and landscaping, sidewalks, curb and gutter, fence, equipment, pads, guard booths, guardrail, walls and associated incidentals within the designated project Limits of Disturbance (LOD). It also includes all labor, equipment and materials required to perform the Work. Demolished materials that are not salvaged and recycled will be legally disposed of. All excavated areas will be backfilled to match surrounding terrain and shall be graded to maintain positive drainage.

Scope of Work for Site Utility Demolition

Site Utility demolition, some of which is outside of the proposed ROW (right of entry by District will be provided for these areas), shall include the demolition or abandonment of existing Utilities as detailed in the final (released for construction) design plans, to include at a minimum: final design, permit acquisition, wet and dry Utilities, steam tunnels, hazardous materials inspection/testing, hazardous materials abatement, and the legal disposal of demolished materials. It also includes all associated labor, equipment and materials required for the demolition of the following Utilities:

- Water mains, including fire hydrants, valves, valve boxes, vaults, service lines, meters, and other ancillary equipment and all materials required to cap, plug, and block to properly demolish or abandon as required. Fire hydrants that meet current District of Columbia Water & Sewer Authority (DC Water) standards may be salvaged and re-used on the Project with the written advance approval of DC Water. All other materials to be removed and legally disposed of.
- Storm drainage, including but not limited to: pipes, drop inlets, manholes, cleanouts, and other incidentals associated with storm drainage. Pipes with over 10 foot of cover may be exposed and crushed in place, all other materials to be removed and disposed of offsite.
- Telephone duct banks, conduits, vaults, manholes, wiring, poles, and other incidental items associated with the overhead and underground telephone duct systems.
- Electrical duct banks, conduits, vaults, manholes, hand holes, wiring, junction boxes, poles, lights, and other incidental items associated with the overhead and underground electrical systems.
- Sanitary sewer, including manholes, service lines, and other incidental items associated with the sanitary sewer system. Pipes with over 10 foot of cover may be abandoned in place by filling the pipes with flowable fill materials.
- Steam tunnels, including all pipes, valves, equipment, other incidental items associated with the steam tunnels and all materials necessary for the abandonment and sealing off of remaining steam tunnels where demolition of tunnels stops, including hazardous material abatement. All materials are to be removed and legally disposed of offsite.
- Gas mains, including pipes, valves, manholes, vaults, and other incidental items associated with the gas mains, only after coordination with Washington Gas efforts to abandon these gas mains. All materials to be removed and legally disposed of offsite.
- Traffic signals, including poles, lights, cabinets, conduits, junction boxes, service drops, and other incidental items associated with the traffic signals, in coordination with the modifications of the two traffic signals shown on the intermediate plans..
- Demolition of Street lights, landscaping, and other improvements as shown on the Intermediate Plans within the site demolition limits.

Scope of Work for Stage 1 Phase 1 Roadway & Infrastructure Improvements

Roadway construction includes but is not limited to: final design, DDOT approvals, permit acquisition, project management, and construction management services during construction. Attachment A (RIDs) includes draft MOUs (which the District will finalize and assign to the contractor) with the utility providers outlining details of the system requirements. The Work also includes all labor, equipment, and materials required to support the final design and construction of the Project, including but not limited to the following:

- Surveys for design and construction layouts,
- Roadway, curbing, and related grading, including grading associate sites within the LOD and utility access roadways for access to utility outfall facilities,
- Permanent and/or temporary structures,
- Geotechnical analysis, filed work or reports as necessary to complete design and construction,
- Environmental analysis and testing,
- Hydraulics/hydrology design and approvals,
- Traffic control devices, including associated CCTV and ITS systems shown,
- Transportation management plan,
- Utility installation and approvals,
- Hazardous materials inspection, testing, and abatement (both site and demolition related),
- Design quality control (QC) and quality assurance (QA),
- Construction QC inspection and materials testing,
- Public involvement/community relations,
- Pavement markings and signs,
- Overall management of Contractor's activities,
- Street lighting including all power connections,
- Landscaping, and LID Drainage features, including final design and approvals,
- Sidewalks.

Scope of Work for Stormwater Conveyance

Stormwater conveyance work includes but is not limited to: final design (including hydraulic/hydrologic analysis), stormwater management plans, permit acquisition, District Department of Energy & Environment (DOEE) and DC Water approvals, and construction services that include all labor, equipment, and materials required to support the design and construction of the new stormwater drainage system including Low Impact Development LID) features for the Project in accordance with the final design approvals and other Contract Documents.

Scope of Work for Sanitary Sewer

Sanitary sewer work includes but is not limited to: final design, permit acquisition, DC Water approvals, and construction services. It also includes all coordination, labor, equipment, and materials required to support the design, construction, adjustments and tie-ins, and acquisition of Utility easements as required for the new and reconditioned sanitary sewer system in accordance with the intermediate design plans and other Contract Documents.

Scope of Work for Potable Waterline

Potable waterline Work includes but is not limited to: final design, permit acquisition, DC Water approvals, and construction services. It also includes all coordination, labor, equipment, and

materials required to support the design, construction, adjustments and tie-ins, and acquisition of Utility easements as required for the new potable waterline system in accordance with the intermediate design plans and other Contract Documents.

Scope of Work for Electrical, ITS, and Telecommunications

Electrical, ITS, and telecommunications Work includes but is not limited to: final design, permit acquisition, approvals from the Potomac Electric Power Company (PEPCO) and DC Net, and construction services. It also includes all coordination, labor, equipment, and materials required to support the design, construction, tie-ins, coordination, and acquisition of Utility easements as required and in accordance with the intermediate design plans and other Contract Documents and Washington Gas standards.

Scope of Work for Gas Main

Gas main work, including final design and all construction, will be performed by Washington Gas and its contractors. The Utility's role will be to supply the construction services, including all coordination, labor, equipment, and materials required; supporting the design, construction, adjustments and tie-ins; and acquisition of Utility easements (if required) for the new gas main system in accordance with the intermediate design plans and other Contract Documents. The Project scope for gas main Work will include all necessary coordination, cooperation, and efforts to integrate the Washington Gas designs and construction timing proposed by Washington Gas and its contractors to complete the system and to stage the Washington Gas construction to be compatible with the Stage 1 Phase 1 infrastructure construction phasing and MOT plans.

Scope of Work for Street Lighting

Street lighting work includes but is not limited to: final design, permit acquisition, DDOT approvals, and construction services. It also includes all coordination, labor, equipment and materials required supporting the design, construction, and acquisition of Utility easements as required for the new street lighting system in accordance with the intermediate design plans and other Contract Documents.

Scope of Work for Traffic Signals

Traffic Signal work incudes, but is not limited to: final design, DDOT approvals, and construction services. It also includes all coordination, labor, equipment and materials required to modify the existing traffic signal at Martin Luther King, Jr Ave SE and Cypress, the existing traffic signal at Alabama Ave, SE and 11th Place SE, and install a new signal at the new intersection of Alabama Ave, SE and 12th Street SE. All components of new and modified signals must meet or be upgraded to meet DDOT standards as indicated in the latest DDOT Standard Specifications for Highways and Bridges whether part of the actual designed modification of the signals or not.

Scope of Work for Landscaping, Streetscape, and LID Features

Landscaping work includes, but is not limited to: final design, DDOT Urban Forestry Administration (UFA) approvals, and construction services. It also includes all coordination, labor, equipment, and materials, required to purchase, install, maintain and warrant the streetscape landscaping and facilities (bike racks, trash receptacles, etc.) and the Low Impact Development (LID) plantings and structures for the drainage system in accordance with the Intermediate Plans and other Contract Documents.

C.5.8.3 Project Requirements

C.5.8.3.1 Compatibility with Existing Configuration

The Final Design Documents furnished by the Contractor shall provide a smooth transition from the Work to the existing facilities. The Project shall be designed and built to minimize the cost of throw-away construction associated with transitions to the existing facilities.

C.5.9 Project Technical Requirements

The final design and construction Work for the project shall be performed in accordance with Legal Requirements, Utility Company and DDOT standards, specifications and reference documents that include but are not limited to the most current edition of the documents listed herein, as of the release date for the Request for Proposals (RFP) for this Project. The Contractor must verify and use the latest version of the documents listed herein. The Contractor must meet or exceed the minimum roadway and utility design standards and criteria.

If, during the course of the design, the Contractor determines that a specific standard, specification, or reference document is required but not listed herein, it is the responsibility of the Contractor to identify the pertinent standard, specification, or reference document and submit it to DGS for review and approval before inclusion in the Contract Documents. The following is a list of agency and District standards, specifications and reference documents:

- DDOT The Anacostia Waterfront Framework Plan
- DDOT Public Realm Design Manual
- DDOT Design & Engineering Manual
- DDOT MicroStation V8 Computer-Aided-Design (CAD) Standards Manual
- DDOT Standard Drawings for Highways and Structures
- DDOT Standard Specifications for Highways and Structures
- DDOT Bicycle Facility Design Guide
- District of Columbia Regulatory Agency - *District of Columbia Building Code*
- DDOT Environmental Manual,

- DDOT Street Light Policy and Design Guidelines
- DDOT Low-Impact Development Design Strategies
- DDOT Context Sensitive Design Guidelines
- DC Law 8-21, Tree Space Beautification Regulation Act
- DDOT Work Zone Safety and Mobility Policy
- DDOT Pedestrian Safety and Work Zone Standards
- DDOT Work Zone Temporary Traffic Control Manual
- DDOT Construction Management Manual
- DDOT Utility Work Zone Typicals
- DOEE Standards and Specifications for Soil Erosion and Sediment Control Handbook
- DOEE Proposed Rule Making on Stormwater Management and Soil Erosion and Sediment Control
- DOEE Stormwater Management Guide Book
- National Oceanic & Atmospheric Administration, Precipitation Frequency Data Server, National Oceanic & Atmospheric Administration Atlas 14 point Precipitation Frequency Estimates: DC
- Manual on Uniform Traffic Control Devices (MUTCD)
- DDOT Sidewalk Construction Policy
- DDOT Right-of-way Policies and Procedures Manual
- American Association of State Highway and Transportation Officials (AASHTO) *Roadway Lighting Design Guide*
- AASHTO *Roadside Design Guide*
- AASHTO Policy on Geometric Design of Highways and Streets
- AASHTO Minimum Requirements for Design Level Geotechnical Investigations
- AASHTO Guide for the Development of Bicycle Facilities, 5th Edition
- AASHTO Guide for Planning, Design, and Operation of Pedestrian Facilities
- Americans with Disabilities Act Accessibility Guidelines for State and Local Government Facilities
- PEPCO regulations and standards
- DC Net regulations and standards

- District of Columbia Street Light Policy and Design Guidelines Final Report
- DC Water, *Project Design Manual, Volume 3, Infrastructure Design*
- DC Water Standards & Specification
- DC Code 8-105, "Wastewater Control"
- District of Columbia Municipal Regulations (DCMR) (as amended), Environmental Parts I and II and amendments
- DCMR Title 20, Water and Sanitation and amendments
- Water Pollution Act of 1984 (DC Law 5-188)
- Anacostia Watershed drainage standards
- Washington Metropolitan Area Transit Authority – Office of Joint Development and Adjacent Construction Adjacent Project Construction Manual,

C.5.10 Project Management

The Contractor shall establish and maintain an organization that effectively manages all elements of the design and construction Work. This project management effort shall be defined by and follow the Project Management Plan (PMP), which is a collection of several management plan elements (PMP elements) describing discrete elements of the Work listed in Table C-1. The PMP is an umbrella document that describes the Contractor's managerial approach, strategy, and quality procedures to design and build the Project and achieve all requirements of the Contract Documents. Within the timelines for implementing each element of the PMP, the plan shall include details of external auditing procedures.

TABLE C -1
Elements of the Project Management Plan

Title	Section That Defines Requirements
Project Administration	Section C.5.10
Quality Management Plan (QMP) • Design Quality Management • Construction Quality Management • Maintenance Management	Sections C.5.10 and C.5.27
Risk Management Plan (RMP)	Section C.5.10
Safety Plan	Section C.5.10
DDOT – Contractor Communications Plan	Sections C.5.10 and C.5.11
Comprehensive Environmental Protection Program (CEPP)	Section C.5.12

DGS shall audit and monitor the activities described in the management plans to assess Contractor performance. All commitments and requirements contained in the PMP shall be verifiable.

C.5.10.1 Administrative Requirements

C.5.10.1.1 Project Schedule

General Requirements

The Project Schedule shall be resource-loaded and define the timeframe for completion of the Project and achievement of milestones, and shall be used to monitor progress and denote changes that occur during design, construction, and maintenance, as well as serving to determine the amount due to the Contractor for a progress payment.

Before the start of any Schedule Activity, the Contractor shall submit a Project Baseline Schedule (PBS) following the Critical Path Method format in accordance with the WBS.

The scheduling software employed by the Contractor shall be compatible with the current and any future scheduling software employed by DGS (currently using Prolog system for all uploads). Compatible shall mean that the Contractor-provided electronic file version of a schedule may be loaded or imported by DGS using DGS's Prolog scheduling software with no modifications, preparation, or adjustments to do so.

Project Baseline Schedule

The Contractor shall use the Preliminary Baseline Schedule (PBS) submitted with the Proposal to prepare a PBS and shall submit a draft of the PBS to DGS for review and approval. Approval of the PBS shall be a condition for the issuance of NTP-2.

The Contractor shall submit a single hardcopy of the PBS on full-size (24-inch by 36-inch) color plot sheets, along with an electronic version of the schedule in its native format.

The PBS shall include a separate narrative report that describes, in general fashion, the Contractor's proposed methods of operation for designing and constructing the major portions of the Work in accordance with the Contract Documents. The schedule narrative shall describe the general sequence of design and construction, the proposed critical path of the Project, and all milestone schedule deadlines.

The PBS shall include all Work activities required under the Contract Documents, in sufficient detail to monitor and evaluate design and construction progress, from commencement of the Work to Final Acceptance of the Work.

The PBS shall also include activities for permit acquisition, Utility coordination, Utility inspections and interfaces with other adjacent tenants, projects, localities, municipalities and other Governmental Entities. For each Activity, the Contractor shall indicate the duration (in Calendar Days) required to perform the activity and the anticipated beginning and completion

date of each activity. In addition, the PBS shall indicate the sequence of performing each Activity and the logical dependencies and inter-relationships among the Activities.

The PBS shall include a listing of all submittals as called out in the Contract Documents. Submittal activity durations shall include specific durations for DGS review and/or approval of the Contractor's submittals as required.

With the exception of activities relating to environmental Approvals by Government Entities, each Activity depicting the Contractor's operations shall have a Calendar Day duration of no more than 20 Days and no less than 1 Day, except as otherwise approved by DGS. All Activities shown in the PBS, with the exception of the first and last Activities, shall have a minimum of one predecessor and a minimum of one successor Activity.

Float shall not be considered as time for the exclusive use of or benefit of either DGS or the Contractor, but rather shall be considered as a jointly owned, expiring resource available to the Project. It shall not be used to the financial detriment of either party. Any method used to sequester Float calculations will be prohibited without prior approval of DGS. Any schedule, including the PBS and all updates thereto, showing an early Completion Date shall show the time between the scheduled Completion Date and the applicable milestone schedule deadline as "Project Float."

The Contractor shall allocate the total Contract Price throughout the Activities in the PBS. Such allocation shall accurately reflect the Contractor's price structure for each Activity and shall not artificially inflate, imbalance, or front-load line items. The price of each Activity shall be all-inclusive and shall include all direct and indirect costs, overhead, risks, and profit. Cost information will be suppressed on the Proposal submission, but shall be included with Contractor's first monthly Project schedule update(s) and submitted with Contractor's first draw request.

Percent complete shall be used to show Activity progress as of the status date. The definition of percent complete for Activities shall be made in consultation with DGS before beginning scheduled Work. It should only be altered with DGS's consent.

The Contractor shall establish a WBS with clearly identifiable linkage between the Price Proposal and Contractor-designated Activities, and phases represented in the PBS. The WBS for each Work element shall indicate the duration, timing, and logical relationship to other Work elements, including relationships to Activities other than the parent Activity of the particular Work element. The WBS for each Activity shall be defined in terms of Work elements reflecting the types of Work shown in the price elements of the DBC. Activities shall be broken down, at a minimum, to Work elements (for example, building demolition may be broken down into hazardous materials inspection, abatement, salvage, demolition, disposal, and backfill). All Work shall be broken down to similar manageable Work elements. For Utility Work, if Work is not shown as An Activity itself, such Work shall be shown as a Work element, where applicable. For

mobilization, the Contractor shall provide a list of Work items that are included in each Activity or Work element.

Project Status Schedule Updates

The Contractor shall update, on at least a monthly basis, the approved PBS to reflect the current status of the Project, including any approved Change Orders.

Each project status schedule update shall accurately reflect the status of all Activities as of the effective date of the updated PBS. Each project status schedule update shall indicate the overall completion percentage of the Project.

No changes in Activity durations, calendar assignments, logic ties, or constraints will be allowed in the project status schedule update without the written approval of DGS.

The project status schedule update shall include a schedule narrative report that describes the status of the Project in detail, including progress made that period, status updates on District of Columbia Certified Business Enterprise (CBE), Certified Small Business Enterprise (SBE) and First Source requirement compliance, plans for the forthcoming period, all potential delays and problems, their estimated effect on the project schedule and on overall completion, and whether on, ahead of, or behind schedule.

Project Schedule Revisions

Until DGS approves a schedule revision, all Project schedule submittals shall be tracked against the previously approved Project Baseline Schedule. Accepted revisions shall be incorporated into the Project Baseline Schedule at the next monthly schedule update.

C.5.10.1.2 Progress, Invoicing, and Payment

Progress Payment Calculations

DGS will base progress payments on DDOT's estimate of physical percent completion of the Work, not on measured quantities (except as may be specifically stated in the Contract). The percent complete for each Activity multiplied by the cost associated with each Activity will determine the amount of the Contractor's progress payments.

The payment to the Contractor will be the amount shown on the Contractor's invoice less any deductions.

The Contractor shall ensure that all cost breakdowns are consistent and total up to the Contract Price.

The following items will be paid in equal monthly amounts as measured from NTP-1 until Final Acceptance:

- Project Management
- Quality Management

Invoice Submittals

The Contractor shall use a monthly invoice period as established with Contract execution. Each invoice shall consist of three paper copies and one electronic copy.

- The invoice documents shall include the following:
- Invoice cover sheet – including the project number and title, invoice number, invoice period, total amount invoiced for current period, total amount invoiced to date, total Contract value, Contractor's authorized signature
- Payment breakdown – including Work Activity identification, Activity name, Contract value, percent complete, amount invoiced for current period, amount invoiced to date, and remaining amount to be invoiced
- Monthly Project Baseline Schedule progress & update
- Monthly SBE/CBE Status report – including DGS Small Business Enterprise (SBE)/CBE Contractor Payment Form and Local Contract Compliance SBE/CBE Utilization Form
- Progress photographs

DGS may withhold invoice payment if the Contractor does not submit a monthly Project Baseline Schedule update in accordance with the Contract Documents.

Document Management

All electronic information submitted to DGS shall be searchable and legible and uploaded via DGS's Prolog system.

Document Storage and Retrieval Requirements

The Contractor shall establish and maintain an electronic document management system to store, catalog, and retrieve all Contract Documents using the applicable control section job numbers. Unless otherwise directed by DGS, records shall be provided to DGS at the time of the expiration or earlier termination of the DBC.

The Contractor Quality Control Manager (QCM) shall coordinate QC testing schedules with DDOT and DGS to afford DGS & DDOT's QA personnel the opportunity to witness QC testing and coordinate QA testing. The responsible QC technician and his/her supervisor shall sign the daily test reports, and the results of the daily tests shall be provided to DGS & DDOT within 48 hours after test completion.

In the provision of a document management system, the Contractor shall:

- Use data systems, standards, and procedures compatible with those employed by DGS and implement any new operating practices required as a result of DGS's amendments to any such systems, standards, and procedures.

- Provide a secure location for any interface as may be provided by DGS, such that only authorized users have access and that it is protected from loss, theft, damage, and unauthorized or malicious use.
- Employ appropriate standards and procedures, and train Contractor to operate any DGS data management system that DGS may require in connection with the Project.
- Provide a mechanism for the electronic transfer of metadata along with the associated portable document format images for uploading into the Prolog electronic document management system employed by DGS.

To allow for disaster recovery, the Contractor shall back-up all Project-related documents on a nightly basis and store all Project-related documents in a secure off-Site area on a weekly basis.

The Contractor shall provide, at its expense, sufficient access for DGS to Contractor's document control database as deemed necessary by DGS.

C.5.10.2 Quality Management Plan

The Contractor shall submit a comprehensive QMP to DGS for review that is consistent with and expands upon the preliminary QMP submitted with the Proposal.

C.5.10.2.1 General Requirements

The Contractor shall develop, implement, and maintain the QMP throughout the Term. The QMP shall describe the system, policies, and procedures that ensure the Work meets the requirements of the Contract Documents and provides documented evidence of same.

The QMP shall include details of Quality Control Staff (QCS), which includes but is not limited to a Quality Control Manager (QCM), inspectors, testing technicians, labs and/or other testing facilities, and other personnel to ensure delivery of a quality Project.

The complete QMP shall incorporate the following features:

- The Contractor shall make all quality records immediately available to DDOT for review. The Contractor shall also provide DGS with a copy of any and/or all quality records when requested.
- The QMP shall encompass all Work.
- The Contractor shall submit to DGS the results of all Project quality test results within 48 hours of their completion**.**
- The Contractor shall promptly submit to DGS non-conformance reports both upon issuance and resolution.

The QMP shall contain detailed procedures of the Contractor's QC activities. The Contractor's quality process shall incorporate planned and systematic verifications that Work is performed in accordance with approved plans and the Contract Documents. The Contractor shall conduct all

QC, performance verification, and coordination among design disciplines, all in accordance with the QMP and the requirements of the Contract Documents.

Inspections, reviews, and testing shall only be performed by personnel with appropriate training and qualifications for each appropriate item of Work (items produced on and off the Project Site) using appropriate equipment that is accurately calibrated and maintained in good operating condition.

C.5.10.2.2 Quality Terminology

Quality terminology, unless defined or modified elsewhere in the Contract Documents, shall have the meanings defined below:

- Organization: Including any Contractor-Related Entities engaged in the performance of this contract.
- Customers: includes users of the roadways, DDOT, DGS, Phase 1 Real Estate Developer, ESA site (Wizards Facility), customer groups, and key Stakeholders who have an adjacent property interest or connecting roadway
- Work: As defined in Attachment B.

C.5.10.2.3 Quality Management Organization

The Contractor shall regularly maintain the QMP to contain current versions of the following information:

- The organizational chart that identifies all quality management personnel, their roles, authorities and line reporting relationships
- Description of the roles and responsibilities of all quality management personnel and those who have the authority to stop work
- Identification of Persons performing testing, including information on each Person's capability to provide the specific services required for the Work, certifications held, equipment, and location of laboratories for products produced both on and off the Project Site
- Resumes for all Quality Management Staff personnel including but not limited to the QCM, inspectors, testing technicians, and record keepers.

C.5.10.2.4 Quality Policy

The QMP shall contain a complete description of the quality policies and objectives that the Contractor will implement throughout its organization in performance of the Work. The policy shall demonstrate Contractor senior management's commitment to implement and continually improve the QMP for the Work.

C.5.10.2.5 Inspection and Testing

The QMP shall contain detailed descriptions of the inspection and test plans, including the timing, quantities represented, and frequency of testing that the Contractor will use to meet QC and QA requirements of the Work.

The Contractor shall revise its QMP when its Organization detects a systemic or fundamental non-conformance in the Work performed or in the manner the Work is inspected or tested, or when DGS or DDOT advises the Contractor of such a problem.

DGS Construction Notices

On a weekly basis, the Contractor shall provide DGS with a rolling 4-week inspection notice. The inspection notification shall include the fabrication schedule and planned construction activities for items where DGS is performing the fabrication inspection.

Reporting, Recordkeeping, and Documentation

The Contractor shall develop and maintain inspection and testing records that include, but are not limited to:

- QC inspection reports and process control material sampling/testing results and control charts shall be submitted to DGS and DDOT within 48 hours following the inspection or test.
- The Quality Control Staff (QCS) shall maintain, electronically, a daily log of all inspections performed for Contractor and/or Contractor-Related Entities in a format acceptable to DGS and transmitted to DGS daily. The daily inspection reports shall identify inspections conducted, results of inspections, location and nature of defects found, causes for rejection, and remedial or corrective actions taken or proposed. The responsible technician and supervisor shall sign the daily inspection reports. The results of the daily inspections shall be provided to DGS in an electronic format within 48 hours after the work shift.
- The QCS shall be responsible for establishing an electronic system for recording all material test results. The responsible technician and his/her supervisor shall sign the daily test reports. The results of the daily test shall be provided to DGS within 48 hours of test completion.
- The QCS inspection and materials quality program shall electronically deliver the laboratory and field test results to DGS. This electronic reporting is intended to allow the Contractor and DGS to make timely and accurate decisions on workmanship and material quality issues.

Laboratory Requirements

The Contractor shall perform testing in accordance with, but not limited to:

- Quality acceptance tests shall be conducted by the QCS's testing laboratory (ies) identified in the QMP that complies with the requirements of the AASHTO Accreditation Program or other appropriate accreditation acceptable to DGS & DDOT for the pertinent test. A copy of the AASHTO Accreditation Program accreditation certificate(s) shall be transmitted to DDOT & DGS upon its receipt by the testing laboratory.

- Equipment in all laboratories shall be certified before starting any construction activities and shall retain the certification by AASHTO, or DDOT, as applicable for the duration of the Work.

Supply Source and Material Quality

The quality of all materials shall conform to requirements contained in the Contract Documents and to any requirements of affected Utility Companies. The QCS shall provide plant inspection and aggregate sampling and testing at concrete and asphalt plants. Manufacturers' test reports may supplement, but not replace, the QA inspections, sampling, testing and certification provisions.

C.5.10.2.6 Responsibility and Authority of the Contractor Staff

QCS performing inspection, testing, or monitoring of characteristics for compliance with the contract documents shall not perform, directly supervise, or otherwise be involved in the Work being inspected, tested, or monitored.

The QCM shall prepare a monthly report of the quality inspections and tests performed, results of such inspections and tests, and occurrences and resolution of non-conformance discoveries. The Contractor shall submit the monthly reports to DGS for review.

The QCM shall have the authority to stop work for quality-related issues.

C.5.10.2.7 Design Quality Management Plan

The Contractor shall prepare and submit to DGS for review a Design Quality Management Plan (DQMP) that describes its policies, procedures, and staffing to manage design QC and QA in accordance with the requirements of this Section C.5.10.2.7.

Released for Construction Documents

The Contractor shall submit to DGS all Released for Construction Documents in accordance with the submittal requirements of the DQMP. The Contractor's Released for Construction Documents shall comply with the requirements of the Contract Documents, and shall be detailed, complete, constructible, and shall allow verification of the design criteria and compliance with Contract Documents.

The Contractor shall submit each Released for Construction Document, signed and sealed, to DGS no later than 5 Business Days after completion.

The Contractor shall prepare and provide all Project-related submittals and documents using English units of measure.

The Contractor shall furnish all submittals by electronic copy in accordance with Section C.5.10. Unless otherwise stated in the Contract Documents, the Contractor shall provide to DGS 10 paper copies and a single electronic copy of each submittal. Each submittal shall have the signature of an authorized representative of the Contractor, unless otherwise expressly stated for

a particular submittal. The electronic copy shall be in a suitable format (e.g., portable document format) or in the format in which the Work was originally created unless stated otherwise in the Contract Documents.

The Contractor shall include with each submittal a transmittal cover sheet in a form acceptable to DGS.

The minimum sheet size for the submittals shall be 8.5 inches by 11 inches (except plans must be at least 11 inches by 17 inches). The maximum sheet size shall be 24 inches by 36 inches. Every page in a submittal shall be numbered in sequence.

Each submittal shall be full and complete and shall be assigned a unique, sequential number, clearly noted on the transmittal cover sheet. The original submittal shall be assigned a unique numerical submittal number. Revised submittals shall bear an alphanumeric designation consisting of the unique submittal number assigned to the original submittal, followed by a letter of the alphabet to represent that it is a subsequent submittal of the original.

Any changes made on a revised submittal, other than those made or requested by DGS, shall be identified and noted on the revised submittal.

Design deliverables shall include a title block, consistent with the standard project drawing format established as part of the QMP, with the following information:

- Date of issuance and including all prior revision dates
- Contract title and number
- The names of the Contractor and applicable Contractor-Related Entities
- Stage of development
- Reference to applicable technical documents and amendments
- If required, review and acceptance or approval from a Government Entity or Utility, before submission to DGS.
- Review stamp
- Action block space – All deliverables shall include a sufficient blank space in which the DB Contractor may list required actions to be taken.
- When calculations accompany drawings in a submittal, cross-references from the body of the calculations to the individual drawing to which the pages of the calculations pertain.
- Organization of the computer-aided design drawings and associated documents in a logical manner, having a uniform and consistent appearance, and clearly depicting the intention of the design.

Record Drawings and Documentation

Within 30 Calendar Days of Final Acceptance of all or part of the Project, the Contractor shall submit to DGS and applicable Stakeholders (DDOT, DOEE, WMATA, etc.) or Utility Company (ies) (Pepco, DC Water, DC Net, etc.) a complete set of the appropriate signed and sealed record drawings in hard copy and native electronic format. The record drawings and documentation shall be an organized, complete record of plans and supporting calculations, and should detail accurately what the Contractor constructed.

The Contractor shall ensure that the record drawings reflect the actual condition of the constructed Work. The Contractor shall submit to DGS and applicable Stakeholders (DDOT, DOEE, etc.) or Utility Company (Pepco, DC Water, DC Net, etc.) the electronic files used to prepare the record drawings and documentation.

DQMP General Requirements

The DQMP shall describe and include the following general requirements:

- The QC and QA review procedures for professional services products shall be organized by discipline (such as drainage, civil, Utilities). These procedures shall specify measures to ensure that appropriate quality requirements are specified and included in the professional services product and to control deviations from such requirements.
- Specific QC and QA review procedures, including all required forms and checklists, shall be specified for preparing, verifying, and checking all professional services products to ensure that they are independently checked and back-checked in accordance with Standards of the Industry for engineering practices in the District of Columbia and the requirements of the Contract Documents
- The designer and checker shall be clearly identified on the face of all Final Design Documents. The DQMP shall also include specific procedures for verifying the professional services product along with any computer programs being used for such purposes. Design documents shall be stamped, signed, and dated by the engineer in responsible charge for that item, element, or phase of the Work.
- Procedures shall be described for coordinating professional services performed by different Persons working in the same area, in adjacent areas, or on related tasks to ensure that conflicts, omissions or misalignments do not occur between drawings or between the drawings and the specifications. This shall also include the coordination of the review, approval, release, distribution and revision of documents involving such parties.
- Procedures shall: (1) ensure that Person performing the Work is familiar with all the provisions of the Contract Documents concerning their respective responsibilities; (2) provide for the education, training and certification, as appropriate, of each Person performing activities affecting or assessing the quality of the Work so that such Persons achieve and maintain reasonable proficiency; and (3) ensure that the Work is performed

according to the DQMP, Standards of Industry for engineering practices in the District of Columbia, and the Contract Documents.

- Procedures shall be established for meeting documentation requirements; the filing of design criteria, reports and notes, calculations, plans, specifications, schematics, and supporting materials needed during the final design; and the specific responsibilities of personnel to satisfy these requirements. All design documents shall be maintained, organized and indexed by Contractor and copies made available to DGS upon request.
- Procedures and schedules for the Design Quality Assurance Manager (DQAM) to perform audits of the design firm's quality control procedures under the DQMP.

Personnel and Staffing

Professional Services Quality Control Manager

The Contractor shall assign a Professional Services Quality Control Manager (PSQCM), who shall be responsible for management of the QC program for the design, environmental management, ROW, Utilities, and survey. The PSQCM shall not be involved with direct scheduling or production activities and shall report directly to the Contractor's management team. The PSQCM shall be responsible for the methods and procedures contained in the approved DQMP being implemented and followed by the Contractor design staff in the performance of the Work. The PSQCM shall be a Registered Professional Engineer.

Design Quality Assurance Manager

The Contractor shall assign an independent DQAM, who shall be responsible for management of the QA program for the design, environmental management, ROW, Utilities, and survey. The DQAM shall work for an independent design QA firm hired by the Contractor and shall report jointly to DGD and the Contractor's management team. The DQAM shall be responsible for the methods and procedures contained in the approved DQMP being implemented and followed by the Contractor design staff in the performance of the Work. The DQAM shall be a Registered Professional Engineer. The DQAM shall not report to any person or party directly responsible for design or construction production.

Personnel in Responsible Charge

The Contractor shall designate (by name) the individual(s) in responsible charge for each item, element, or phase of the Work. The personnel in responsible charge shall possess the necessary registrations in the District of Columbia and shall be personally responsible for directly supervising the Work and who will stamp, sign, and date the professional services work product for a given item, element, or phase of the Work as applicable.

Reviewing Professional Services

The Contractor personnel performing the QC check of the professional services shall not be directly involved with the original development of the item, element, or phase being checked.

Professional Services Submittal Review Process

The Contractor shall conduct a series of working meetings with individuals providing Professional Services, and DGS to establish workflow processes and procedures to be used during the design review process that are consistent with the Contract Documents. The working meetings are intended to develop an understanding on general design concepts such as geometrics, aesthetics, drainage, environmental compliance, traffic control, and structure demolition.

The Contractor and DDOT shall collaborate and mutually agree upon (i) a list of proposed sections (that is, Station x+xx to Station y+yy) for the Work; (ii) professional services packaging and content (such as drainage, individual structures, roadway, traffic sequencing, and others); (iii) a list of mandatory submittals; and (iv) a proposed submittal schedule. The professional services reviews shall be evenly scheduled over the duration of the professional services phase of the Work. Sections and packages shall be logically organized into manageable pieces and shall contain sufficient information and details to confirm Contractor intent and to validate conditions. The Contractor shall obtain DGS's written approval of the sections, packages and contents, the schedule, and the methodology before making the first submittal.

The DQAM shall chair the submittal reviews with DGS and the Contractor shall maintain formal documentation of these meetings for DGS's audit.

The purpose of the submittal reviews is for DDOT to review professional services products for general compliance with Project requirements, Standards of the Industry, Legal Requirements, the Governmental Approvals, and the Contract Documents. All submittals are subject to review and comment by DGS.

The QMP shall define the timing, content, and format of all design reviews. The Contractor shall provide a 21-Calendar-Day review period for DGS review and comment on all design submittals. DGS reserves the right to extend the review time by up to seven Calendar Days for submittals that are received between November 15 and January 1 and for submittals with overlapping review periods that are being reviewed by the same discipline team. However, failure to provide review comments within the 21-Day time period does not constitute acceptance.

The Contractor shall address all comments made by DGS in each submittal and shall include a comment resolution matrix in subsequent submittals.

The Contractor shall schedule and maintain minutes of all resolution meetings with the appropriate DGS staff to document and resolve the Contractor's responses to the comments. It is intended that all comments will be resolved at the meetings. If agreement is not reached on any specific comment, it shall be resolved as described in the QMP.

Final Design Submittal

The final design submittal shall be submitted to DGS for general review, and the DQAM shall provide certification of compliance. Construction packages for individual Work Elements shall be organized such that the final document package can be assembled in a manner similar to the

standard construction documentation typically provided to DDOT for conventional project letting, as mutually agreed upon by the Contractor, DGS, and DDOT.

When the Contractor has completed the final design Submittal for a Work Element and wishes to obtain DGS's concurrence of such a design, the DQAM shall certify that:

- The design meets all applicable Contract Documents.
- The design has been checked in accordance with Contractor's approved DQMP.
- The Work Element is ready for construction.
- The Contractor has obtained all required Governmental Approvals and Utility Company Approvals.

The final design submittal shall be complete design documents incorporating all of the design submittal review comments. All documentation, including copies of DDOT's approval of deviations for design standards and/or design exceptions, shall be provided with the final design submittal.

Before certifying the Work Elements, and upon review and comment of the final design submittal by DDOT & DGS, the DQAM shall schedule a formal review with DGS.

Formal Review

The DQAM will conduct a formal review presentation to DGS at a location acceptable to DGS. The formal review presentation will be held following the DGS's review and comment of the mandatory Submittals.

At least 5 Business Days in advance of the applicable formal review presentation dates, the Contractor will assemble and submit Submittals to DGS for information and review.

Draft minutes of formal review presentations shall be submitted to DGS by DQAM within 5 Business Days after completion of each review.

Re-submittal Process

Re-submittals of any design submittal may be required if deemed necessary by DGS. Each re-submittal must address all comments received from a previous submittal in a manner satisfactory to the commenting party. Submittals shall be re-submitted as many times as necessary to address comments from DGS.

If DGS had requested additional information during the final formal review, the DQAM will conduct an additional formal review of the Submittal for any Work Element. A copy of all correspondence relating to each Submittal made to any Governmental Entity with jurisdiction over the Project shall be concurrently provided to DGS.

Certification of Compliance

The DQAM shall verify that the Contractor obtained approval of the respective Utility system designs from applicable Utility Companies before the issuance of a "Certification of

Compliance" designation of the design documents by the DQAM. Following issuance of a "Certification of Compliance" by the DQAM, DGS shall review and provide written concurrence.

After the Contractor has incorporated the final design Submittal and/or the re-Submittal of formal review comments into its final design, and all concerns and questions have been resolved to the satisfaction of DGS, the Contractor shall provide a final design package to DGS. As part of its final design Submittal, the Contractor shall include all:

- Design drawings
- Design calculations
- Design reports
- Specifications
- Electronic files
- Documentation required for all final ROW (if applicable)
- Governmental approvals
- Utility Company approvals

DGS's concurrence with the DQAM's certification of compliance will not constitute approval of the design or subsequent construction, nor relieve Contractor of its responsibility to meet the requirements hereof. DGS's provision of authority for Contractor to begin construction on Work Elements prior to completion of the design for the entire Project shall not relieve Contractor of responsibility for the construction meeting all Contract Requirements.

Construction of any Work Element covered by the DQAM's certification of compliance of said Work Element shall only progress to the extent covered by the design documents included in that statement except for the Work performed in accordance with Section C.5.12.2.7.9. Before progressing further with construction of a certified package, the Contractor shall complete the next Work Element of design or complete the final design, and obtain DGS's concurrence, except for the Work performed in accordance with Section C.5.10.2.7.9. Any design Work Element, subsequent to the certification of compliance from the DQAM, shall be checked and certified by the DQAM in the same manner indicated above.

If DGS concludes that the Final Design Documents do not meet any Contract Requirements, DGS will notify the Contractor in writing of any specific deficiencies in the Final Design Documents. The Contractor shall correct such deficiencies, modify the Final Design Documents, and, if necessary, modify construction upon receipt of DGS's comments.

If there is evidence that the DQMP procedures are not adequate, as evidenced by DGS's oversight reviews or problems during construction, DGS may, at its sole discretion, withhold payment for design and construction until sufficient DQMP procedures are in place. If construction is in progress, DGS may suspend ongoing Work represented by the deficient design and require correction of design and/or construction defects.

Design Changes

The Contractor or DGS may initiate design changes. Design changes may occur either to items, elements, or phases undergoing construction or after final design. In order to process these types of changes, the Contractor shall submit, when the problem or change occurs, a Request for Information (RFI) for DGS's review.

All design changes submitted under the RFI procedure shall undergo the same DQMP checks as the original design.

The designer responsible for the original design shall approve design changes during construction, or design changes to Final Design Documents in writing. If the original designer is no longer available, then after notification to the original designer, an experienced Registered Professional Engineer shall provide documentation of design changes. All Submittals for design changes shall be stamped, signed, and dated by a Registered Professional Engineer. In all cases, the DQAM shall certify in writing that the design change has been:

- Designed in accordance with the Contract Requirements
- Checked in accordance with the Contractor's reviewed DQMP
- Prepared consistently with other elements of the original design

The Contractor shall request and schedule interim and final RFI formal design review(s) by DGS for all design changes made during construction or to the final design plans. Design changes submitted under an RFI that are minor may not warrant interim review in addition to final formal design review(s) by DGS. Design changes eligible for a single review shall be defined in the DQMP and approved by DGS. All changes made through the RFI process shall be documented in the as-built drawings.

Early Start of Construction

The following sets forth the circumstances under which certain Work Elements may be packaged by the Contractor to initiate an "early start of construction" before obtaining DGS's concurrence of the final design for the item, element, or phase. The early start of construction (but not before NTP-2 issuance) requirements shall apply to any Work that is performed by the Contractor before receiving DGS's written concurrence with the DQAM's certification of compliance of the final design submittal for the Work. All such Work is performed at the sole risk of the Contractor. DGS does not consider any items as satisfying the DQMP requirements until the DQAM has issued a certification of compliance and DGS has issued a written concurrence therewith.

DGS, at its sole discretion, may defer early start of construction for any Work Element as requested by the Contractor.

Any Work constructed by the Contractor before receiving DGS's concurrence of the final design submittal for the Work, and later determined to be unacceptable by DGS in its sole discretion,

shall be revised, removed, or otherwise reconfigured to the satisfaction of DGS at the Contractor's sole cost and expense and without any consideration given to an extension of the completion deadline.

DGS and the Contractor shall agree on procedures for early start of construction, which procedures shall among other things, include a process for distributing construction documents signed and sealed by a Registered Professional Engineer to DGS and the Contractor's field staff. In order for the Contractor to proceed with early phases of construction of a Work Element, specific pertinent items of the design shall have been previously reviewed by DGS and comments from DGS shall have been transmitted to the Contractor. For example, early start of construction may be rough grading of a specific portion of the Project, for which specific pertinent items of the design may include:

- Clearing and grubbing
- Stormwater management plans
- Hazardous materials abatement in buildings
- Subsurface geotechnical investigations and recommendations

An early start of construction shall be at the sole and complete risk of the Contractor, and does not release the Contractor from any of the Contract Requirements, including but not limited to those described in this Section C.5.10.2.7. If, as a result of the review process, construction modification or changes to already completed Work Elements performed under the early start of construction are required, the Contractor shall make any and all construction modifications to already completed construction activities at its sole cost and expense without any entitlement to time extensions or adjustments in the Contract Price.

C.5.10.2.8 Construction Quality Management Plan

The Contractor shall construct the Work in accordance with the Released for Construction Documents, following a reasonable timeframe for DGS review and comment, together with the relevant requirements and specifications of the Contract Documents.

The Contractor's CQMP shall contain detailed procedures for the Contractor's QC activities for construction activities. At a minimum, the CQMP shall specify:

- Methods and procedures that clearly define the distinction/authority/responsibility for the administration of the Contractor's CQMP.
- Methods and procedures to be used by the Contractor to obtain active participation of the Work force in QC operations to achieve Work meeting the Contract Requirements.
- A construction QC organization and staffing plan. The period of time that the QC staff members will be present on the Site shall be shown; resumes of the personnel shall be included; and the experience/knowledge/skill levels of the QCS shall be stated.

- Procedures for inspecting, checking, and documenting the Work. Inspection, examinations and measurements shall be performed for each operation of the Work to ensure quality.
- Procedures to ensure that all activities affecting the quality of the Work are accomplished under controlled conditions, using appropriate equipment for the task being performed.
- Procedures to ensure that the education, training, and certification of personnel performing CQMP activities are achieved and maintained and that all Work is performed in accordance with the approved designs, plans, and specifications.
- Procedures to ensure that critical Work Elements are not started or continued without inspection and testing by the QA personnel on Site. Inspection or hold points shall be identified and communicated to the Construction QA Manager and DGS. Procedures to proceed beyond inspection points shall be developed.
- Description of specific procedures to ensure that all Work conforms to the requirements of the Contract Documents.
- Documents specify that all activities undertaken by or on behalf of the Contractor affecting the quality of the Work shall be prescribed and accomplished by documented instructions, procedures, and appropriate drawings. Such instructions, procedures, and drawings shall include quantitative and qualitative criteria to be used to determine compliance.
- Measures to ensure that purchased Work Elements conform to the Contract Requirements. These measures shall be consistent with Standards of the Industry and shall include provisions for source evaluation and selection, objective evidence of quality furnished by Subcontractors and Suppliers, inspection at the manufacture or vendor source, and examination of products upon delivery.
- Procedures for identification and control of tangible items comprising the Work. These procedures shall be consistent with the good industry practice to ensure that identification of the item is maintained by appropriate means, either on the item or on records traceable to the item, as necessary, throughout fabrication, erection, installation, and use of the item.
- Procedures to ensure that Work Elements that do not conform to Contract Requirements are not used or installed. These procedures shall include identification, documentation, segregation, disposition, and notification to DGS and, if appropriate, Governmental Entities and other affected third parties, as well as procedures for DGS to review nonconforming Work.
- Procedures for processing an RFI to resolve discrepancies and/or questions in the plans and specifications so that all changes are documented and approved by the Contractor’s design engineers and DGS.

- Procedures to indicate, by the use of markings such as stamps, tags, labels, routing cards, or other suitable means, the status of inspections and tests performed upon individual items of the Work.
- A program for inspection for each operation of all Work Elements and measurement and test of Work elements to check quality.
- A program for coordination of all inspection and testing with the inspections and tests of Governmental Entities and Utility Companies.
- A program to ensure performance of all testing required to demonstrate that all tangible items that comprise the Work will perform satisfactorily for the purpose intended and meet the Applicable Standards. It shall specify written test procedures that include provision for ensuring that all prerequisites for the given test have been met and that adequate test instrumentation is available and used. The CQMP shall require test results be documented and evaluated to ensure that test requirements have been satisfied. The CQMP shall also demonstrate how the QCM will track testing frequencies to ensure compliance with the Contract Requirements.
- Procedures for reviewing and approving acceptance test results, categorizing test results in a manner acceptable to DGS, transmitting acceptance test results to DGS in a format acceptable to DGS for use in fulfilling its statistical validation requirements, and working collaboratively with DGS to resolve statistical non-validation between Qc and QA test results.
- Measures to ensure that tools, gauges, instruments, and other measuring and testing devices used in activities affecting quality of Work Elements are properly maintained, controlled, calibrated, certified, and adjusted at specified periods to maintain accuracy within industry standards.
- Procedures to control the handling, storage, shipping, cleaning, and preservation of tangible items that comprise Work to prevent damage or deterioration.
- Procedures to ensure that conditions adverse to quality, such as failures, malfunctions, deficiencies, defective material and equipment, deviations, and other Nonconforming Work are promptly identified and corrected. The procedures shall ensure that the cause of the condition is identified and corrective action taken to preclude repetition. The identification of the significant condition adverse to quality, the cause of the condition, and the corrective action taken shall be documented and reported to DGS in writing and to appropriate levels of the Contractor’s management to ensure corrective action is promptly taken.
- A comprehensive system of planned and periodic audits of the Contractor’s CQMP to review adherence to and the effectiveness of the CQMP. QA personnel shall perform the audits in accordance with the written procedures or checklists. Audit results shall be documented,

reviewed, and acted upon by the Contractor. Follow-up action, including re-audit of deficient areas following corrective action, shall be taken where indicated.

- Measures to control the receipt and issuance of documents, such as instructions, procedures, training manuals and drawings, including changes thereto, that prescribe activities affecting quality. These measures shall ensure that approved documents, including authorized changes thereto, are reviewed for adequacy and approved for release by authorized personnel of the Contractor and are distributed to and used at the location where the prescribed activity is performed. Changes to documents shall be reviewed and approved by the same organizations that performed the original review and approval unless DGS consents, in writing, to another responsible organization.
- The requirements and methods for controlling documents. The Contractor's document control system shall be compatible with DGS's.
- Procedures and personnel to be used to ensure that specified instrumentation is installed and monitored in accordance with applicable specification.
- The form and distribution of certificates of compliance.
- Procedures for quality acceptance in the CQMP with respect to checking and verifying the accuracy and adequacy of construction stakes, lines, and grades established by the Contractor.

Personnel and Staffing

Construction Quality Control Manager

The Contractor shall assign an on Site Construction QCM, who shall be responsible for management of the QC aspect of the CQMP. The QCM shall report jointly to the Contractor's management team. The QCM shall work independently from production staff.

Construction Quality Control Staff

The Contractor's and Subcontractors' (of any tier) construction work force are all considered to be members of the Contractor's QC because each individual is responsible for the quality of the Work. Personnel performing QC inspection shall ensure quality of workmanship and QC sampling/testing personnel shall ensure that materials meet the required specifications before acceptance testing is performed by the QA team. Personnel responsible for performing QC inspection shall be knowledgeable and receive training to perform their QC duties. Personnel performing QC sampling/testing shall be certified in the testing methods and procedures.

C.5.10.2.9 Maintenance Management Plan

Section C.5.27 discusses the requirements for the Maintenance Management Plan (MMP).

C.5.10.3 Risk Management Plan

The Contractor shall prepare an RMP and perform risk management for the Project. The RMP shall cover all phases of the Project, including design, construction, Stakeholder coordination,

security, maintenance of traffic (MOT), hazardous waste abatement and demolition, and shall include but not be limited to the following elements as a minimum:

- The Contractor's risk management policy for the Project
- Project team roles and responsibilities concerning risk management
- Approach to risk identification and assessment for all phases, including design, construction, hazardous waste abatement and demolition; and including regular reviews and updates at appropriate milestones and whenever risk levels change, and/or when new risks are identified that may affect risks already identified
- Compliance with WMATA-JDAC requirements and procedures for Work adjacent to Congress Heights Metro Station and Green Line tunnel facilities on East Campus
- Risk monitoring and control approach, including performance measurement strategy and reporting
- Methodologies for risk identification, quantification, analysis, response planning, mitigations, monitoring and management, within each Project phase and as a continuum throughout the Project
- Risk registers that identify at a minimum, risks to cost, schedule, operational performance, and the quality of the Work. The Contractor shall provide a copy of the Project risk register to DGS on a monthly basis, and at any substantive material change to the register. DGS may review and provide written comment on any item in the risk register that, in the opinion of DGS, is of relevance or concern to DGS.

C.5.10.4 Safety Plan

The Contractor shall be responsible for the safety of its personnel and of the general public affected by the Project.

The Contractor shall submit to DGS for review, a comprehensive safety plan that is consistent with and expands upon the preliminary safety plan submitted with the Proposal. The safety plan shall fully describe the Contractor's policies, plans, training programs, Site controls, and incident response plans, to protect the health and safety of personnel involved in the Project and the general public affected by the Project during the Term.

The Contractor's Safety Plan shall address procedures for immediately notifying DGS of all Incidents arising out of or in connection with the performance of the Work, whether on or adjacent to the Project.

C.5.10.5 Public Information and Communications Plan

A public information and communications plan shall be developed in coordination with DGS and in accordance with the requirements discussed in the Contract Documents.

C.5.10.6 Comprehensive Environmental Protection Plan

Section C.5.12 discusses the requirements for environmental management and protection.

C.5.10.7 DDOT-Contractor Communications Plan

The Contractor shall submit to DGS for review a District–Contractor Communications Plan (CP) that is consistent with and expands upon the preliminary communications plan submitted with the Proposal. The Contractor shall maintain and update the CP throughout the term of Agreement. The CP shall include a list (developed by the Contractor) of Stakeholders that will be maintained and updated on an as-needed basis.

The CP shall describe the procedures for communication of Project information between the Contractor's organization, Stakeholders, and DGS.

The CP shall describe how the Contractor's organization will respond to unexpected RFIs, communicate changes or revisions to necessary Contractor personnel, and notify affected Stakeholders before and after changes are made to the Contract Documents.

C.5.10.8 Right-of-Way Acquisition Plan

The land required for this project is owned by the District of Columbia. The District will provide right of entry (ROE) to DGS. DGS will provide the Contractor with an ROE for access to the ROW and Site access necessary for completion of infrastructure systems not within future ROWs.

C.5.10.9 DGS Field Office and Equipment

Except where noted elsewhere in the Contract Documents, the Contractor and DDOT shall co-locate for the term to facilitate Project coordination and daily communication. The "co-locate" for this section means having office space meeting the conditions of these Technical Requirements that are near each other on the Site.

The Contractor shall provide office space for DGS (available for occupancy) within 120 Calendar Days of issuance of NTP-1. The location, condition, and amenities of the office space for DGS are subject to DGS's prior written approval. The office space requirements for the field office are provided below.

C.5.10.9.1 Computers and Equipment

The Contractor shall provide, install, and maintain the following computers, peripherals, and software for the DGS office spaces:

- Connectivity to printers, faxes, email, and the Internet shall be provided by wireless means.
- The Contractor shall provide, install, and maintain the following telephones, servers, copiers and fax equipment, and premise wiring for the DDOT office space:

  - At least one touch-tone telephone for each personal office area, each with a status indicator, access to all outside lines, and conference-call capability, and including speakers for the telephones in the enclosed offices rooms
  - At least one touch-tone conference telephone with satellite microphones for each conference room, each with a status indicator, caller identification, access to all outside lines, and conference-call capability
  - Hardware and software will be compatible with good industry practice and with the Contractor's system interface.

- One high-speed HP laser printer (or equivalent upon DDOT's approval), 10-15 pages per minute, 2-3 input trays – 750 pages, monthly volume of 50,000 pages. Support letter, legal, A4, and 11 x 17 prints. Remote management and configuration, built-in network card, support laser technology, cables, toner, cartridge, developer and fuser kits, as needed.
- One high-speed color HP printer (or equivalent upon DDOT's approval), 10-15 pages per minute, 2-3 input trays – 750 pages, monthly volume of 50,000 pages. Support letter, legal, A4, and 11 x 17 prints. Remote management and configuration, built-in network card, support laser technology, cables, toner, cartridge, developer and fuser kits, as needed.
- One facsimile transmission machine capable of holding 250-500 sheets of plain paper. Memory buffer for minimum of 100 sheets. Provide confirmation page, 14.4-33.6 Data/FAX mode, print/copy in multimode, (i.e., fine, superfine).
- One color scanner. Scanner must be single pass, USB and parallel port capable, 600 dpi to 2400 dpi optical resolution. Capacity at least 100 sheets. Support letter, legal and 11 x 17 paper.
- A multipurpose piece of equipment capable of meeting multiple parts of the requirements above will be considered to meet the requirements.
- All office supplies, including copier paper, toners, paper towels, toilet paper, hand soap and other miscellaneous office supplies.
- The equipment shall be maintained in such a condition that it is always available for immediate use.
- The Contractor shall be responsible for District (and its agents) equipment placed in field offices and shall promptly replace in kind or acceptably repair such equipment that is removed without permission or damaged.

C.5.10.9.2 Field Office

The Contractor shall provide all space, facilities, and support elements necessary to design, construct and maintain the DGS field office in accordance with the Contract Documents. The Contractor shall provide office space, a minimum of 2,000 square feet (SF), for DGS's Project

management staff, including the DDOT Construction Management Services Consultant and other Contract employees. If it is necessary to locate any of these elements of the Work off-Site or outside of this office, the Contractor shall obtain DGS's prior written approval.

The Contractor shall provide a preliminary DGS facility area layout plan to DGS no later than 60 Business Days after NTP-1. DGS will promptly review and comment on required modifications to the layout within 10 Business Days. The Contractor shall submit a final facility layout plan within 10 Business Days of receipt of DGS comments.

The Contractor shall have the DGS facility area available for move-in no later than 120 Calendar Days from NTP-1.

DGS Facility Area and Items Provided by Contractor

The Contractor shall provide separate office space for the exclusive use of DDOT's construction management and DGS's Project management staff in the DGS facility area as specified herein and subject to DGS's prior written approval. This office space shall be located within the same building or complex as the Contractor's office staff. DGS will be reasonable regarding re-use of existing space within the Contractor's office facility, providing the space is contiguous and workable in DGS's sole discretion.

Office Condition

The offices shall be in good and serviceable condition, at least of the same quality as those of the Contractor's counterpart office space and available for occupancy as specified herein. Both parties shall participate in a facility condition survey prior to and at the completion of occupancy. DGS shall return possession of the Contractor-provided DGS facility area to the Contractor in essentially the same condition as when DGS occupied the facilities, except for reasonable wear and tear and except for alterations, or loss or damage caused by any member of the Contractor-Related Entity.

Loss or Damage

If office spaces, related facilities, or fixtures are destroyed, damaged or stolen, during the Work in the DGS facility area, except as a direct result of willful misconduct of DGS, DDOT, or its personnel, the Contractor shall, at its cost and within 10 Business Days after the occurrence of such destruction or damage, repair those items to their original condition or replace them. However, in the case of lost, damaged, or stolen office equipment (for example, computers, fax machines, copy machines, and printers) necessary for normal office operations, replacement shall occur within 2 Business Days. If loss or damage is caused as a direct result of willful misconduct of DGS or its personnel, the Contractor shall replace the facilities noted herein within the timeframes specified herein, and DGS shall reimburse the Contractor for actual, reasonable, and documented costs incurred.

Office Facilities and Equipment

For the DGS facility area it provides, the Contractor shall do the following:

- General. Secure facility space, obtain all permits, install and pay for all Utility services, and maintain the facilities as part of the Work.
- Access and Security. Provide separate DGS entrance/exit(s) from building, which shall be secured with electronic door lock(s) plus a deadbolt lock. The Contractor shall provide security badge card access with locking doors running on time zone/Holiday schedules for entry doors as well as other designated areas (e.g., server room, document storage, offices). The Contractor shall provide software for maintaining access to these areas, which will be owned and/or maintained by DGS's design and Project management staff.
- Lighting and Electricity. Include with all interior spaces overhead lighting meeting Occupational Safety and Health Administration (OSHA), building, and electrical and energy code requirements for similar office space (provide nominal 30 foot-candles of light at 30 inches above finished floor). Each office space shall have at least four duplex receptacles, with minimum circuit capacity of 20 amperes (amp).
- Janitorial and Trash Services. Provide daily janitorial service (except Saturdays, Sundays, and Holidays) and maintain trash containers and trash pickup service for the building and Site areas beyond the DGS facility area. This shall include, but not be limited to, sweeping and mopping floors, cleaning restrooms and break room, emptying wastebaskets, and periodic dusting. This service shall be paid for by the Contractor. The Contractor will pay for and procure janitorial services for the DGS facility area.
- Exterior Maintenance. Maintain the exterior areas of office spaces, including access to parking areas.
- Accessibility and Licensing. Meet all access requirements of the Americans with Disabilities Act Accessibility Guidelines, as amended (42 U.S. Code §§12101, et seq.), and the applicable building code.
- Restrooms, Break Room, and Entry Space. Provide access to women's and men's restrooms, break room space and building entry space; these spaces may be shared with the Contractor's office space/staff. These spaces and all DGS spaces shall have access 24 hours per day, 7 days per week, and 365 days per year (24/7/365). In lieu of access to a common break room, the Contractor may provide a 200-SF break room/kitchen within the DDOT space, with a refrigerator with freezer compartment, ice machine, sink including waste disposer, microwave, and dishwasher. The break room/kitchen will have storage closet (25 SF) and cabinets with drawers and counter tops. In the event that access to restrooms cannot be accessed from a common building entry/lobby, the Contractor may provide separate restrooms for the DGS facility area. In the event it is necessary to locate a separate break room and/or restrooms within the DGS facility area, the 2,000-SF DGS & DDOT space allocations may have to be increased to accommodate these spaces.

- Heating, Ventilation, and Air Conditioning. Provide electrical, heating, ventilation, and air conditioning (HVAC) systems capable of maintaining temperatures between 65 and 75 degrees Fahrenheit in all spaces 24/7/365. Server room shall have dedicated air conditioning/cooling system capable of maintaining temperatures between 65 and 70 degrees Fahrenheit and 15 percent relative humidity.
- Code Requirements. Meet all applicable building and fire code requirements.
- Disposal and Removal. Be responsible for disposal or removal of all the Contractor-provided facilities and any facility and/or Site restoration Work as required.

Space Requirements

Although actual spaces may vary slightly, the following nominal size requirements will apply, and the DGS facility area shall include the following elements:

- Offices. Enclosed offices for DGS's management staff (nominal 150 SF each), four total with keyed door hardware.
- Cubicles. Cubicle area spaces for administration staff (nominal 64 SF each) six total; power supply and data and communication lines to cubicles may be provided through power pole drops.
- Conference Room. One conference room at nominal 12 feet by 25 feet (300 SF). The room shall have dimmable lighting and have one chair for every 24 SF of conference room space and a conference table of sufficient size for each chair.
- Reception Area. A shared receptionist space with waiting area with seating for four visitors (nominal 200 SF); other furniture to be determined jointly by the Contractor and DGS.
- Work Room. Work room (nominal 150 SF) with 30-inch-high plastic laminate wall-mounted counters (15 lineal feet of counter). Work room shall be located near the center of the facility, and close to the receptionist space.
- Storage and Filing. One lockable space for storage and filing, nominal 10 feet by 15 feet (150 SF).
- Parking Area. Parking area for at least 14 vehicles (10 staff/4 visitors) that is reasonably level (all-weather surface and all-weather access).
- Exterior Lighting. Sufficient exterior security lighting that is automatically activated at low light levels to maintain 2 foot-candles of lighting within the building and parking areas of the Site.
- Corridors. Corridors within the DGS facility shall have a nominal width of 54 inches.

Miscellaneous Requirements and Features

The following shall be provided as noted:

- Flooring. Carpeted flooring (non-static in server room).

- Entry Access. Entry to DGS areas by electronic door hardware card access (not keyed), with U.P.S. on locks (fail closed).
- Electrical Outlets. Each office and conference room shall have two (two data, one com Cat 5E) outlets per room, and one (two data, one com Cat 5E) outlet per cubicle, as well as outlets at designated printer, fax and copier locations and any and all shared areas (i.e., workroom, storage room, etc.). All data/voice outlets shall be installed next to power outlets.
- HVAC. 24/7/365 HVAC as previously described.
- Window Coverings. Horizontal mini-blinds (no drapes) for each exterior window.
- Power Circuits. Dedicated electrical power circuits for copiers, and minimum of six duplex receptacles with three dedicated 20-amp circuits and one 30-amp circuit for the server room.
- Fire Extinguishers. Fire extinguishers compliant with the requirements of the fire code and fire marshal with jurisdiction.
- Insurance. Insurance (obtained and provided by the Contractor) covering the use of the Project office by the Contractor, DDOT, and DGS, in accordance with the terms of the underlying property use agreement with the property owner, but in no event shall the insurance be less than that required by the RFP.
- Vending Area. Access to general building vending area.
- Utilities. Initial installation and monthly expense of all utilities paid by the Contractor except long-distance telephone service.
- Emergency Contacts. 24-hour emergency contact to the Contractor.
- Furniture. In addition to previous descriptions, the Contractor shall provide; 2 fireproof, locking four-drawer legal file cabinets; 10 desks with locking drawers; 10 swivel chairs; 10 folding chairs; 1 hanging file for full-size drawings; a 36-inch by 72-inch drawing table; and table and seating in the break room for 10 people

C.5.11 Public Information and Communications

C.5.11.1 General Requirements

The Contractor shall assist DGS with public information activities to ensure that a consistent message is being distributed to the residents and Stakeholders regarding the Project.

The Contractor shall assist DGS in working with residents, communities, neighborhoods, and other Stakeholders within the general vicinity of the Project to mitigate construction impacts to the neighborhoods, particularly during off-peak hours.

C.5.11.2 Administrative Requirements

C.5.11.2.1 Project Manager

The Contractor Project Manager shall assist DMPED & DGS with public involvement activities throughout the Term.

C.5.11.2.2 Emergency Event Communications

For all emergency events, such as vehicle collisions, ice/snow conditions, and Hazardous Substances spills, the Project Manager shall take timely and appropriate action to inform DGS and appropriate Stakeholder groups of all pertinent details. The Project Manager shall provide these details through the use of appropriate tools to ensure effective communication. These tools include, but are not limited to: portable changeable message signs, email/Web alerts, telephone notification, facsimiles, and media releases/interviews, as appropriate. The Contractor Project Manager shall continue to provide updated information, as available and on a timely basis, until the emergency no longer exists.

In the event of an unforeseen emergency, timely notification shall mean as soon as practicable, but in no event longer than within 1 hour of the occurrence. If advanced warning is available for an emergency event such as ice/snow, timely notification shall mean as soon as practicable, but in no event longer than within 1 hour of the time the information is available. In both situations, the Contractor Project Manager shall continue to provide updated information, as available and on a timely basis, until the emergency no longer exists.

Lane Closures

Subject to the lane closure restrictions set forth in Section C.5.26, the Contractor shall provide DGS and appropriate Stakeholder groups a minimum of 2 weeks' advance notice for lane closures and/or traffic switches planned to be in effect for longer than 24 hours, and a minimum of 48 hours' advance notice for lane closures that are planned to be in effect for less than 24 hours, using all appropriate tools as needed. All lane closures are to be approved in advance by DDOT. The Contractor shall coordinate all MOT operations with adjacent projects, Emergency Services, St Elizabeths Hospital (SEH), and WMATA.

C.5.11.2.3 Disseminating Public Information

The Contractor shall assist DMPED & DGS in preparing and distributing materials regarding Project-related subjects, using all appropriate methods, including, but not limited to: meetings, news releases, schedule updates, construction photographs, weekly/monthly progress updates, telephone correspondence, newsletters, email, hotlines, highway conditions report, portable changeable message signs, Web alerts, maps, displays, renderings, presentations, brochures, pamphlets, highway advisory radio, and video news releases. DMPED & DGS will have final review and approval of all public information disseminated.

C.5.12 Environmental

C.5.12.1 General Requirements

The Contractor shall deliver the environmental commitments required Contract Requirements, and the following CDRs:

- Final St. Elizabeths East Campus Transportation Network Environmental Assessment and Appendices, (EA, CH2M HILL, 2012)
- Final St. Elizabeths East Campus Finding of No Significant Impact (FONSI, June 2012)
- Phase I Environmental Site Assessment, Proposed St. Elizabeths East Campus Roadway Improvements, (Tidewater, Inc., March 2012)
- Phase II Environmental Site Assessment, St. Elizabeths East Campus, (Haley & Aldrich, Inc., November 2012),
- Phase I Environmental Site Assessment, North Parcel and FEMA Tracts, (Haley & Aldrich, Inc., October 2012)

The Contractor shall protect the environment and document the measures taken during the performance of the Work to avoid and minimize impacts on the environment from the Work.

The Contractor shall cause Work to comply with Environmental Laws throughout the Term. The Contractor shall monitor and document Work Elements so that documents providing evidence for compliance are available to DGS for inspection at any time.

The Phase I and II Environmental Site Assessment Reports are included in Attachment A and are for informational purposes only. It is the Contractor's sole responsibility to verify Site conditions.

C.5.12.2 Environmental Approvals

C.5.12.2.1 New Environmental Approvals and Amended DDOT-provided Approvals

District-provided approvals are based on the Project schematic presented in the environmental approvals, including but not limited to commitments set forth in the executed FONSI, Memorandum of Agreement (MOA), environmental surveys performed for wetland delineation and subsequent jurisdictional determinations, and existing permits. Such approvals may require re-evaluation, amendment, or supplement as the Work progresses or in order to accommodate actions not identified in the environmental approvals or covered specifically by existing resource agency coordination. Changes to the Project schematic or incorporation of additional properties into the Project shall require the validity of existing environmental approvals to be reassessed and may require New Environmental Approvals.

The Contractor shall be responsible for coordination with DGS, DOEE, and other state and federal entities as necessary to obtain new environmental approvals or amendments to the District-provided approvals except where DGS has agreements with agencies to perform such coordination.

The Contractor shall be responsible for ensuring compliance with the conditions and schedules set forth in amendments to any District-provided approvals or New Environmental Approvals. DGS may, in its discretion, provide assistance in securing New Environmental Approvals, permits, or amendments to District-provided approvals.

C.5.12.2.2 Responsibilities Regarding Environmental Studies

The Contractor shall be responsible for conducting continuing environmental studies based on the Project approved National Environmental Policy Act document, *106 Executed Memorandum of Agreement, St. Elizabeths East Campus Transportation Network Environmental Assessment* and *FONSI* (CH2M HILL, 2012) and the Project schematic.

The Contractor shall be responsible for conducting environmental studies and re-evaluations caused by actions not identified in the environmental approvals, actions not covered specifically by existing resource agency coordination, or incorporation of additional properties into the Project. The Contractor shall be responsible for all coordination of environmental studies with appropriate Governmental Entities, except where DGS has agreements with Governmental Entities to perform such coordination.

C.5.12.2.3 DGS Review and Approval of Contractor Submissions

DDOT reserves the right to review, comment on, require revisions to, and reject for re-submission documentation submitted for environmental compliance or environmental approvals. Documentation shall conform to current DGS submission standards and the requirements of all applicable Governmental Persons and Environmental laws. DGS shall return reviewed documentation to the Contractor for submittal to the DOEE in cases where the Contractor performs coordination. DGS, acting reasonably, shall approve those submissions for which DGS signature or other approval is required. Documentation not meeting current submission standards or requirements of Governmental Entities will be returned to the Contractor, and shall be revised by the Contractor to meet standards or requirements. Contractor shall anticipate a 21 calendar day review period for DGS review and comment on all design Submittals.

C.5.12.2.4 DDOT-Provided Intermediate Plans and Technical Documents

See Attachment A, Reference Information Documents Listing, for a complete list of DGS-provided documents.

C.5.12.3 Comprehensive Environmental Protection Program

As part of the PMP, the Contractor shall develop and implement a CEPP, applicable throughout the term, to establish the approach, requirements, and procedures to be employed to protect the

environment and comply with Environmental Laws. The CEPP shall satisfy applicable DGS and Government Persons requirements, including those detailed as commitments in any environmental approvals.

The CEPP shall be the overarching system by which the Contractor shall cause environmental commitments made during the environmental approval and permitting processes, and other environmental requirements to be carried forward and reflected, as appropriate, in the design and implemented throughout the Work. The Contractor shall use the CEPP to track ongoing issues, identify environmental compliances, non-compliances, and identify actions required/taken to correct any such non-compliance.

At a minimum, the CEPP shall include the following component parts:

- Environmental Management System (EMS)
- Plan for recycling facilities
- Environmental Compliance and Mitigation Plan (ECMP)
- Environmental Protection Training Program (EPTP)
- Hazardous Materials Management Plan (HMMP)
- Communications Plan (CP)
- WMATA-JDAC requirements and procedures for Work adjacent to Congress Heights Metro Station and the Green Line tunnel facilities on East Campus, including at the utility outfall tie-in locations.
- Construction Monitoring Plan (CMP)
- Vibration Monitoring Plan
- Historic Site Protection and Restoration
- Environmental team (ET) resumes

The dates by which component parts comprising the CEPP are to be submitted for DGS approval are set forth throughout these Technical Requirements. Amendments and updates to the CEPP as necessary to address changing conditions and environmental requirements shall be in accordance with the procedures for amendments to the PMP.

C.5.12.3.1 Environmental Management System

The EMS shall be the overarching system by which the Contractor shall cause environmental commitments made during the environmental approval and permitting processes, and other environmental requirements, to be carried forward and reflected, as appropriate, in the design and implemented throughout the Work. The Contractor shall use the EMS to track ongoing issues, identify compliances and non-compliances with Environmental Laws, and identify actions required/taken to correct any such non-compliance.

The EMS shall establish a schedule for at a minimum, quarterly CEPP review to keep it up to date. The EMS shall provide a means to track the reviews and results. At a minimum, the EMS shall require documents in the following list to be on file at the Site and available at any time for DGS review:

- CEPP component parts
- Weekly environmental monitoring reports
- Investigative work plans, Site investigation reports, and remedial action plans as necessary for hazardous material discovery/remediation
- Wetlands delineations and appropriate Section 404 permit application if changes to the design or temporary construction impacts are necessary
- Mitigation or resource monitoring reports, as required by resource-specific mitigation plans
- Designs for wetland mitigation if needed
- Storm Water Pollution Prevention Plan (SW3P) and amendments, as required to reflect Project development and staging, including off-Site plans, controls, and reporting from borrow sites, waste sites, and plant location sites
- Completed permit applications and permits as issued
- Pre-construction inspection report
- Training documentation
- Contractor's final noise analysis, if different than that included in the DGS-provided approvals
- Environmental Permits, Issues, and Commitments (EPIC) Sheets

C.5.12.3.2 Environmental Compliance and Mitigation Plan

The ECMP shall document and fully detail compliance strategies and procedures to be employed to cause Work performance in accordance with requirements of applicable Environmental Laws and environmental approvals. This plan shall establish and/or document schedules, protocols, and methodologies to be used in accomplishing the Work, with an emphasis on monitoring, reporting, corrective actions, and adaptive management, and shall include a matrix/status report of environmental conditions/requirements from the EA/FONSI. The plan shall include a Compliance Action Plan (CAP). The CAP shall consist of a decision making matrix that will define the triggers for initiating or re-initiating environmental compliance actions for construction and maintenance activities, including construction noise and dust mitigation measures, and the triggers for initiating mitigation measures. For each trigger, the CAP shall identify the appropriate type or level of environmental study or other compliance action necessary to ensure the ongoing validity of Project environmental approvals and commitments.

In addition, the ECMP shall detail any mitigation required by environmental approvals and the Contractor's approach to satisfying mitigation requirements, including mitigation requirements identified after completion of the ECMP.

The ECMP shall include the following components:

- EPIC Sheets
  - The Contractor shall develop and maintain EPIC construction plan sheets. Applicable permits and environmental commitments shall be identified on EPIC sheets and updated throughout the construction period to identify on-Site conditions.
  - The Contractor shall ensure that EPIC sheets include the environmental commitments required to ensure that any discharge from the Site into a sanitary sewer system complies with appropriate codes and standards of the sanitary sewer owner.
- Clean Water Act - Sections 404 and 401: Waters and Wetlands of the United States:

  The Contractor shall document how it will comply with the terms and conditions for Section 404 permit(s) issued to the Contractor by the U.S. Army Corps of Engineers (USACE) and associated Section 401 Water Quality Certification(s) as administered by the DOEE, as well as any additional Section 404 permits and 401 certifications issued to the Contractor during the life of the Project. The documentation at a minimum shall include:
  - Process for training personnel to recognize waters of the U.S. that fall under the jurisdiction of the USACE
  - Process for communicating the terms and conditions of all USACE 404 permits and DOEE 401 certifications and other permits as necessary
  - Procedures for carrying out any required mitigation
  - Procedures for handling off-ROW Project-specific locations as required by all Section 404 permit(s) issued to the Contractor by the USACE.
- SW3P:

  The Contractor shall document how it will comply with the SW3P. The documentation shall state that the Contractor has day-to-day operational control over activities necessary to comply with the SW3P and has the sole responsibility for any potential non-compliance issue. The documentation shall also state that the Contractor is responsible for submitting a Notice of Intent to DOEE. The documentation at a minimum shall include:
  - Process for training personnel on the requirements and conditions for stormwater discharges from construction sites
  - Procedures for incorporating additional properties outside the original National Environmental Policy Act-approved schematic to comply with the project's SW3P

- Procedures for handling non-compliance issues
- Escalation procedures for SW3P items

- Cultural Resources:

  Section 106 Memorandum of Agreement (MOA)

  The Contractor shall be responsible for ensuring compliance with cultural resource regulations on the Project through the Term. Cultural resources investigations on St. Elizabeths East Campus were carried out in 2011 and 2012. The Section 106 consultation process, as required by the National Historic Preservation Act, culminated in an MOA among DDOT, the Deputy Mayor for Planning and Economic Development (DMPED), District of Columbia State Historic Preservation Office, and the Advisory Council on Historic Preservation.

  The Contractor shall design and construct the Project in accordance with the stipulations agreed upon in the MOA for proposed transportation network for the St. Elizabeths Hospital East Campus, dated June 2012. The full text of the MOA can be found on the DGS Web page.

  The MOA stipulations before or during construction include (summarized from the MOA on the DGS Web page):

  - DDOT & DGS will continue to coordinate with the MOA signatories during the design phase of the transportation network, in conjunction with Federal Highway Administration. Signatories will have opportunities to review and comment on the design plans (Stipulation II).
  - In the design phase, DDOT & DGS/DMPED will consider revisions that may further minimize effects to historic properties; such as adjustments to roadway location to move it farther from contributing buildings or farther from significant trees (II.A).
  - Prepare Historic American Landscape survey documentation (V).
  - Prepare an East Campus Landscape Plan (VI).
  - Create a Vibration Monitoring Plan for monitoring contributing buildings during construction (VIII.A).
  - Install protective barriers during construction to avoid adverse effects to contributing buildings, contributing landscapes, and significant trees (VIII.B).

  If stipulations in the MOA cannot be carried out as agreed in the document, Section 106 of the National Historic Preservation Act shall be followed.

  If previously unidentified archaeological or other cultural resources are discovered during ground disturbing activities as a part of this Project, the Inadvertent Discoveries Plan attached to the June 2012 MOA shall be followed.

- Public Involvement

  The Contractor shall document how it will comply with all public involvement requirements, including public involvement requirements specifically related to cultural resources, as stipulated in the Section 106 MOA. The documentation shall comply with all applicable requirements. The documentation shall state that the Contractor is responsible for conducting all public involvement requirements (with DGS assistance) for the life of the project, except where DGS has agreements with Governmental Entities to perform public involvement requirements. The documentation at a minimum shall include:

  – Process for handling public involvements requirements
  – Procedures for documenting public involvement

- Standard Operating Procedures:

  The Contractor shall develop standard operating procedures for the following activities and include them in the ECMP:

  – Managing Hazardous Materials
  – Monitoring and controlling dust and noise during construction
  – Performing perimeter dust particle measurements to comply with applicable air quality control regulations
  – Monitoring vibration, in accordance with the Section 106 MOA
  – Installing protective barriers around contributing buildings, in accordance with Section 106 MOA
  – Monitoring and mitigating noise impacts to adjacent properties
  – Mitigating light intrusion on adjacent properties
  – Complying with jurisdictional waters and wetlands permits
  – Complying with WMATA-JDAC requirements and procedures

C.5.12.3.3 Environmental Protection Training Program

The Contractor shall develop and implement an EPTP that shall meet the minimum requirements set forth herein, which provides environmental protection training to individuals responsible for performing Work on Site before those individuals commence work on the Site. The EPTP shall include methods and procedures documented in the ECMP to:

- Educate every individual to:

  – Recognize the overall importance of environmental compliance to constructing, operating and maintaining a successful Project

  - Recognize federally listed threatened and/or endangered species that could occur in the site
  - Understand the various environmental sensitivities of the Project
- Train every individual to:
  - Recognize environmentally sensitive resources that may be encountered during the Work
  - Avoid or take appropriate action to avoid or minimize environmental impacts from the Work
  - Know the required actions, practices, and procedures regarding regulated resources
  - Understand protocols for meeting environmental commitments for post-review discoveries
- Foster the Contractor's management and supervisory personnel's attitude of commitment to the Project's environmental quality.
- Convey to all individuals the Contractor's management commitment to the Project's environmental quality.
- Convey to all individuals DGS's and the Contractor's commitment to zero tolerance for violations.

EPTP Scope and Content

The goal of the EPTP is to educate Persons performing Work about the following:

- Overall importance of environmental protection to the Project
- Compliance responsibility and Governmental Persons authority, including background and environmental issues regulatory overview
- Overview of the Contractor’s environmental commitments and responsibilities at the Project level
- Individual responsibilities
- MOA commitments
- Wetlands and jurisdictional waters of the U.S. identification
- Environmental Approvals terms and conditions, including an overview of the provisions of the final EA commitments, FONSI, Section 106 MOA, Migratory Bird Treaty Act, and SW3P
- Best management practices (BMPs) for environmental compliance, including pollution prevention, erosion, sedimentation, post-construction controls, and dust control measures to maintain water and air quality.

- Required mitigation measures for Endangered Species Act/Fish and Wildlife Coordination Act compliance
- Procedures and precautions in the event of spills of or discovery of Hazardous Materials or unknown chemicals or contamination
- Procedures and precautions in the event human skeletal remains or other archeological or paleontological resources are discovered
- Procedures regarding the relocation of historical markers
- Groundwater protection requirements
- Clean Water Act regulations and surface water protection requirements
- Overview of noise and residential impact reduction procedures
- Air quality requirements
- Penalties and/or fines for violations of and noncompliance with environmental approvals and Environmental Laws, including termination of employment

C.5.12.3.4 EPTP Participation

The Contractor shall require all individuals performing non-administrative Work on Site to participate in the EPTP and shall keep accurate records documenting attendance, as well as materials presented.

EPTP Schedule

The Contractor shall include activities for implementation of the EPTP in the Project schedule. The length of training sessions and their frequency shall be sufficient to achieve the requirements set forth above. Periodic training sessions at key times (for example, before construction or major maintenance in sensitive areas or construction timing restrictions to protect threatened and/or endangered species) shall be used to update workers on specific restrictions, conditions, concerns, and/or requirements.

C.5.12.3.5 Hazardous Materials Management Plan

The Contractor shall prepare an HMMP for the safe handling, storage, treatment and/or disposal of Hazardous Materials, whether encountered at or brought onto the Site by the Contractor, encountered or brought onto the Site by a third party including but not limited to a Subcontractor (at any tier), or otherwise, during the Term. The Contractor shall submit the final HMMP to DGS for review and approval in its good faith discretion within 60 Calendar Days of NTP-1; approval of the Plan by DGS shall be a condition of issuance of NTP-2.

The HMMP shall include procedures compliant with all applicable Environmental Laws and include, at a minimum:

- For all chemicals to be used on the Project, the Contractor shall keep and update Material Safety Data Sheets, according to OSHA requirements, throughout the Term and then shall retain copies as legally required.
- Designated individuals responsible for implementation of the plan
- Procedures for identifying and documenting potential contaminated sites that might affect Project development for both building and other site excavations
- Procedures for mitigation of known contaminated sites anticipated to affect construction
- Procedures for mitigation of unanticipated contaminated sites encountered during construction
- Procedures for mitigation of contamination during the operation and maintenance of the Project
- Procedures for developing a detailed Spill Response Plan for the Term
- Process for training individuals for responding to and mitigating Incidents involving contamination or waste or Hazardous Materials
- Provisions for appropriate storage and disposal of all waste or Hazardous Materials encountered or disposed of on the Project for the Term
- Provision for a Hazardous Materials training module as an element of the EPTP component of the CEPP
- Procedures for preparing an Investigative Work Plan (IWP) and Site Investigative Report (SIR) in the event that Hazardous Materials are discovered during performance of the Work.
- Identification and contact information for designated responsible individuals
- Procedure for notifying DGS within 2 hours of discovering Hazardous Materials

The HMMP shall include provisions for making all individuals performing on-Site Work aware of and able to recognize the potential Hazardous Materials to which they may be exposed, limiting Contractor's and other Site workers' exposure to Hazardous Materials and providing all necessary personal protective equipment to protect workers from exposure. The HMMP shall require the Contractor to provide any third party who visit the Project with the appropriate personal protective equipment.

The HMMP shall require that all individuals for or on behalf of Contractor-Related Entities performing Work handling Hazardous Materials be trained and certified at least to the minimum requirements established under the current guidelines of OSHA 1910.120 (Hazardous Waste Operations and Emergency Response [HAZWOPER] training).

Further, the HMMP shall include procedures for ensuring that all applicable certifications, licenses, authorizations and Governmental Approvals for the individuals for the Contractor

performing Work handling Hazardous Materials are current and valid through the duration of the Work.

Investigative Work Plans and Site Investigation Reports

If Hazardous Materials are encountered within any of the Project ROW, or outside the ROW but within the project limits, or on additional properties used as the Contractor's staging area, field office site, plant sites, borrow site, or stockpile location, the Contractor shall prepare an IWP that addresses the methods, techniques, and analytical testing requirements to adequately characterize the extent of the contaminated media (soil and/or groundwater or other materials) potentially affecting the Project. Examples would include but not be limited to: structures slated for demolition, steam tunnel demolition/abandonment, dewatering of trench excavations, or groundwater discharges. The Contractor shall locate and assess the likely source of contamination.

A Registered Professional Engineer and other qualified professionals, as needed, shall prepare the IWP and other necessary reports in accordance with applicable, relevant or appropriate laws and guidance.

Upon satisfactorily completing the investigative work, the Contractor shall summarize the findings within an SIR and make recommendations regarding potential response actions necessary for Project development. The Contractor shall take Hazardous Materials contamination into account during all subsequent phases of Project development, including additional properties negotiation and acquisition, property management, design, and construction.

The SIR shall address the characterization of the affected area, sampling efforts and findings, opportunities to avoid the contamination by adjusting the design, level of response action warranted if the contamination cannot be avoided, feasibility of initiating response actions before construction, pursuit of cost-reimbursement from responsible parties, the need for completing response actions concurrent with construction, and the nature of any special specifications and provisions necessary for incorporation into the Project.

The Contractor may initiate a preventative or corrective action after DGS review and approval of the SIR from appropriate federal or District agencies.

C.5.12.3.6 Communication Plan

The Contractor shall develop a CP that describes in detail the communication hierarchy for information distribution related to the compliance with the CEPP. The CP will include names and contact information, including emergency contact information, and the preferred methods of routine and emergency communication distribution.

C.5.12.3.7 Construction Monitoring Plan

The CMP shall identify times, locations, and other conditions where monitoring of construction activities are to be performed to maintain and cause compliance with Environmental Laws and

other Contract Requirements. The CMP shall establish and/or document schedules, protocols and methodologies to be used for monitoring work, with an emphasis on timely reporting, corrective actions, and adaptive management. The CMP shall establish reporting procedures, identify reporting requirements, and establish controls for report distribution and records retention. All environmental monitoring reports shall be made available for review by DGS at DGS's request. Should any non-compliance or violation be observed that represents an imminent danger to human health or the environment, the CMP shall include procedures to cause immediate notification to DGS.

Before issuance of NTP-2, the Contractor and DGS shall jointly inspect existing facilities, structures, and environmentally sensitive areas in the vicinity of the Site but not included as part of the Work. The Contractor shall provide a minimum 2-week advance notice to DGS of this joint inspection. The inspection shall document the pre-construction condition of vegetation, streets, sidewalks, landscaping, residential and commercial property, creeks, storm drainage and infrastructure. The purpose of the inspection is to provide a point of reference from which DGS can determine if any facility, structure and environmentally sensitive area damaged during the Work is restored to its pre-construction condition. The Contractor shall document the inspection with a report that shall include photographs, videos, sketches, maps, and narratives clearly depicting the pre-construction Site condition.

All photographs and videos shall be of archival quality and shall be accompanied by a caption or voice recording describing the date, time of day, location, and direction in which the photograph or video was taken. If the photograph shows existing damage, the damage must be clearly shown and noted in the caption. If the video shows existing damage, the damage must be audibly called out on the recording. All sketches and maps must be no larger than 11 inches by 17 inches. All photographs must be 4 inches by 6 inches. Videos must be digital.

The post-Award inspection (coordinated with DC Water, DOEE, and DGS) shall cover the municipal separate storm sewer system within and adjacent to the Site. During the inspection, the Contractor shall note the following:

- Storm drains, culverts, swales, and other components of the municipal separate storm sewer system that the Contractor has verified as free of floatable trash, silt, debris, and functioning as originally intended.
- Storm drains or culverts that do not function or appear not to function as originally intended.
- Siltation of culverts, concrete swales, and other components of the municipal separate storm sewer system within the project limits.
- The presence of construction on adjacent, up-gradient, or down-gradient properties. If construction on other properties is noted, the Contractor shall photographically document the general condition of these properties and their compliance with stormwater regulations.
- Pre-existing off-Site tracking from the Site or surrounding properties.

- Potential pre-existing contamination (such as areas of soil discoloration or distressed vegetation).
- Any other pre-existing condition that, by its nature, could be construed as a potential future compliance issue.

C.5.12.3.8 Recycling Plan

Except as otherwise noted, demolished materials from Site and building demolition shall become the property of the Contractor and shall be legally disposed of or salvaged and recycled as called for in the Intermediate Plans and Contract Documents. The Contractor shall develop a recycling plan that describes in detail at a minimum the Contractor's plan to salvage and recycle common brick, concrete, and structural steel as called for in the Intermediate Plans as well as details regarding other materials the Contractor anticipates being able to salvage and recycle. The recycling plan will also describe monthly sustainability reports that will include details on material salvage/recycle percentages versus total demolition quantities for common brick, concrete and structural steel, as well as details on other materials salvaged for recycling and demolition materials that have been legally disposed of.

C.5.12.4 Environmental Personnel

The Contractor, acting through the Environmental Compliance Manager (ECM), shall designate an Environmental Team (ET), as detailed in this section, to prevent, minimize, and/or correct any violation of or noncompliance with environmental approvals. The ET shall consist of environmental training personnel, environmental compliance inspectors (ECIs), and a natural resource biologist, water quality specialist, and Hazardous Materials manager. All of the ET members shall be deemed other principal personnel. Because St. Elizabeths is a National Historic Landmark and an MOA is in place, the ET should include an archaeologist, architectural historian, historian, and/or a historical architect.

In the CEPP, the Contractor shall establish a detailed approach, procedures and methods for:

- Staffing and availability of ECM and all ET personnel
- ET staff response times during the Work

C.5.12.4.1 Environmental Compliance Manager

The Contractor shall designate a full-time ECM for the Work. The ECM shall report and coordinate all issues directly with DGS and the Contractor's Project Manager. In the event the ECM, in consultation with the Contractor's Project Manager and DGS, is unable to reach satisfactory resolution of environmental issues, the ECM shall provide written notification to the Contractor and DGS outlining the concerns, actions taken in attempt to correct the concerns, and provide a recommendation as to the suggested course of action.

The ECM shall direct the work of the ET and shall monitor, document, and report the current status of environmental compliance for the Work. The ECM shall report immediately to DGS

and the Contractor any violation or non-compliance and shall include the appropriate recommendations for corrective action, including stoppage of Work, with any such report.

The ECM shall coordinate with DGS, the Contractor, DOEE, and permitting agencies. The ECM shall submit all necessary environmental documentation and monitoring reports to the appropriate Governmental Entities and when applicable, through DGS, to the extent necessary to maintain compliance with applicable environmental approvals.

The Contractor shall not have the ability to relieve the ECM of his or her duty without the written consent of DGS. Should the Contractor desire to replace ECM, the Contractor shall submit to DGS the resume of a replacement candidate. The replacement candidate shall be available full-time within 30 Calendar Days after delivery of DGS's written acceptance. In the absence of the ECM, the Contractor's Hazardous Materials manager shall act as an interim ECM.

The ECM candidate shall have at least 5 years of experience successfully managing the environmental compliance of urban construction. The qualifying experience used to evaluate an ECM candidate must include the following experience:

- Developing and managing a SW3P
- Developing and managing a hazardous substance and petroleum products management plan
- Implementing environmental mitigation plans
- Providing environmental and personal protection training
- Monitoring compliance with the Section 106 MOA
- Monitoring compliance with the Section 404 permit conditions

The ECM's qualifying experience must demonstrate familiarity with the following:

- The scope and terminology of American Society for Testing of Materials (ASTM) E 1527-05, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process
- Requirements of environmental certification/permitting provisions

C.5.12.4.2 Environmental Training Staff

Under the direction of the ECM, the environmental training staff shall develop, schedule, and conduct environmental awareness and environmental compliance training for the Contractor's personnel. All training shall be in accordance with the requirements set forth in Section C.5.12.2.3. Environmental training staff members shall have at least 1 year of experience providing environmental compliance inspection for urban construction.

C.5.12.4.3 Environmental Compliance Inspectors

The ECIs shall conduct onsite environmental monitoring, prepare documentation, and report to the ECM daily all violations, compliance, and noncompliance with environmental approvals.

The ECIs shall report immediately to the ECM any violation or non-compliance and shall include, with any such reports, the appropriate recommendations for corrective action, including but not limited to stoppage of Work.

The ECIs shall have at least 1 year operational control experience of SW3P activities.

C.5.12.4.4 Cultural Resource Management Personnel

The ECM shall designate as needed an archaeologist, architectural historian, historian, and/or historical architect to provide expertise in monitoring impacts to cultural resources during the course of the Work and ensuring the stipulations of the Section 106 MOA are followed.

C.5.12.4.5 Water Quality Specialist

The ECM shall designate as needed a water quality specialist to provide expertise in permitting delineation, stormwater pollution prevention, and the protection of jurisdictional waters during the course of the Work.

The water quality specialist shall have verifiable experience implementing SW3Ps and shall be able to demonstrate a working knowledge of DOEE requirements applicable to the Project.

C.5.12.4.6 Hazardous Materials Manager

The ECM shall designate a Hazardous Materials manager to provide expertise in the safe handling of Hazardous Materials required to perform the Work and those that may be discovered/affected during the duration of the Project. The Hazardous Materials manager shall conduct activities such as the following:

- Schedule and/or conduct training for individuals for or on behalf of Contractor's and Contractor-Related Entities performing Work on-Site
- Verify all individual’s certifications prior to and required for any handling of Hazardous Materials
- Maintain records of all incidents involving Hazardous Materials and notify the ECM, DGS, and appropriate authorities in writing of any such incidents

The Hazardous Materials manager shall be a qualified professional with 40-hour HAZWOPER certification and at least 5 years of experience in similar projects in the following areas:

- Experienced in developing IWPs, SIRs, and remedial action plans or equivalent reports necessary and acceptable to the DOEE in material discovery and remediation efforts of Hazardous Materials.
- Experienced in DOEE guidance for the investigation and remediation of Hazardous Materials.

C.5.12.5 Property Access

To fulfill the obligation of the District-provided approvals to maintain current access during and after construction, the Contractor shall make reasonable efforts to minimize the inconvenience to vehicles, bicycles, and pedestrians during the Term.

The Contractor shall coordinate and provide 24/7/365 access to the new hospital site (including all hospital employees, deliveries, and the emergency vehicles), the WMATA Congress Heights Metro station, and the two areas on the Site where there are vents and access shafts to the WMATA Green Line tunnel running under the East Campus. The Contractor shall coordinate with WMATA regarding the vent shafts before DGS issues NTP-2.

The Contractor shall coordinate with developers and allow them access to the site development locations they are developing. It will be the Contractor's sole responsibility to develop agreements with individual developers regarding access, security, maintenance, repair of damages, and time frames for ingress/egress with DGS and DMPED (Master Developer for the Site). Stage 1 Phase 1 is to be constructed in at least four sub-phases, as indicated in the RIDs.

It shall be the Contractor's responsibility to maintain Site security at all times. This may include but is not limited to: maintaining the existing perimeter fencing, installing temporary security fencing where existing fence does not exist; installing/relocating temporary security fencing as Work progresses and/or existing fencing is removed; installing/maintaining gates; utilizing security patrols, cameras or other monitoring devices; and coordinating with adjacent properties in order to maintain a safe and secure Project Site. The District Department of General Services (DGS) currently provides Site security. The Contractor shall coordinate all security efforts, including the development of the Project Site Security Plan, with DGS.

The existing guard house at the hospital will not be affected by the Stage 1 Phase 1 Project.

The Contractor shall submit a Project Site Security Plan to DGS for review and consideration within 60 calendar days of NTP-1.

C.5.12.6 Dust Control

The Contractor shall institute dust control measures to minimize air quality impacts. The measures shall be adjusted as necessary based on construction traffic, forecasted wind speeds, and persistent dry weather conditions. A dust monitoring and control plan shall be developed as part of the CAP detailed in Section C.5.12.3.2, to minimize dust impacts to the hospital, WMATA, and other neighboring properties and adjacent residences.

C.5.12.7 Hazardous Materials

The Contractor shall identify, inspect, test, notify, amend notifications as necessary, pay notification and disposal fees, and abate hazardous materials found on or within the Site, including, but not limited to, materials in buildings, soils, steam tunnels, Utilities, and any liquids or solids found on Site that are determined to be hazardous. The Contractor shall legally dispose of any and all Hazardous Materials that are to be abated.

C.5.13 Third-party Agreements

C.5.13.1 General Requirements

DGS has existing agreements with local Governmental Entities and Utility Companies along the Project corridor that define the requirements for construction, maintenance, and operation of traffic signals, illumination, and roadway and Utility maintenance. These agreements specify the local Governmental Persons responsibilities and DGS's responsibilities with respect to the requirements and are provided in the RIDs listed in Attachment A.

For the purpose of the DB Construction, the Contractor will cooperate and comply with the terms, conditions, specifications, and requirements of the MOA/MOU's. In any event, the DB Contractor will cooperate and comply with any notice requirements, testing and inspection requirements set forth therein. Contractor is responsible for providing DGS and Governmental Persons with all information necessary for it to fulfill DGS's responsibilities under these agreements.

DMPED is currently negotiating MOAs and/or MOUs with individual Utilities. Finalized MOAs and/or MOUs will be delivered to the Contractor upon award of a Contract.

C.5.13.2 Traffic Signals

The Contractor shall maintain existing traffic signals until such time as new traffic signals are operational. The Contractor shall remove and legally dispose of existing signals once they are no longer needed. Should DDOT desire to recycle the existing signals, the Contractor will deliver the equipment to a location specified by DDOT. All components of modified signals must be upgraded to current DDOT standards as part of the overall signal modification.

C.5.13.3 Other Affected Third Parties

When Work interfaces with other third-party facilities, the Contractor shall be responsible for coordinating the Work with all third parties potentially affected by the Work. The Contractor shall prepare an Affected Third Parties Plan that describes how the Contractor will mitigate the impact of the Work upon potentially affected third parties for DGS's review before initiating discussions with potentially affected third parties. Potential other third parties include, but are not limited to, the SEH, WMATA's Congress Heights Metro Station, site developers, DGS, The proposed Entertainment & Sports Arena, Gateway Pavilion, Bike Share, pop-up retail sites, R.I.S.E. Demonstration Center and temporary walkways, Washington Gas design and installation of new natural gas distribution system within the proposed Stage 1 Phase 1 ROW, and various other Utilities.

C.5.14 Utility Work

C.5.14.1 General Requirements

A number of existing public and private Utilities are within or in the vicinity of the Project ROW, some pursuant to statutory rights and some pursuant to property rights. Those existing Utilities within the project limits will need to be demolished, abandoned, kept in service and connected to new facilities, or otherwise adjusted in order to accommodate the Project as indicated in the Intermediate Plans. This Section C.5.14.1 establishes procedures and requirements for Utility Work, including such processes as coordination with utility companies; administration of the engineering, demolition or abandonment of existing facilities; construction; adjustments at tie-ins; and other activities necessary for Utility Work, and required documentation.

The Contractor shall cause all utility adjustments necessary to accommodate construction, operation, maintenance and/or use of the Project. Some Utility Adjustments may be performed by the Utility Company; all others shall be performed by the Contractor (subject to any approval rights required by the Utility Company for those working on its facilities).

All Utility Work shall be performed by a pre-approved contractor from each Utility's pre-approved contractors list, if applicable.

At no time shall the Utility services to the SEH, the Gateway Pavilion, the R.I.S.E. Demonstration Center, the Congress Heights Metro Station, or the Metro Green Line be disrupted.

Intermediate water line design includes 12-inch ductile iron pipe main service lines with 8-inch, 6 inch and 4 inch ductile iron pipe stub-outs at Stage 1 Phase 1 parcels. It is anticipated that parcel developers will connect to each stub-out with reducers for a fire suppression line and potable water service line per Utility Company standards.

The intersections of water mains will include multiple valves to allow for the discrete and select shutdown of individual mains to minimize impacts when shutdowns become necessary. All water valves will open and close in the same direction and will meet DC Water standards.

Fire suppression and potable water existing service supply to SEH shall remain in continuous service until proposed new services have been constructed, inspected, approved, and online by DC Water. Temporary fire protection systems may be required for protection of the Historic Buildings adjacent to areas of Stage 1 Phase 1 where utility demolition removes existing water mains and hydrants. Temporary systems may include above ground piping or hoses, subject to Fire Marshall Approval.

The Contractor shall coordinate with DMPED and DGS for preservation of, and/or reconnection to, existing fire hydrants, water lines, sanitary sewer, storm sewer and other services for existing buildings on the East Campus. Existing hydrant locations, waterlines, sanitary sewers, storm sewers, and other services shall be evaluated and marked accordingly so preservation is

guaranteed. The existing elevated storage water tank located on the East Campus and the 14-inch water main connecting the tank to the West Campus pumping station is to remain in service during construction and after Stage 1 Phase 1 Project completion.

Other Utility Work will include new stormwater drainage systems related to roadway drainage and development parcel outfalls, as well as reconditioning or replacement of existing storm sewers in the ravine area of East Campus, as shown on the Intermediate Plans. DC Water is presently analyzing downstream stormwater drainage system capacity so the potential for some off-Site storm sewer improvements for the project exists, but will not be considered part of the Project for the Stage 1 Phase 1 Infrastructure. Details of the stormwater drainage system are contained in the Intermediate Plans and the draft MOU between DC Water and DGS (see Attachment A).

A new separate gravity sanitary sewer system will be installed as part of the Project. This system will serve all the new development pads in Stage 1 Phase 1 as well as connect to various existing building sanitary sewer service lines as outlined in the Intermediate Plans. Reconditioning or replacement of existing sanitary sewer in the ravine will be as outlined in the Intermediate Plans. DC Water is presently analyzing downstream sanitary sewer pump station and line capacities, so the potential for some off-Site sanitary sewer improvements for the project exists, but will not be considered part of the Project for the Stage 1 Phase 1 Infrastructure. Details of the Sanitary Sewer system are contained in the Intermediate Plans and the MOU between DC Water and DGS (see Attachment A).

The installation of dry Utilities (electric and telecommunications) infrastructure with the construction of roadways is intended to preclude the need for future disturbance of the roadways in the Stage 1 area by these Utilities for at least 5 years. A moratorium will be established by DDOT prohibiting the roadways from being disturbed for 5 years from the time of construction completion. The Utility infrastructure shall be sufficient to allow PEPCO and DC Net to complete the installation of services to all properties and proposed new or renovated developments without disturbing the roadways. It is the Contractor's responsibility to coordinate with each Utility to ensure its needs are met. Washington Gas will be constructing its facilities and services with the above intent. The Contractor will coordinate with Washington Gas. Details of the dry utility systems are contained in the Intermediate Plans and the MOUs between DGS and the utility providers (see Attachment A).

The existing electrical system on the East Campus was installed privately for the specific needs and use of St. Elizabeths; therefore it is not considered reusable by PEPCO. PEPCO has no use for the existing infrastructure, so all unused existing electrical distribution, cables, switches, conduit and manholes within the project limits shall be removed or abandoned. All cables and transformers shall be removed and salvaged or recycled. Contractor is to coordinate with DGS and other on-site facilities regarding temporary street lights and other electrical services (see Attachment A).

PEPCO has constructed a new 12-inch diameter underground duct bank with four active feeders under Martin Luther King Jr. Avenue SE via 8th Street and Malcolm X Avenue SE to the main gate (tunnel) at the West Campus. PEPCO intends to extend the primary electrical service feeders from the infrastructure in Martin Luther King Jr. Avenue SE to serve the East Campus.

Interconnecting systems and coordination with the existing hospital power service will require relocating/ reconfiguring the existing SEH power supply and substation. The ultimate electrical system shall be provided to accommodate the new roadway configuration and criteria provided in the Intermediate Plans and Contract Documents. Details of the Word to be performed and coordination efforts required are contained in the Intermediate Plans (see Attachment A). The Contractor shall coordinate with all stakeholders to avoid service interruptions to SEH and the WMATA Metro Station. Switchgear serving SEH may need to be relocated in Stage 1 Phase 2 of the East Campus development (which is not a part of this Contract). PEPCO lines servicing the SEH, WMATA, and certain existing users on campus shall remain in service to provide existing loads that must be sustained for the term of construction. Any and all abandonment of existing services must be coordinated with PEPCO and DGS.

Contractor is to coordinate with Pepco regarding purchase of new materials for the Stage 1 Phase 1 electrical systems Work. Materials are to be purchased by the Contractor through Pepco to insure materials installed in the new electrical system meets Pepco standards.

Several sites within Stage 1 Phase 2 areas of East Campus will require temporary electric service during Stage 1 construction:

- Temporary power supply to existing buildings that have cellular telephone provider antenna transmitter stations, that will remain operational until new locations are available
- Temporary access walkway lighting for walkway between Congress Heights Metro Station and Gateway Pavilion
- Several perimeter security locations
- Demonstration Center Building (R.I.S.E. Center) adjacent to Martin Luther King, Jr. Boulevard at the southwest corner of East Campus
- The Gateway Pavilion, to support the West Campus community opened in 2013. Contractor must maintain services and not cause disruptions to the Gateway Pavilion Utility services.

The existing telecommunications system on the East Campus was installed privately for the specific needs and use of St. Elizabeths, so it is not considered re-usable by DC Net. DC Net has expressed no interest in using the existing infrastructure, so all existing telecommunication distribution, cables, switches, conduit and manholes shall be removed or abandoned. All cables shall be removed and salvaged or recycled. DC Net will be the primary service provider to East Campus sites.

Verizon was/is the telecommunication infrastructure owner for equipment up to the main telecommunication building. This building (the Dix building), is slated to be demolished in Stage 2 of development. A few buildings have cellular telephone antenna/transmitter equipment owned by a variety of vendors. These facilities shall require coordination with vendors and DGS prior to power interruption.

Existing entertainment TV wiring infrastructure shall be removed.

Any existing security systems on the East Campus are remnants of St. Elizabeths and shall be removed after coordination with DGS.

Several sites will require temporary telecommunication service during Stage 1 Phase 1 construction:

- Temporary telecommunication service to existing buildings that have cellular telephone provider antenna transmitter stations, that will remain operational until new locations are available
- The Demonstration Center Building (Old Chapel) in the southwest corner of East Campus presently served by DC Net
- Several perimeter security locations
- The Gateway Pavilion. The Contractor must maintain service and not cause disruptions to the Gateway Pavilion Utility services.

All existing natural gas infrastructure on-Site is owned and maintained by Washington Gas. It is believed that all natural gas service to the Stage 1 Phase 1 Site has been disconnected by Washington Gas. Existing infrastructure is old and interferes with potential property development and shall be removed. Contractor is to verify that Washington Gas has terminated and capped existing piping at Martin Luther King Jr. Avenue SE or other adjacent streets. The Contractor shall remove or abandon existing piping on the Site in accordance with the Intermediate Plans after obtaining written approval from DGS and Washington Gas. Pipe shall be removed where encountered in the construction of roadways. Piping not in the proposed roadways may be abandoned in accordance with Intermediate Plans and Contract Documents. The Contractor shall coordinate with Washington Gas for the capping of additional lines that are to be abandoned.

The Contractor shall coordinate with Washington Gas to avoid service interruptions to SEH and the WMATA Metro Station.

All new natural gas pipes shall be provided and installed by Washington Gas. The Contractor shall coordinate with Washington Gas contractor for the installation of the new gas infrastructure, concurrent with the Stage 1 Phase 1 Infrastructure Improvements Project, including any sub-phasing of Stage 1 Phase 1 improvements.

The intersections of gas mains shall include multiple valves to allow for the discrete and select shutdown of individual mains to minimize impacts when shutdowns become necessary. All gas valves will open and close in the same direction. Design and construction of facilities shall be by Washington Gas.

The East Campus of St. Elizabeths used a central plant arraignment for heating. This concept used a system of steam tunnels to house steam distribution pipes and other facilities to each of the buildings. These steam tunnels date back to the early 1900's. Materials used in the tunnels and insulation of the pipes are now considered hazardous materials and include asbestos. The tunnels connect buildings, one to another. The tunnels will not be reused in the new development because they contain hazardous materials and are considered a security risk. All Hazardous Materials shall be abated in those tunnels that are to be demolished and removed from the Site. Tunnels that conflict with new roadway construction, new Utility infrastructure construction, or other demolition activities shall be demolished. Other sections of tunnels not in conflict with new construction may be sealed and abandoned 20 feet past ROW limits as indicated on the Intermediate Plans.

All hazardous materials abatement shall be performed in accordance and strict compliance with all Environmental Laws and other applicable Contract Requirements.

C.5.14.1.1 When Utility Adjustment is Required

A Utility Adjustment may be necessary to accommodate the Project for either or both of the following reasons: (a) a physical conflict between the Project and the Utility, and/or (b) making tie-ins to existing facilities with newly installed Utilities. The physical limits of all Utility Adjustments shall extend as necessary to functionally replace the existing Utility, whether inside or outside of the Project ROW.

C.5.14.1.2 Certain Components of the Utility Work

Coordination

The Contractor shall communicate, cooperate, and coordinate with DGS, the Utility Owners and potentially affected third parties, as necessary for performance of the Utility Adjustment Work. The Contractor shall be responsible for preparing (unless prepared by the Utility Company) and securing execution (by the Contractor and the Utility Company) of all necessary MOAs/MOUs.

All MOAs/MOUs must be approved by DGS before taking effect.

Betterments

Replacements for existing Utilities shall be designed and constructed to provide service at least equal to that offered by the existing Utilities, or upgraded to the level shown in the Concept Infrastructure Plan as minimum or as detailed in the Intermediate Plans. Utility enhancements are not included in the Work; however, any Betterment Work furnished or performed by Contractor as part of a Utility Adjustment shall be deemed added to the Work, on the date the MOA/MOU

providing for same becomes fully effective. The Contractor shall perform all coordination necessary for Betterments.

Protection in Place

The Contractor shall be responsible for protection in place of all Utilities affected by the Project as necessary for their continued safe operation and structural integrity and to otherwise satisfy the requirements of the Contract Documents. The Utility Company must agree to protect in place all Work that pertains to its facilities.

Abandonment and Removal

The Contractor shall make all arrangements and perform all Work (including Hazardous Materials abatement) necessary to complete each abandonment or removal (and legal disposal) of a Utility in accordance with the Contract Requirements, including obtaining governmental approvals and consent from the affected Utility Owner and any affected landowner(s), or shall confirm that the Utility Owner has completed these tasks. Abandonment of Utilities in place shall require approval by DGS. See the Intermediate Plans for the extent of Utility demolition and removals for Stage 1 Phase 1 construction.

Steam tunnels shall be demolished to a point a minimum of 20 feet outside of the ROW limits shown in the Intermediate Plans following abatement of hazardous materials or as necessary in the area of building demolition. The remaining portions of steam tunnels beyond the minimum 20-foot limit may be abandoned by blocking off the tunnels with airtight walls.

Service Lines and Utility Appurtenances

Whenever required to accommodate construction, operation, maintenance, and/or use of the Project, the Contractor shall cause service line adjustments and Utility appurtenance adjustments. The service lines shall have a definitive point of termination such as a meter or point of sale. On completion of these, the Contractor shall cause full reinstatement of the roadway, including reconstruction of curb, gutter, sidewalks, and landscaping, whether the Utility Adjustment Work is performed by the Utility owner or by the Contractor.

C.5.14.1.3 Agreements between Contractor and Utility Owners

Except as otherwise stated in this Section C.5.14 or elsewhere in the Contract Documents, each Utility Work shall be specifically addressed in a MOA or MOU, or in an amendment, as described elsewhere in this Section C.5.14. The MOA/MOU (s) are being negotiated by DMPED and shall be assigned to the Contractor who will be responsible meeting the conditions of each MOA/MOU. DGS/DMPED anticipates base agreements to be in place before Contract Award.

Memorandum of Agreement/Memorandum of Understanding

Through assignment, the Contractor shall enter into one or more MOAs or MOUs with each affected Utility Company to define the design, material, construction, inspection, and acceptance standards and procedures necessary to complete Utility Adjustments, as well as to define Contractor's and the Utility Company's respective responsibilities for Utility Adjustment

activities such as material procurement, construction, inspection and acceptance. A MOA/MOU may address more than one Utility Adjustment for the same Utility Company. Additional Utility Work may be added to an existing MOA/MOU by a MOA/MOU amendment.

The Contractor shall be assigned the necessary MOAs/MOUs with each affected Utility Company within a reasonable time period after issuance of NTP-1. The Contractor shall address any proposed changes to a standard form (other than filling in blanks specific to a particular Utility Company) in a Utility Company-specific addendum. Each MOA/MOU amendment (including the Utility plans attached thereto) shall be subject to DGS/DMPED review and approval.

Language modification to any MOA/.MOU shall be approved by DGS/DMPED.

Utility MOA/MOU Amendments

Except where utility adjustment field modifications are permitted, modification of an executed MOA/MOU or any component thereof after it has been approved by DGS as part of a Utility assembly, shall be stated in a Utility Adjustment Agreement Amendment (UAAA). A UAAA may be used only when the allocation of responsibility for the Utility Adjustment work covered by that UAAA is the same as in the underlying MOA/MOU; otherwise, an additional MOA/MOU will be required.

Each UAAA (including any Utility Adjustment plans attached thereto) shall be subject to DDOT/DMPED approval as part of a supplemental utility assembly. Except as otherwise directed by DGS or provided in an applicable MOA/MOU, the Contractor shall prepare all UAAAs.

Language modification to a MOA/MOU shall be approved by DGS prior to the submission of the UAAA.

C.5.14.1.4 Recordkeeping

The Contractor shall maintain construction and inspection records in order to ascertain that Utility Adjustment Work is accomplished in accordance with the terms and in the manner proposed on the approved Utility Adjustment plans and otherwise as required by the Contract Documents and the applicable MOA/MOU (s).

C.5.14.2 Administrative Requirements

C.5.14.2.1 Standards

All Utility Adjustment Work shall comply with all Contract Requirements.

C.5.14.2.2 Communications

Communication with Utility Companies

The Contractor is responsible for holding meetings and otherwise communicating with each Utility Company as necessary to timely accomplish the Utility Adjustments in compliance with

the Contract Documents. DGS shall be notified of all meetings and will participate in these meetings if requested by the Utility Company or the Contractor or otherwise as DGS deems appropriate.

Before distribution of any communications to Utility Companies, and 21 Days in advance of distribution, the Contractor shall submit to DGS, for its review and comment, the form, content, and addressees of any such communications. For purposes of this Section C.5.14, the term communications means written correspondence that is sent to Utility Companies within a 3-week time period and contains substantially the same content with respect to each Utility Company.

Meetings

At least 3 Business Days in advance of each scheduled meeting, the Contractor shall provide notice and an agenda for the meeting separately to DGS and, if necessary, to the appropriate Utility Company. The Contractor shall prepare minutes of all meetings and shall keep copies of all correspondence.

The Contractor shall prepare meeting minutes within 5 Business Days after the conclusion of such meetings. At a minimum, the Contractor shall include the following items in the meeting minutes:

- A complete list of attendees (including their affiliations, telephone numbers, and e-mail addresses)
- Documentation of the issues discussed and any associated solutions
- Description of remaining open issues and action items (including the person(s) responsible for follow-up and target date for resolution)

The Contractor shall submit draft versions of all meeting minutes to DGS for review before distributing final versions to the meeting attendees and appropriate customer groups.

C.5.14.2.3 Utility Team

The Contractor shall provide a Utility team with appropriate qualifications and experience for the Utility Work. The Contractor shall provide the names and contact details, titles, job roles, and specific experience of the team members in the PMP.

C.5.14.2.4 Real Property Matters

The following subsections describe what services the Contractor shall provide in connection with existing and future occupancy of property by Utilities.

Documentation of Existing Utility Property Interests -- Affidavits

For each existing Utility property interest within the Project ROW claimed by any Utility Company, the Contractor shall include an affidavit of property interest in the applicable Utility assembly, with documentation of the existing Utility property interest (e.g., an easement deed) attached. Any such claim shall be subject to DGS's review as part of a Utility assembly approval.

No property interests are known to exist within East Campus but may exist within adjacent ROWs or with service lines to SEH or to the WMATA Congress Heights Metro Station or Green Line.

Acquisition of Replacement Utility Property Interests

Each Utility Company will be responsible for acquiring any replacement Utility property interests that are necessary for its Utility Adjustments or new Utility system installations. For new Utilities in new ROW, Utility Companies need to obtain an update to their public ROW occupancy permit after acceptance of the new Utility systems. The Contractor shall have the following responsibilities for each acquisition:

- The Contractor shall coordinate with, and provide the necessary information to each Utility Company as necessary for the Utility Company to acquire any replacement Utility property interests required for its Utility Adjustments.
- If any of the Contractor-related entities assists a Utility Company in acquiring a replacement Utility property interest, such assistance shall be by separate contract outside of the Work, and the Contractor shall ensure that the following requirements are met:
  - The files and records must be kept separate and apart from all acquisition files and records for the Project ROW.
  - The items used in acquisition of replacement Utility property interests (for example, appraisals, written evaluations and owner contact reports) must be separate from the transfer of the Project ROW.

The Contractor is not responsible for Utility Company condemnation proceedings.

Relinquishment of Existing Utility Property Interests

The Contractor shall cause the affected Utility Company to relinquish each existing Utility property interest within the Project ROW, unless the existing Utility occupying such interest is either (i) remaining in its original location or (ii) being reinstalled in a new location still subject to such interest.

Quitclaim Deeds

Except as otherwise directed by DGS, the Contractor shall prepare a quitclaim deed for each relinquishment of an existing Utility property interest using DGS's standard form. Each quitclaim deed shall be subject to DGS's approval as part of a Utility approval.

The Contractor understands and expects that a Utility Company will not relinquish any existing Utility property interest until after the Utility Adjustment has been accepted by the Utility Company in its new location. Accordingly, instead of an executed quitclaim deed, the Utility assembly for such a Utility Adjustment shall include a letter signed by the Utility Company's authorized representative confirming that the interest will be quitclaimed upon completion of the Utility Adjustment, and a copy of the unsigned quitclaim deed. In these cases, the Contractor

shall obtain the executed quitclaim deed within 90 days of completion of the Utility Adjustment or unless otherwise approved by DGS in writing. The quitclaim deed must be approved by DGS before recording.

Documentation Requirements

The Contractor shall prepare, negotiate (to the extent permitted by Section C.5.14.2.4, and obtain execution by the Utility Company of (and record in the appropriate jurisdiction, if applicable) all agreements and deeds described in Section C.5.14.2.4, including all necessary exhibits and information concerning the Project (for example, reports, plans, and surveys). Each agreement or deed shall identify the subject Utility (ies) by the applicable Utility assembly number (*[four-digit number beginning with 0001]*) (ex. StE-U-0001), and shall also identify any real property interests by parcel number or roadway station number, or by other identification acceptable to DGS.

C.5.14.3 Design

C.5.14.3.1 Contractor's Responsibility for Utility Identification

The Contractor shall be responsible for ascertaining, at its own expense, all pertinent details of utilities located within the Project ROW or otherwise affected by the Project, whether located on private property or within an existing public ROW, and including all service lines.

The Contractor shall prepare and submit to DGS, no later than 90 Days after NTP-2 or 30 Calendar Days before the first Utility design package is submitted, a Utility Strip Map showing the information obtained and/or confirmed pursuant to this Section C.14.3.1. The Contractor's Utility Strip Map shall show in plain view all Utilities within the Project ROW or otherwise affected by the Project, in each case detailing the type of Utility facility (communication, gas, and water) size, material and the Utility Company's name and contact information. The Contractor shall update the information provided in the Utility Strip Map and shall submit the same to DGS in accordance with the PMP.

C.5.14.3.2 Technical Criteria and Performance Standards

All design plans for Utility Adjustment Work, whether furnished by the Contractor or by the Utility Company, shall be consistent and compatible with the following:

- The applicable requirements of the Contract Documents
- The Project as shown in the Intermediate Plans
- Any Utilities remaining in, or being installed in, the same vicinity
- All applicable Governmental and Utility Company approvals
- Private approvals of any third parties necessary for such Work
- Memorandums of Understanding between DGS/DMPED and Utility Companies (see Attachment A).

C.5.14.3.3 Utility Concept Plans

The Contractor shall prepare a final Utility design plan for the Project based on the Intermediate Plans and conceptual approvals from Utilities already in place showing the approximate location of each existing Utility, any existing Utilities to remain, existing Utilities to be demolished or abandoned in place, proposed location of each Utility, the Contractor's Utility Adjustment recommendations, and requirements of the Utility Companies.

In accordance with the PMP, the Contractor shall submit the final Utility design plan to the affected Utility Company (ies) for review and concurrence prior to submission to DGS. The plan shall be color-coded and shall use a scale that clearly depicts all of the required information. Any subsequent revisions will follow the same review process as noted above.

The intermediate design for water, sanitary sewer and other Utilities includes multiple stub-outs at Stage 1 Phase 1 parcels. The Contractor shall ensure proper stub-outs are included in their final Utility design plans for installation during construction. Estimated demand analysis is documented in the St. Elizabeths East Campus Redevelopment Concept Infrastructure Plan.

C.5.14.4 Construction

C.5.14.4.1 General Construction Criteria

All Utility Adjustment and new Utility construction performed by the Contractor shall conform to the requirements listed below. In addition, the Contractor is responsible for verifying that all Utility Adjustment construction performed by each Utility Company conforms to the requirements described below. In case of nonconformance, the Contractor is responsible for the performance of whatever corrective work is necessary at its own expense, to deliver Work that meet the Contract Requirements, and is acceptable to each Utility and DGS. All Work shall be performed in accordance with:

- The Contract Documents
- The Utility Plans reviewed by DGS and agreed to by Utility Companies
- Utility Company MOUs with DGS/DMPED (see Attachment A)
- All Project safety and environmental requirements
- All pre-construction meeting requirements
- Utility Company standard specifications

C.5.14.4.2 Inspection of Utility Company Construction

The Contractor shall set forth procedures in the PMP for inspection of all Utility Work performed by Utility Company (ies) (and/or their contractors) to verify compliance with the Contract Requirements. The Contractor is responsible for QC for all work performed by the Utility Company (ies) and/or their contractors.

C.5.14.4.3 Scheduling Utility Work

The Contractor shall not arrange for any demolition, removal, or other construction work for any Utility until all of the following conditions are satisfied:

- The Utility Adjustment is covered by an executed MOA/MOU (and any conditions to the start of such activities that are included in the MOA/MOU have been satisfied).
- Pre-construction meeting shall be required after execution of the MOA/MOU and before the start of any construction activities, unless otherwise approved by DGS.
- The review and comment process has been completed and required Approvals have been obtained for the final Utility design plans.
- All governmental and Utility Company Approvals necessary for the Utility Work have been obtained, and any pre-construction requirements contained in those Governmental and Utility Company Approvals have been satisfied.
- All other conditions to that Work stated in the Contract Documents have been satisfied.

C.5.14.4.4 Standard of Care Regarding Utilities

The Contractor shall carefully and skillfully carry out all Work affecting Utilities and shall mark, support, secure, exercise care, and otherwise act to avoid damage to Utilities. At the completion of the Work, the condition of all Utilities shall be at least as safe and permanent as before and shall meet Utility safety requirements.

C.5.14.4.5 Emergency Procedures

The Contractor shall provide emergency procedures with respect to Utility Work in the PMP. The Contractor shall obtain emergency contact information from and establish emergency procedures with each Utility Company in the event of rupture break or damage to Utility Company's Utility facilities.

C.5.14.4.6 Utility Adjustment Field Modifications

The Contractor shall establish a procedure to be followed if a Utility Adjustment Field Modification (UAFM) is proposed by either the Contractor or a Utility Company, after the final Utility design plans have been approved. The procedure shall contain, at minimum, the following processes:

- The Utility Company's review and approval of a UAFM proposed by the Contractor, or the Contractor's review and approval of a UAFM proposed by the Utility Company. The UAFM shall have approval before the start of construction. All revisions shall be signed and sealed by a Registered Professional Engineer and formally submitted to DGS for review and approval.
- Transmittal of UAFM to the appropriate construction field personnel.

- Inclusion of any UAFM in the record drawings for the Project.

The Contractor shall cause the procedure to be followed for all UAFMs, whether the construction is performed by the Contractor or by the Utility Company.

C.5.14.4.7 Switch Over to New Facilities

After a newly constructed Utility Work has been accepted by the Utility Company and is otherwise ready to be placed in service, the Contractor shall coordinate with the Utility Company regarding the procedure and timing for placing the newly constructed Utility Work into service and terminating service at the Utility being replaced.

C.5.14.4.8 Record Drawings

The Contractor shall provide record drawings to each Utility Company for its adjusted utilities, in accordance with the applicable MOA/MOU (s).

The Contractor shall provide record drawings to DGS. These drawings shall show the location of, and label as such, all abandoned Utilities. These drawings shall show and label all other Utilities, whether remaining in place or relocated, located within the Project ROW, or otherwise affected by the Project. The Contractor shall provide the record drawings for each adjustment to DGS no later than 90 Calendar Days after Utility Company acceptance as defined in the MOA/MOU, the adjustment, or before such earlier deadline as is specified elsewhere in the Contract Documents.

C.5.14.4.9 Maintenance of Utility Service

All Utilities shall remain fully operational during all phases of construction, except as specifically allowed and approved in writing by the Utility Company. The Contractor shall schedule Utility Adjustment Work in order to minimize any interruption of service, while at the same time meeting the Project schedule and taking into consideration seasonal demands. Each Utility Adjustment or remain in place location must allow for adequate access to the Utility facility that is agreed to by the Utility Company.

At no time shall Utility services to SEH, Gateway Pavilion, R.I.S.E. Demonstration Center Building, the WMATA Congress Heights Metro Station, or the WMATA Green Line be disrupted.

C.5.14.4.10 Traffic Control

The Contractor shall be responsible for the Traffic Management Plan (TMP). The TMP shall cover all traffic control made necessary by Utility Work, whether performed by the Contractor or by the Utility Company. Traffic control for adjustments shall be coordinated with and subject to approval by DDOT and DGS.

C.5.15 Right-of-Way

The District of Columbia currently owns the property known as St. Elizabeths East Campus, and it is anticipated that DMPED will dedicate the proposed ROW required for this Project to benefit public purpose. DGS will be the responsible agency to oversee and manage the Project and DDOT will maintain the public streets. DMPED will issue a Right of Entry (ROE) to DGS and then DGS will issue the Contractor a ROE allowing access to the Site for purposes of final engineering activities, demolition, and construction activities in support of the Project.

ROEs will be granted for the limits of Project disturbance within the proposed ROW and some areas outside of the proposed ROW but located within the St. Elizabeths East Campus Site.

C.5.16 Geotechnical

C.5.16.1 General Requirements

The Contractor shall perform all geotechnical investigations, testing, research, and analysis necessary to effectively characterize and understand the existing surface and subsurface geotechnical conditions of the Project ROW to be used by the Contractor to carry out the Work. The Contractor shall ensure the geotechnical investigations and analyses are both thorough and complete, provide accurate information for the design of roadways, pavements, foundations, Utilities, structures, demolition of existing facilities, and ensure the Project is safe and meets the Contract Requirements.

C.5.16.2 Design Requirements

C.5.16.2.1 Subsurface Geotechnical Investigation by Contractor

The Contractor shall establish the specific locations, frequency, and scope of all subsurface geotechnical investigations, testing, research, and analysis necessary to provide adequate and reliable subsurface information for the design and construction of foundations, roadway structures, and pavement, scoped for the Project.

The Contractor shall prepare and amend, as needed, its Geotechnical Engineering Reports documenting the assumptions, conditions, and results of the geotechnical investigation and analysis.

Each Geotechnical Engineering Report, upon completion including any later supplements or amendments, shall be signed and sealed by a District of Columbia Registered Professional Engineer before submission to DGS for review and comment.

C.5.16.2.2 Pavement Design

Pavement design by the Contractor shall be based on: a) Recommended Pavement Reconstruction Catalog, and b) the AASHTO Guide for the Design of Pavement Structures. The minimum preliminary design sections shall include: 6-inch crushed stone aggregate subbase

course, 7-inch hot mix asphalt base course, and 2-inch hot mix asphalt surface course. The preliminary typical section is based on the upper most 3 feet of subgrade where the California Bearing Ratio (CBR) value is equal to or greater than 5.4, and in areas where the CBR value is less than 5.4, the top 3 feet of subgrade will be removed and replaced with new approved granular backfill. After completing its pavement investigations and analyses, the Contractor shall provide verification of the Proposal pavement designs to DDOT and DGS. The Contractor shall provide any geotechnical analysis that demonstrates the minimum preliminary design sections are deficient and submit a new pavement design to DDOT and DGS for review and approval.

The Contractor should expect that subgrade materials can vary throughout the Project limits. The Contractor shall verify that the materials encountered or imported meet the required CBR value by performing CBR tests at 50-foot intervals along the centerline of the proposed roadways before placing the base course to ensure the material in place to a minimum depth of 3 feet below subgrade meets or exceeds a CBR value of 5.4.

Methodology Enhancements

Recognizing that the development of pavement design methods, products, and procedures are under continuous enhancement within the pavement community, the Contractor and DGS understand that new methods, procedures, and products may present opportunities for improved pavement design and management during the Term. All parties mutually agree to consider the use of new design technologies, provided that any such technologies and methods are agreed to by the Contractor and approved by DDOT and DGS in writing before final implementation.

Related Pavement Materials Specifications

Unless otherwise specified herein, pavement material requirements are defined in the most current version of the DDOT 2013 *Standard Specifications for Highways and Structures* (hereafter referred to as the DDOT *Standard Specifications*) and/or in accordance with special provisions as provided in these Technical Requirements. Test procedures identified herein shall be the most current version identified in the Materials Test Procedures, AASHTO or ASTM standards, or equivalent guidance as approved or provided by DDOT.

C.5.17 Land Surveying

C.5.17.1 General Requirements

The Contractor shall provide accurate and consistent land surveying and mapping necessary to support design and construction of the Project. All Work shall be completed under the direct supervision of a registered Professional Land Surveyor. It is the responsibility of the supervising Land Surveyor to ensure that all Work under this agreement complies with all local and federal regulations. All documents submitted shall bear the Surveyor's seal, signature, and a certification that all Work was done under the Surveyor's supervision, that all information contained in the document is true and is accurately shown and in compliance with all local and federal regulations.

The Contractor shall review existing survey data and establish the requirements for updating or extending the existing survey and mapping data. The Contractor is responsible for the final precision, accuracy, and comprehensiveness of all survey and mapping.

C.5.17.2 Administrative Requirements

C.5.17.2.1 Standards

The Contractor shall ensure that all surveying performed in accordance with the Contract Documents. The Contractor shall ensure that any person in charge of a survey field party is proficient in the technical aspects of surveying.

C.5.17.2.2 Right-of-Entry

The Contractor shall secure written permission from DGS before entering the Site. The Contractor shall be responsible for any and all damages and claims resulting from that ingress. Proper documentation of ROE shall be maintained at all times by Contractor.

C.5.17.2.3 Survey by DGS

In performing surveys for other adjoining projects, DGS may need to verify and check the Contractor's survey work. The Contractor shall coordinate with the Contractor of the adjoining project(s) regarding planned construction activities. The Contractor shall notify DGS within 2 Business Days if DGS stakes and marks are altered or disturbed.

C.5.17.3 Design Requirements

C.5.17.3.1 Units

All survey work shall be performed in U.S. Survey Feet.

C.5.17.3.2 Survey Control Requirements

The Contractor shall base all additional horizontal and vertical control on the control provided by DGS in the Intermediate Plans. The WMATA control points at the Congress heights Metro Station are on the WMATA datum and are to be surveyed and tied into the control points provided by DGS.

The Contractor shall establish and maintain additional survey control as needed throughout the duration of the Project. The Contractor shall tie any additional horizontal and vertical control for the Project to the DGS-supplied control network. If Contractor chooses to use global positioning system (GPS) methods, the Contractor shall meet the accuracy of the appropriate level of survey as defined in the Contract Documents.

All survey control points shall be set and/or verified by a Registered Professional Land Surveyor licensed in the District of Columbia.

Monuments shall be DDOT-survey markers installed and marked as directed by the Contract Documents. The Contractor shall make all survey computations and observations necessary to establish the exact position of all other control points based on the primary control provided.

The Contractor shall deliver to DDOT and DGS a listing of all control coordinate values, original computations, survey notes, and other records, including GPS observations and analysis made by Contractor as the data are available.

C.5.17.3.3 Conventional Method (Horizontal and Vertical)

If the Contractor chooses to use conventional methods to establish additional horizontal control, the Contractor shall meet the accuracy of the appropriate level of survey as defined in the Contract Documents.

C.5.17.3.4 Right-of-Way Surveys

The Contractor shall survey the proposed ROW to ensure the proposed footprint of the project provides enough ROW to construct the project.

C.5.17.3.5 Survey Records and Reports

The Contractor shall produce a horizontal and vertical control report, including coordinate listing, maps showing control, preparation of standard DDOT and/or DGS data sheets for all primary control, monument description, and location description of all primary and secondary survey control points installed, marked, and referenced, along with a listing of the existing control used to create the installed control points. Control from adjoining, incorporated, or crossed roadway projects, which are currently in design, will be located, and a comparison of the horizontal and vertical values will be shown. The Contractor shall provide survey records and reports to DDOT and DGS upon request.

The Contractor may use an electronic field book to collect and store raw data. The Contractor shall preserve original raw data and document any changes or corrections made to field data, such as station name, height of instrument, or target. The Contractor shall also preserve raw and corrected field data in hardcopy output forms in a similar manner to conventional field book preservation.

Field survey data and sketches that cannot be efficiently recorded in the electronic field book shall be recorded in a field notebook and stored with copies of the electronic data.

All field notes shall be recorded in a permanently bound book (loose-leaf field notes will not be allowed.) The Contractor shall deliver electronic or hard copies of any or all field notebooks to DDOT and DGS upon request.

C.5.17.4 Construction Requirements

C.5.17.4.1 Units

All survey work shall be performed in U.S Survey Feet.

C.5.17.5 Deliverables

C.5.17.5.1 Survey Records

The Contractor shall deliver to DDOT and DGS, for its review and acceptance, a list of all primary and secondary control coordinate values, original computations, survey notes and other records, including GPS observations and analysis made by Contractor within 90 Calendar Days of Final Acceptance. All documents submitted shall bear the Surveyor's seal, signature, and a certification that all Work was performed under the Surveyor's supervision, and that all information contained in the document is true, is accurately shown, and is in compliance with all local and federal regulations.

C.5.17.5.2 Final ROW Surveying and Mapping

The Contractor shall perform final ROW surveying and mapping of the completed Project and provide these records to DDOT and DGS within 90 Calendar Days of Final Acceptance. All documents submitted shall bear the Surveyor's seal, signature, and a certification that all Work was done under the Surveyor's supervision, all information contained in the document is true, accurately shown, and in compliance with all local and federal regulations.

C.5.17.5.3 ROW Monuments

The Contractor shall install ROW monuments in accordance with the Contract Documents. All documents submitted shall bear the Surveyor's seal, signature, and a certification that all Work was performed under the Surveyor's supervision, all information contained in the document is true, is accurately shown, and is in compliance with all local regulations.

C.5.17.5.4 Record Drawings and Documentation

The Contractor shall submit the following as part of the record drawings and as a condition of Final Acceptance:

- A listing of all primary and secondary control coordinate values, original computations, and other records, including GPS observations and analysis made by Contractor
- Copies of all survey control network measurements, computations, unadjusted and adjusted coordinate and evaluation values
- Survey records and survey reports

The Contractor shall produce reports documenting the location of the as-built alignments, profiles, structure locations, Utilities, and survey control monuments. These reports shall include descriptive statements for the survey methods used to determine the as-built location of the feature being surveyed. The Contractor's as-built data shall include the coordinate types (x, y, and/or z) and feature codes in the same format in which the preliminary construction data were generated. Where data have been provided to the Contractor from DDOT and DGS in an x, y, z-

only coordinate format, or z-only coordinate format, the Contractor shall provide DDOT and DGS with data in an x, y, z-only coordinate format or z-only coordinate format.

All documents submitted shall bear the Surveyor's seal, signature, and a certification that all Work was done under the Surveyor's supervision, all information contained in the document is true, is accurately shown, and is in compliance with all local and federal regulations.

C.5.18 Grading

C.5.18.1 General Requirements

The Contractor shall conduct all Work necessary to meet the requirements of grading, including clearing and grubbing, excavation and embankment, pavement and miscellaneous structures, subgrade preparation and stabilization, dust control, aggregate surfacing, and earth shouldering, in accordance with the requirements of the Contract Documents.

The Contractor shall demolish or abandon in place all designated existing facilities within the Project ROW, including but not limited to; trees, as shown in the Intermediate Plans and in coordination with the DDOT Urban Forester, Utility lines, buildings, steam tunnels, pavements, drainage facilities, sidewalks, curb and gutters, sign/pole foundations, and headwalls that are no longer required for service, or are required to be treated as described in Section C.5.12. Any features that are abandoned in place shall be removed to at least 3 feet below the final finished grade or 4 feet below the proposed pavement stabilized subgrade and proposed drainage structures. Basements are to be completely removed and backfilled with compacted suitable material, rough-graded to match existing terrain, and seeded with grass seed. The Contractor shall ensure that abandoned structures are structurally sound after abandonment. Caution shall be taken by the Contractor to minimize damage to any of the facilities associated with the temporary walkway between the Gateway Pavilion and the Congress Heights Metro Station.

C.5.18.2 Preparation within Project Limits

The Contractor shall develop, implement, and maintain, for the term of the DBC, a Demolition and Abandonment Plan that considers types and sizes of Utilities and structures that will be abandoned during the term based on the Intermediate Plans and Contract Documents. The plan shall ensure that said structures are structurally sound after the abandonment procedure. The plan shall be submitted to DGS for review no later than 60 Calendar Days prior to the scheduled date for NTP-2 or during the final design process, whichever is earlier. Contractor shall be responsible for damage any of the facilities associated with the temporary walkway between the Gateway Pavilion and the Congress Heights Metro Station.

DGS reserves the right to require the Contractor, at any time, to salvage and deliver to a location designated by DGS within the Ward in which the Project is located, any DGS or DDOT-owned equipment and materials in an undamaged condition. DGS reserves the right to require the Contractor to salvage and deliver to a reasonable location designated by DDOT and DGS any

ITS equipment and materials in an undamaged condition. Any materials designated for salvage shall be stockpiled on the Project Site.

C.5.18.3 Slopes and Topsoil

The Contractor shall use the latest edition of the *AASHTO Roadside Design Guide* regarding design limitations and roadside safety guidelines associated with the design of slopes along roadways. The Contractor shall adjust grading to avoid and minimize disturbance to any identified waters of the United States.

The Contractor shall perform finished grading and place topsoil in all areas suitable for vegetative slope stabilization (and areas outside the limits of grading that are disturbed in the course of the Work, including where buildings have been demolished) that are not paved. The Contractor shall use only materials and soils next to pavement layers that do not cause water or moisture to accumulate in any layer of the pavement structure. For areas outside the Contractor's limits of maintenance, the Contractor shall provide stable slopes. For slopes steeper than 4:1, the Contractor shall submit to DGS a slope stability analysis that demonstrates the adequacy of the Contractor's design. The Contractor shall submit the slope stability analysis to DGS for review with the Released for Construction Documents.

The Contractor shall leave at least 5 feet from the edge of the ROW to the toe of slope or provide retaining walls during design of final plans. Placement of temporary fill in Stage 1 Phase 2 ROW areas to accommodate Utility construction is anticipated to occur during Stage 1 Phase 1 construction. Some use of Stage 1 Phase 1 retaining walls that will not detrimentally affect Stage 1 Phase 2 improvements may be considered as an alternative to the temporary fill.

C.5.19 Roadways

C.5.19.1 General Requirements

The objectives of the Project include the provision of a safe, sustainable, environmentally sensitive, cost-effective, and aesthetically pleasing corridor for the traveling public. The requirements contained in this Section C.5.19 provide the framework for the design and construction of the roadway improvements to help attain the Project objectives.

The Contractor shall coordinate roadway design, construction, Utility Work, and maintenance with other elements of the Project to achieve the objectives of the Project.

Where changes to the roadway geometrics result in revisions to the Project ROW, the Contractor is responsible for demonstrating the proposed change is an equally safe alternative as well as the initiation and progression of all environmental and public involvement processes in coordination with DGS. Contractor shall be liable for any costs associated with a change to proposed ROW limits.

C.5.19.2 Design Requirements

The Contractor shall coordinate its roadway design with the design of all other components of the Project, including aesthetics. The Project roadways shall be designed to integrate with streets and roadways that are adjacent or connecting to the Project and comply with the St. Elizabeths East Campus Master Plan. All design transitions to existing facilities shall be in accordance with the DDOT *Design & Engineering Manual*.

The Contractor shall design all elements in accordance with the applicable design criteria and good industry practice based on the design speeds for various elements.

C.5.19.2.1 Control of Access

The Contractor shall maintain all existing property accesses, including those not shown on the Intermediate Plans, and shall not revise control of access without DGS review and the written agreement of the affected property owner. Development and submission of a Security Plan and a MOT Plan are Contract Requirements.

C.5.19.2.2 Roadway Design Requirements

The Contractor shall design the elements of the Project to meet or exceed the geometric design criteria shown in the DDOT *Design & Engineering Manual* and other Contract Documents.

Roadway pavement design shall comply with the requirements listed in Section C.5.16.2.2.

Roadway Design Deviations

Roadway design deviations will require approval by DDOT Chief Engineer.

C.5.19.2.3 Miscellaneous Roadway Design Requirements

All roadside safety devices used on the Project shall meet current crash test and other safety requirements in accordance with DDOT standards.

Driveways shall be designed in accordance with the guidelines, which will be considered requirements, specified in DDOT's *Design & Engineering Manual*, to be functionally adequate for land use of adjoining property.

It is anticipated that the Stage 1 Phase 1 Infrastructure Improvements Project will be constructed in at least four sub-phases (see Attachment A). Roadway pavement for each sub-phase will be completed up to and including the 7 inches of base asphalt. The remaining 2-inch surface asphalt course will not be placed until all sub-phases are completed and all Utility systems have been installed, tested, and accepted.

C.5.20 Drainage

C.5.20.1 General Requirements

Efficient performance of the drainage system incorporating low-impact development (LID) and environmentally sustainable solutions is an integral part of the performance of the Project. The Contractor shall account for all sources of runoff that may reach the Project, whether originating within or outside the Project ROW, in the design of the drainage facilities.

If existing drainage patterns are revised during the Project design, then the Contractor shall design and construct a solution that does not adversely affect property owners outside the ROW.

Preliminary design of the stormwater pipe system was sized for the 15-year storm event with no abstraction for the BMP volumes. The stormwater pipe system was designed to include Stage 1 parcel flow volumes with 50-percent on-Site detention and future conceptual Stage 2 development areas. At DDOT's direction, flanker inlets located adjacent to sag inlets were not included. Sag inlets were located at low points in the roadway with a drainage spread criteria of 8.61 inches per hour intensity.

LID drainage concepts have been developed in the Intermediate Plans. LID areas and concepts shown within the Intermediate Plans are for conceptual purposes only and must be finalized by review of DOEE. All LID and BMP designs shall comply with DOEE *Stormwater Management Guidebook*. LID design shall be submitted to DDOT, DGS, and DOEE for review, permitting, and approval prior to construction.

C.5.20.2 Administrative Requirements

C.5.20.2.1 Data Collection

To establish a drainage system that complies with the requirements and accommodates the historical hydrologic flows in the Project limits, the Contractor is responsible for collecting all necessary data and performing all hydraulic and hydrologic investigations for the design and construction of the drainage system, including those elements outlined in this Section.

The Contractor shall collect available data identifying all water resource issues, including water quality requirements of Applicable Laws; National Wetland Inventory and other wetland/protected waters inventories; in Federal Emergency Management Agency-mapped floodplains; and official documents concerning the Project, such as the EA or other drainage and environmental studies. Water resource issues include areas with historically inadequate drainage (flooding or citizen complaints), environmentally sensitive areas, localized flooding, maintenance problems associated with drainage, and areas known to contain Hazardous Materials. The Contractor shall also identify watershed boundaries, protected waters, ditches, areas classified as wetlands, floodplains, and boundaries between regulatory agencies (for example, watershed districts and watershed management organizations).

The Contractor shall acquire all applicable municipal drainage plans, watershed management plans, and records of citizen concerns. The Contractor shall acquire all pertinent existing storm drain plans and/or survey data, including data for all culverts, drainage systems, and storm sewer systems within the Project limits. The Contractor shall also identify existing drainage areas that contribute to the highway drainage system and the estimated runoff used for design of the existing system.

If documentation is not available for elements of the existing drainage system within the Project limits and scheduled to remain in place, the Contractor shall investigate and videotape or photograph the existing drainage systems to document condition, size, material, location, and other pertinent information.

The data collected shall be taken into account in the final design of the drainage facilities.

Within 30 Calendar Days of Substantial Completion, the Contractor shall submit to DGS and DDOT, as part of the Record Drawings, a final Drainage Design Report, which shall be a complete documentation of all components of the Project's drainage system. At a minimum, the Drainage Design Report shall include the following:

- Record set of all drainage computations, both hydrologic and hydraulic, and all support data
- Hydraulic notes, models, and tabulations
- Storm sewer drainage report
- Culvert designs
- Correspondence file
- DC Water review and approvals of outfalls
- Drainage system data (location, type, material, size, and other pertinent information) in a suitable electronic format

C.5.20.2.2 Coordination with Other Agencies

The Contractor shall coordinate all water resource issues with affected interests and regulatory agencies. The Contractor shall document the resolution of water resource issues.

C.5.20.3 Design Requirements

The Contractor shall design all elements of the drainage facilities in accordance with the applicable design criteria and Standards of the Industry.

Design of new and reconfigured storm drainage systems as required meeting the performance requirements as defined in this Section C.5.20.

Contractor shall provide facilities compatible with existing drainage systems and all applicable municipal drainage plans or approved systems in adjacent properties.

Elements of the existing drainage system within the Project limits scheduled to remain in place must meet hydraulic capacity requirements as detailed in this Section. Any elements of the existing system that do not comply with the requirements of this Section shall be replaced by the Contractor.

For purposes of obtaining DOEE approvals all Stage 1 Phase 1 roadways are to be considered reconstruction of existing roadways and qualify for DOEE MEP regulations.

The Contractor shall base its final design on design computations and risk assessments for all aspects of Project drainage.

C.5.20.3.1 Hydrologic Analysis

The Contractor shall design for the future changes in land use that may affect the magnitude of runoff and therefore the design capacity of drainage structures. The Contractor shall incorporate anticipated changes in the basin land use, characteristics, or water operations into the hydrologic parameters. The Contractor shall design all drainage facilities to accommodate probable land uses in accordance with current development policy.

C.5.20.3.2 Storm Sewer Systems

Where precluded from handling runoff with open channels by physical Site constraints, or as directed in this Section the Contractor shall design enclosed storm sewer systems to collect and convey runoff to appropriate discharge points.

The Contractor shall prepare a Storm Sewer Drainage Report and final design meeting DOEE and DDOT standards encompassing all storm sewer systems, and contains at a minimum, the following items:

a) A Site drawing of existing and proposed conditions with pertinent data:

b) Stormwater retention volume computations for entire Site and each individual drainage area

c) Pre/post-development hydrologic computations.

d) Hydraulic computations for the final design of water quality and quantity control structures.

e) Proposed Stormwater Management Plan layout including:

f) Specifications for the pipe bedding material and structural pipe backfill on all proposed pipes and pipe alternates.

g) Complete pipe profiles, including pipe size, type, and gradient; length of pipe; class/gauge of pipe; pipe invert elevations; energy and hydraulic grade lines; hydraulic grade line elevations within manholes; flow arrows; proposed grade lines; and numbered drainage structures with coordinate location and elevations.

This report shall be a component of the final Drainage Design Report.

The Contractor shall design all storm sewer systems such that the hydraulic grade line for the design frequency event is at or below the flow line of:

- Curb inlet
- The top of grate inlet
- The top of a manhole cover
- Runoff within the jurisdiction of the USACE, conveyed in accordance with Applicable Laws and permits
- Any other information necessary for final design of the system to meet DOEE standards.

Pipes

All stormwater pipes shall be reinforced concrete, Class IV minimum.

Inlets

Inlets may be precast from an approved manufacturer or cast in place.

C.5.20.3.3 Stormwater Storage Facilities

The Contractor shall complete preliminary design of the stormwater storage facilities to meet requirements for water quality, water quantity, and rate control, in accordance with the DOEE regulations and DC Water capacity constraints.

C.5.20.3.4 Hydraulic Structures

Culverts

The Contractor shall analyze existing and proposed culverts and drainage-ways affected, replaced, or created by the Project design, for any localized flooding problems.

Where culvert design is influenced by upstream storage, the analysis of the storage shall be incorporated into the design of the culvert.

Method Used to Estimate Flows

The Contractor shall ensure that the selected hydrologic method is appropriate for the conditions in the watershed.

C.5.20.4 Drainage Design Report

A preliminary Drainage Design Report shall be submitted with the 90 percent submission set of design plan submittal packages. The 90 percent Drainage Design Report shall include at a minimum everything to be included in the Final Drainage Design Report. Within 30 Calendar Days of Substantial Completion, the Contractor shall submit to DDOT and DGS, as part of the record set documents, a Final Drainage Design Report, which shall be a complete documentation of all components of the Project's drainage system. At a minimum, the report shall include:

- Record set of all drainage computations, both hydrologic and hydraulic, and all support data
- Hydraulic notes, models, and tabulations
- Correspondence file
- Drainage system data (location, type, material, size, and other pertinent information) in a suitable electronic format
- Storm sewer drainage reports (if applicable)

C.5.20.5 Construction Requirements

The Contractor shall design drainage to accommodate construction staging as shown in the Intermediate Plans. The design shall include temporary erosion control ponds and other BMPs needed to satisfy the DOEE, DC Water, and other regulatory requirements. The water resources notes in the plans shall include a description of the drainage design for each stage of construction.

C.5.21 Structure and Site Demolition

C.5.21.1 General Requirements

The building demolition Intermediate Plans and Contract Documents were developed using limited existing information, incomplete record drawings, aerial photographs and limited field observations. Floor plans were developed and general plan configurations were checked against existing conditions. Overall dimensions and areas of buildings were calculated based on the developed floor plans and compared against dimensions obtained from Google Earth. The buildings were not field measured; therefore the Contract Documents shall be considered preliminary and are not intended to provide estimation information, construction/demolition details, specific materials, or demolition means and methods. Given the limited amount of existing information, building elevations could not be recreated. However, building height and exterior material information can be obtained from the photographs provided in the Intermediate Plans and Contract Documents.

The Contractor shall complete detailed final building demolition plans and obtain all necessary approvals and permits utilizing the Intermediate Plans, Contract Documents, and any other documents deemed necessary. A detailed analysis of the structures adjacent to buildings designated for demolition shall be performed to maintain structural stability during demolition activities and to preserve the architectural elements of those buildings deemed to have historic character. Special consideration shall be provided at locations where buildings to be demolished are either close to or in contact with buildings that are to be preserved. Such attention may require the services of a building preservation specialist to identify the best way to protect and/or restore portions of the historic buildings.

The Contractor’s building demolition plans shall also include details regarding hazardous material inspection, testing, and abatement, plans for the legal disposal of hazardous materials,

plans for the legal disposal of non-hazardous demolition materials, and details on salvaging and/or recycling materials from the demolished buildings.

Unless otherwise specified by DGS, the material from structures designated for demolition shall be the Contractor's property. All material removed shall be properly disposed of by the Contractor outside the Site, or recycled in accordance with the Contractor's recycling plan.

Site demolition will be performed generally as detailed in the Intermediate Plans. Final limits of Site demolition may change in accordance with the approved final design. Unless otherwise stipulated, all materials generated from Site demolition shall be the Contractor's property. All material generated through Site demolition shall be properly disposed of by the Contractor outside the Site. The Contractor may request to recycle and incorporate some of the materials generated by Site demolition into the Project, but prior approval from DGS shall be obtained.

C.5.21.2 Hazardous Materials

The Contractor shall be responsible for the inspection, testing, abatement, and disposal of all Hazardous Materials, in accordance with Legal Requirements, encountered during demolition of the buildings. Building waste characterization study information of buildings included in Contract Documents is for informational purposes only.

The Contractor shall abate all Hazardous Materials in steam tunnels that are to be demolished.

C.5.22 Rail

C.5.22.1 General Requirements

Work on the sanitary and storm outfall tie-ins for Stage 1 Phase 1 connect to existing facilities above the WMATA Green Line. The Contractor shall coordinate with WMATA and will maintain access to the WMATA facility at all times.

The WMATA Green Line tunnel and related access and air vents are located on the East Campus. Operation of and access to these facilities shall be maintained at all times.

The Contractor shall verify the location of all WMATA facilities on East Campus prior to the start of Work.

C.5.22.2 Administrative Requirements

C.5.22.2.1 Rail Facility Agreement

The Contractor shall be responsible for obtaining the required approvals, permits, and agreements as required for the Work. DGS/DMPED may assign agreements with WMATA. All Work is to be performed in compliance with WMATA-JDAC requirements and provisions.

C.5.23 Aesthetics and Landscaping

C.5.23.1 General Requirements

There are numerous trees that the District does not want affected by the Project. The Contractor shall coordinate with the DDOT Urban Forester (UFA) to gain a full understanding of the location of noted trees. Trees slated to be saved and protected will be clearly marked.

The Contractor shall install protective fencing 15 feet beyond the normal drip line of trees that are to be saved and shall maintain the protective fencing for the Term. In the event it is not practical to install protective fencing as noted, the Contractor shall coordinate with the Urban Forester to find other means for protecting the trees.

In addition, the District wants to salvage portions of other trees. The Contractor shall coordinate with the Urban Forester to identify these trees and which parts of the trees the District wants salvaged, and the Contractor will deliver and unload the salvaged portions of trees to a location(s) specified by the Urban Forester.

Seeding and any landscaping will be performed in accordance with the Contract Documents, St. Elizabeths Master Plan, and will be developed by final design efforts of the Contractor.

C.5.24 Signing, Delineation, Pavement Marking, Signalization, and Lighting

C.5.24.1 General Requirements

This Section C.5.24 contains requirements with which Contractor shall design, construct, and maintain all signing, delineation, pavement markings, signalization, and lighting for the Project.

C.5.24.2 Administrative Requirements

C.5.24.2.1 Meetings

The Contractor shall arrange and coordinate all meetings during design and construction phases of the Project with DGS and DDOT points of contact with responsibility for maintaining and operating traffic signals and roadway lighting upon completion of project improvements. The Contractor shall notify DGS and DDOT of such meetings a minimum of 48 hours prior to the start of the meeting. DGS and DDOT, in their discretion, may attend such meetings.

C.5.24.3 Design Requirements

The Contractor shall design all signing, delineation, pavement marking, signalization and street lights in accordance with the Contract Documents.

C.5.24.3.1 Final Design

The Contractor shall advance the final design of the signing, delineation, pavement marking, signalization, and street lighting based on the Intermediate Plans received with the Proposal.

Before placing any signs, delineation, third-party signs, non-standard sign structures, pavement markings, traffic signals, and lighting, the Contractor shall provide a layout to DDOT and DGS indicating the proposed location of such items.

C.5.24.3.2 Signing and Delineation

The Contractor shall design and install all new permanent signs as shown on the final design. The Contractor's design shall include the locations of ground-mounted signs, graphic representation of all signs, proposed striping, delineation placement, guide sign and special sign details, and structural and foundation requirements. Signs shall be located to avoid conflicts with other signs, vegetation, dynamic message signs**,** lighting, pedestrians, underground and overhead utilities and structures.

The Contractor shall ensure that signs are clearly visible, provide clear direction and information for users, and comply with all applicable MUTCD requirements.

The Contractor shall review with DDOT all requests for new permanent signs, including traffic generators, or modifications of existing sign text. Such requests are subject to DDOT's approval.

The Contractor's design of delineators and object markers shall comply with MUTCD requirements.

C.5.24.3.3 Sign Support Structures

The Contractor shall select foundation types and design sign foundations based on geotechnical surveys/tests and the DDOT *Roadway Design Manual*. Designs for sign supports shall also comply with requirements of the Contract Documents.

C.5.24.3.4 Pavement Marking

The Contractor shall ensure that the design and installation of all pavement markings comply with DDOT *Roadway Design Manual* requirements and DDOT's Traffic Engineering Standard sheets.

The Contractor shall mark median noses of all raised islands and inside edges of exclusive turn lanes (channelized curbs) in accordance with the requirements of DDOT *Roadway Design Manual* and DDOT's Traffic Engineering Standard sheets.

C.5.24.3.5 Signalization

Traffic signal designs and modifications to existing traffic signals shall be completed in accordance with the current DDOT *Standards and Specifications*, the MUTCD, and the Intermediate Plans.

Traffic Signal Requirements

Traffic signals shall be designed and constructed in accordance with the Intermediate Plans and Contract Documents and includes all temporary and permanent signal installation and removal of existing signal facilities once they are no longer needed.

Traffic Signal Timing Plans

The Contractor shall develop recommended signal timing plans based on traffic data and shall submit them to DDOT for review.

Traffic Signal Warrants

As part of the intermediate design process signal warrant studies for three (3) traffic signals have been prepared and submitted to DDOT for review. The warrant studies address all signal warrant criteria in the MUTCD. DDOT will reasonably decide if a signal or modification is required, based upon the warrant study.

All requests for signals within the Project ROW throughout the term of the DBC shall be subject to DDOT approval.

Traffic Signal Support Structures

Traffic signal support structures shall be designed in accordance with the Contract Documents.

C.5.24.3.6 Street Lighting

The street lighting approach is comprehensive and aspires to guide future planning and development activities at St. Elizabeths East Campus. To comply with the District energy efficiency program, all the fixtures installed on the campus are to utilize light-emitting diode (LED) technology.

St. Elizabeths East Campus streets can be divided into two types of streets:

1. Historic streets, around historic hospital buildings. Fixtures are to be installed on DC standard 16-foot poles.
2. Modern streets, around modern style new buildings. Fixtures are to be installed on DC standard 30-foot poles.

All design and material used shall conform to DC and DDOT standards and the Contract Documents, including “Street Light Policy & Design Guidelines”.

LED Warranty Requirement

LED fixture warranties shall be provided in accordance with the *Standard Specifications* and the following:

1. Luminaire must have a minimum 5-year warranty against any failure. The warranty shall provide for the repair or replacement of defective electrical parts including, but not limited to, the light source and power supplies and driver for a minimum of 8 years. Shipping shall be included.

2. The LED luminaire warranties shall begin on the date of Final Acceptance of the installation by the DDOT officer or designated representative.
3. The Contractor shall install luminaires in accordance with the design engineer and manufacturer's requirement and shall obtain written concurrence from the luminaire manufacturer that the installation is compliant with its requirements. The signed memo, including post-installation field measurements, shall become part of the Warranty package and be included in the final deliverables to DDOT and DGS.
4. The Contractor shall provide to the DGS Contracting Officer written documentation of its ability to satisfy a worst-case, catastrophic Warranty claim. The documentation shall clearly disclose the county in which the factory of fixture origin is located and the name of the company or organization that owns the factory (including all parent companies and/or organizations and their respective countries of corporate citizenship).

C.5.24.4 Construction Requirements

C.5.24.4.1 Permanent Signing and Delineation

The Contractor shall use Standards of the Industry and Utility safety practices to erect and remove signs located near any overhead or underground Utilities, and shall consult with the appropriate Utility Company (ies) before beginning such Work.

C.5.24.4.2 Permanent Pavement Marking

The Contractor shall prepare a pavement marking plan as part of final design.

The Contractor shall install permanent pavement markings in accordance with the Contract Documents.

C.5.24.4.3 Permanent Signalization

The Contractor shall coordinate with the Utility Company (ies) and ensure necessary power service is initiated and maintained for temporary and permanent signal systems. The Contractor shall ensure power is provided to all Contractor-installed signals. The Contractor shall stake each pole location in the field and provide DDOT 72 hours' notice before installation of any foundation.

The Contractor shall provide DDOT with copies of all signal warrant studies as required in Section C.5.24.3.5.3. The Contractor shall also provide copies of all recommended final signal timing.

Before placing any permanent traffic signals, the Contractor shall provide DDOT a layout indicating the proposed location of such items.

C.5.24.4.4 Permanent Street Lighting

The Contractor shall coordinate with the Utility Company (ies) and ensure power service is initiated and maintained for permanent street lighting systems. Where the Work affects existing street lighting, the Contractor shall maintain existing street lighting as temporary street lighting during construction and restore or replace it prior to Substantial Completion. At all times during the term of the DBC, existing street lighting conditions shall be maintained along Alabama Avenue SE and Martin Luther King Jr. Avenue SE until the new street light system is ready for activation. The Contractor shall stake each pole location in the field and provide DDOT 72 hours' notice before installation of any foundation.

The Contractor shall remove all old illumination-related cable and conduit.

The Contractor shall place all bore pits safely away from traffic, provide positive barrier protection, and provide necessary signs to warn of the construction area.

The Contractor shall contact Utility Company (ies) regarding their specific required working clearance requirements.

The Contractor shall affix an identification tags on each luminaire, ground box, and electrical service that it maintains and/or operates for inventory purposes and shall submit the inventory information to DDOT in a DDOT-compatible format. This identification shall denote that these are property of the Contractor and shall provide a contact phone number and address in the event of emergency or necessary maintenance. Identification tags shall be removed upon Final Acceptance of the new system.

C.5.25 Intelligent Transportation Systems

C.5.25.1 General Requirements

An Intelligent Transportation System (ITS) is necessary for monitoring the Project's traffic flow and performance both during construction and as a permanent installation. The Project ITS must accurately detect traffic and traffic operational conditions at signalized intersections, and clearly communicate relevant and useful travel information to the people using the facility.

DDOT is already operating an ITS network that will need to connect to the new system provided by the Contractor. The Project ITS must be compatible with such in-place system(s) that DDOT and other agencies (including other Contractors) are currently operating. The Contractor shall coordinate the ITS planning and implementation with DDOT.

The Contractor shall maintain and protect the use of the existing ITS functionality within the Project at all times, except for system crossovers that are approved by DDOT.

The Project ITS shall conform and be consistent with systems already being used by DDOT. The functionality of the ITS shall be such that command and control of appropriate field devices is shared and exchanged with appropriate Governmental Persons.

The Contractor shall be responsible for the planning, design, installation, maintenance, and operation of safe and functional ITS for the Project using good industry practice. All components of the ITS shall conform to the provisions of the National Transportation Communication for ITS Protocol. The Contractor shall maintain ITS interoperability over the term of the DBC with DDOT and other Governmental Persons.

The Project ITS shall operate as part of the DDOT system.

The Design, equipment, and installation of closed-circuit television (CCTV), radar vehicle detectors, and fiber optics equipment shall meet or exceed the requirements set forth in the DDOT Intelligent Transportation Systems Standard Specifications.

C.5.25.2 Design Requirements

The Contractor shall provide a complete and operational ITS network throughout the Project that is expandable as capacity is increased along the Project roadways, uses hardware and software components consistent and compatible with DDOT in the manner described in this Section C.5.27, is resistant to weather encountered in the Project area, and places components in locations that are not hazardous to users. The Contractor shall prepare a preliminary ITS layout for review and concurrence by DDOT to ensure adequate planning of the ITS implementation.

Subject to the specific requirements of this Section C.5.25, the Contractor shall establish the number and specific locations of all ITS components.

The Contractor shall provide safe ingress/egress areas and structures to accommodate authorized personnel access to ITS components for maintenance and operation activities.

C.5.25.2.1 ITS Communications Requirements

The Contractor shall provide a communications network that has redundant routing capabilities. The communications network shall serve the highway ITS components along the highway elements of the Project. Where necessary, as specified by DDOT, Contractor shall provide communication node buildings and cabinets to support the communications network.

C.5.25.2.2 Connectivity

The Contractor shall connect ITS components wirelessly to the DDOT ITS center.

The Contractor shall repair each communication cable or electrical conductor that is severed or otherwise rendered not usable.

C.5.25.2.3 Closed Circuit Television Cameras

The Contractor shall provide five CCTV cameras for Incident verification, traffic management, and construction management. The system of cameras shall accurately identify all vehicle(s) involved in an incident or emergency, the extent of vehicle(s) damage, and the likelihood of personal injury, if applicable. Operation of the cameras shall result in no visual delay in response of the camera pan/tilt/zoom by a user.

Equipment

The Contractor shall provide all necessary CCTV equipment, including cameras, camera controls, cables, and connections, and all equipment necessary for DDOT secondary control of all CCTV cameras. The method of secondary control shall be in accordance with DDOT *Standards and Specifications*.

The Contractor shall provide a digital video format and communications protocol at all connections with DDOT systems. The format and protocol provided by Contractor shall be compatible with systems in use by DDOT, and if necessary convertible for use by DDOT's in-place ITS network.

Placement

The cameras shall be installed at locations approved in writing by DDOT and DGS. To provide a stable video image, the Contractor shall mount cameras on dedicated structures unless otherwise approved by DDOT and DGS.

Video Requirements

The Contractor shall provide state-of-the-art CCTV cameras that meet the following requirements. Should any CCTV camera fail to meet any of the following criteria, the Contractor shall replace such cameras within 48 hours of discovery of lack of compliance.

- Contain solid-state design with digital signal processing for digital zoom:
  - for auto/manual long-term integration (exposure) control, with built-in frame buffer
  - for auto-focus; for built-in I.D. generator, with white letters and black outline
- Conform to a minimum of National Television System Committee video output and Electronic Industries Alliance 170A standards
- Contain no less than 30 frames per second color
- Able to produce clear, low-bloom, low-lag video pictures under all conditions, from bright sunlight to nighttime scene illumination of 0.02 foot-candle
- Maintain color quality by a continuous, through-the-lens, automatic, white balance for color temperatures from 2,850 degrees Kelvin to greater than 5,100 degrees Kelvin, with less than 10 Institute of Radio Engineers units unbalance
- Contain aspect ratio of 4:3
- Contain zero geometric distortion
- Signal-to-noise distortion of 55 decibel with automatic gain control off
- Contain built-in auto focus and auto iris
- Contain overexposure protection to prevent permanent damage to cameras when pointed at strong light sources, including the sun, for brief periods of time

Operating Requirements

The Contractor shall provide cameras with built-in heaters, mounting structure, and related equipment capable of operating within the following weather conditions:

- Wind load of 100 miles per hour without permanent damage to mechanical and electrical equipment
- Ambient temperature range of -35 degrees Fahrenheit to +140 degrees Fahrenheit
- Relative humidity range not to exceed 95 percent within the temperature range of +40 degrees Fahrenheit to +110 degrees Fahrenheit
- Humidity range of 0 to 100 percent condensing

Control Requirements

The Contractor shall provide cameras and related equipment capable of operating with the following pan-tilt unit requirements:

- Vertical movement of + 40 degrees to – 90 degrees
- Horizontal movement of 360 degrees
- Tilt speed of 20 degrees per second
- Pan speed of 100 degrees per second
- Simultaneous pan and tilt
- RS-232 serial communications

C.5.25.2.4 Radar Vehicle Sensing Device

The Contractor shall provide one permanent radar vehicle sensing device capable of detecting each highway lane of the Project measuring vehicle classification, vehicular volume, lane occupancy, and speed information on the roadway. The radar vehicle sensing device shall be non-intrusive to the roadway users. The Contractor shall transmit wirelessly the raw data collected by the device to DDOT.

The Contractor may attach the device to existing structures with prior concurrence from DDOT and DGS. Where an existing structure is not available, or in lieu of attaching the radar unit to an existing structure, Contractor shall install a mounting pole solely for the vehicle detector. Any mounting poles placed specifically for ITS items shall conform to DDOT specifications for CCTV mounting poles.

C.5.25.3 Construction Requirements

C.5.25.3.1 General

The Contractor shall notify DDOT and DGS 30 Calendar Days in advance of making connections to the existing DDOT system.

The Contractor shall coordinate with Utility Company (ies) to make sure power service is available for permanent ITS systems.

C.5.26 Traffic Control

C.5.26.1 General Requirements

The Contractor shall design and construct the Project, in conformance with the requirements stated in this Section C.5.26, to provide for the safe and efficient movement of people, goods, and services, through and around the Project, while minimizing negative impacts to users, residents, and businesses. Contractor shall coordinate with DDOT and DGS on the development of the TMP.

During all phases, temporary or existing ITS equipment, street lights, and traffic signals on public ROWs shall remain in operation such that the new and existing equipment operate as a coherent system.

C.5.26.2 Administrative Requirements

C.5.26.2.1 Traffic Management Plan

The Contractor shall prepare and implement a TMP that includes the following items:

- Descriptions of the qualifications and duties of the traffic control coordinator, and other personnel with traffic control responsibilities
- Procedures for ensuring access is maintained 24/7/365 to SEH and WMATA's Congress Heights Metro Station and Green Line air vents and access shafts.
- Procedures to identify and incorporate the needs of transit operators, Utility Company (ies), Governmental Persons, local governmental agencies, emergency service providers, school districts, business owners, and other related users, customer groups, or entities in the Project corridor and surrounding affected areas
- Procedures for obtaining acceptance of detours, road and lane closures and other traffic pattern modifications from applicable Governmental Persons, and implementing and maintaining those modifications
- Procedures for signing transitions during construction from one stage to the next and from interim to permanent signing
- Procedures for maintenance and replacement of traffic control devices, including pavement markings and traffic barriers, if used
- Procedures to regularly evaluate and modify, if necessary, traffic signal timings, and the procedures for the development, DDOT approval, implementation, testing, and maintenance of all affected signals

- Procedures to coordinate with DDOT and DGS, adjacent facilities/property owners, and other Stakeholders along the Project or Project detour routes to ensure temporary system compatibility, establish responsibilities for temporary signal installation, maintenance, operation and removal, and coordinate traffic signal timing with local signal networks
- Procedures and process for the safe ingress and egress of construction vehicles in the Work zone
- Provisions to provide continuous access to established truck routes and Hazardous Material routes, and to provide suitable detour routes, including obtaining any approvals required by the appropriate Governmental Persons for these uses
- Procedures to modify plans as needed to adapt to current Project circumstances, including a contingency plan to alleviate unreasonable construction-related backups that can be implemented immediately upon notification from DDOT and DGS
- Procedures to communicate TMP information to the Contractor's public information personnel and notify the public of MOT issues in conjunction with the requirements elsewhere in this document
- Descriptions of contact methods, personnel available, and response times for any deficiencies or emergency conditions requiring attention during off-hours
- Procedures for night work
- The Contractor shall notify the traveling public by placing changeable message signs a minimum of 7 days in advance of actual roadway closure or major traffic modifications. Where available and when possible, the Contractor shall coordinate and use dynamic message signs on the regional ITS system.
- The Contractor shall use uniformed police officers to effect main lane closures.

The TMP must be approved by DDOT and DGS before the start of construction activities. The Contractor shall provide DDOT and DGS sufficient time for review of, and comment on, the TMP. DDOT and DGS retain the right to require revision and re-submittal of the TMP within a reasonable amount of time.

C.5.26.3 Design Requirements

C.5.26.3.1 Traffic Control Plans

The Contractor shall use the procedures in the TMP and the standards of the Temporary Traffic Control Manual and the MUTCD to develop detailed traffic control plans for all construction stages and phasing, as well as all required switching procedures.

The Contractor shall produce a traffic control plan for each phase of Work that affects traffic and involves traffic control details and shall coordinate with DDOT and DGS on the development of

the plan. The Contractor is responsible for obtaining all necessary permits to implement the plans.

Each traffic control plan shall be submitted to DDOT and DGS for review a minimum of 10 Business Days before implementation. The traffic control plan shall include details for all detours, traffic control devices, striping, and signage applicable to each phase of construction. Information included in the traffic control plans shall be of sufficient detail to allow verification of design criteria and safety requirements, including typical sections, alignment, striping layout, drop off conditions, and temporary drainage. The traffic control plans shall clearly designate all temporary reductions in speed limits. Changes to posted speed limits will not be allowed unless specific prior approval is granted by DDOT.

The Contractor shall maintain signing continuity on all active roadways within or intersecting the Project at all times.

Throughout the duration of the Project, the Contractor shall keep all streets and intersections open to traffic to the greatest extent possible by constructing the Work in stages. The Contractor shall maintain access to all adjacent streets and shall provide for ingress and egress to public and private properties at all times during the Project.

The Contractor shall prepare public information notices in advance of the implementation of any lane closures or traffic switches. These notices shall be referred to as Traffic Advisories.

C.5.26.3.2 Restricted Hours

Holiday Restrictions

No lane closure that restricts or interferes with traffic shall be allowed from noon on the day preceding to 10:00 p.m. on the day after the following Holiday schedule. DDOT has the right to lengthen, shorten, or otherwise modify these restrictions as actual traffic conditions may warrant.

Holidays in the District of Columbia include:

- New Year’s Eve and New Year’s Day (December 31 through January 1)
- Martin Luther King Day (third Monday of January)
- President’s Day (third Monday of February)
- Inauguration Day
- Easter Holiday Weekend (Friday through Sunday)
- Emancipation Day
- Memorial Day Weekend (Friday through Monday)
- Independence Day (July 3 through noon on July 5)
- Labor Day Weekend (Friday through Monday)
- Election Day (first Tuesday of November)
- Veteran’s Day (second Monday of November)
- Thanksgiving Holiday (Wednesday through Sunday)

- Christmas Holiday (December 23 through December 26)

C.5.26.4 Construction Requirements

Construction shall be in accordance with Contractor's TMP, the manufacturer's directions or recommendations where applicable, and the applicable provisions of the Temporary Traffic Control Manual and the MUTCD.

C.5.26.4.1 Contractor Responsibility

If at any time DDOT or DGS determines the Contractor's traffic control operations do not meet the intent of the TMP or any specific traffic control plan, the Contractor shall immediately revise or discontinue such operations to correct the deficient conditions.

The Contractor shall provide DDOT and DGS the names of the traffic control coordinator and support personnel, and the phone number(s) where they can be reached 24 hours per day, 7 days per week.

C.5.26.4.2 Access

Existing bicycle and pedestrian access and mobility shall be maintained on adjacent ROW and public streets and across all cross streets. Access to existing transit stop locations shall be maintained during construction, or reasonable alternative locations as approved by WMATA shall be provided.

C.5.26.4.3 Detours

The Contractor shall maintain all detours in a safe and traversable condition. A pavement transition, suitable for the posted speed of the section, shall be provided at all detour interfaces.

The Contractor shall provide motorists with guidance on diverting around the construction, detouring around specific construction sites, and traveling through the construction areas. This shall include the installation and maintenance of temporary signs to divert traffic around the Project. Motorist guidance to and along detour routes shall be provided, together with regional guidance.

C.5.26.4.4 Pavement Markings

The Contractor shall be required to remove existing pavement markings that conflict with temporary or permanent pavement markings. These pavement markings shall be removed by any method that does not materially damage the surface or texture of the pavement. Pavement marking removal by over-painting is prohibited.

C.5.26.4.5 Reinstatement of Utility Cuts

After installation of drainage structures, storm sewers, or any other public or private Utility facility by open cut beneath existing pavements carrying traffic during construction, the pavement shall be restored to provide a normal satisfactory riding surface.

C.5.26.4.6 Hauling Equipment

The Contractor shall keep traveled surfaces used in its hauling operations clear and free of dirt or other debris that would hinder the safe operation of roadway traffic.

Rubber-tired equipment shall be used for moving dirt or other materials along or across paved roadway surfaces.

Where the Contractor moves any equipment not licensed for operation on public highways on or across any roadway pavement, Contractor shall protect the pavement from all damage caused by such movement. Any damage caused by the operation of Contractor shall be repaired at the expense of Contractor.

All haul routes using any public street shall be coordinated with DDOT and reviewed and commented on by DDOT and DGS in writing during the final design process.

C.5.26.4.7 Final Clean-Up

The Contractor shall clear and remove from the Site all surplus and discarded materials and debris of every kind and leave the entire Project in a smooth and neat condition, after any construction process and before obtaining Final Completion approval.

C.5.27 Maintenance

C.5.27.1 General Requirements

The Contractor shall maintain the Project in a manner that provides a safe and reliable transportation system for improved mobility.

C.5.27.1.1 General Maintenance Obligations

The Contractor shall take all necessary actions to achieve the following:

- Maintain the Project and related transportation facilities in a manner appropriate for a facility of the character of the Project.
- Minimize delay and inconvenience to users and, to the extent the Contractor is able to control, users of related transportation facilities.
- Identify and correct all Defects and damages from incidents.
- Monitor and observe weather and weather forecasts to proactively deploy resources to minimize delays and safety hazards due to heavy rains, snow, ice, or other severe weather events.
- Remove debris, including litter, graffiti, animals, and abandoned vehicles or equipment from the Project ROW.
- Minimize the risk of damage, disturbance, or destruction of third-party property during the performance of maintenance activities.

- Coordinate with and enable DDOT, DGS, and others with statutory duties or functions in relation to the Project or related transportation facilities to perform such duties and functions.
- Perform systematic Project inspections, periodic maintenance, and routine maintenance in accordance with the provisions of the Contractor's MMP and the Contractor's Safety Plan.

The Contractor is responsible for providing all resources necessary for the performance of all activities in the MMP.

C.5.27.2 Maintenance Management Plan

The Contractor shall prepare a MMP that is consistent with the general maintenance obligations described in the Contract Documents and defines the process and procedures for the maintenance of the Project for the Term and Warranty Term. The MMP shall identify response times to mitigate hazards, permanently remedy, and permanently repair Defects.

The MMP shall include procedures for managing records of inspection and maintenance activities, including appropriate measures for providing protected duplication of the records. Inspection and maintenance records shall be kept for the Term and shall be provided to DDOT and DGS at the time the Project is delivered to DGS, at either the expiration of the term or earlier termination of the DBC.

The Contractor shall submit the MMP to DDOT and DGS for review at least 60 Calendar Days before the issuance of NTP-2. Review and approval by DDOT and DGS of the MMP shall be a condition for the issuance of NTP-2.

C.5.27.2.1 Maintenance during Work

The Contractor shall be responsible for maintenance and repairs to any Work Element until Final Acceptance is issued. The Contractor shall also be responsible for maintenance and repairs to any portion of the existing travel lanes that are used as part of the Contractor's Traffic Control Plan and portions of the existing travel lanes that are used for hauling Project equipment and materials. Maintenance activities shall include routine maintenance (such as pothole/surface failure repair, litter pickup, mowing, and repair of third-party-damaged traffic control and safety devices), responding to emergencies and operational problems, and inspections and repairs on an as-needed basis or as directed by DGS until issuance of Final Acceptance. If the Contractor fails to perform such maintenance within 10 Business Days of discovery of the need for the Work, DGS reserves the right to perform such work as it deems necessary with its own forces, and/or to enter into special contracts for the maintenance of specific items and Contractor shall be liable for the cost of such work.

C.5.28 Bicycle and Pedestrian Facilities

C.5.28.1 General Requirements

This Section C.5.28 includes requirements that the Contractor shall design and construct all bicycle and pedestrian facilities for the Project. The Contractor shall ensure that the bicycle and pedestrian facilities of this Project support DGS's commitment to integrate bicycle and pedestrian travel into Project development. The Contractor shall coordinate the elements of this Project with the existing and planned trails and other facilities for bicycles and pedestrians and the St. Elizabeths East Campus Master Plan.

C.5.28.2 Administrative Requirements

The Contractor shall maintain and keep operational all bicycle and pedestrian facilities to Congressional Heights Metro Station and SEH during construction and throughout the Term.

C.5.28.3 Design Requirements

C.5.28.3.1 Pedestrian Facilities

The Contractor shall design, construct, and maintain sidewalks along the public streets where sidewalks currently exist and where shown in the Intermediate Plans. Sidewalks and pedestrian facilities shall comply with the Americans with Disabilities Act and DDOT standards.

Exhibits to be added to Attachment C – Technical Provisions:

- List of permits
- Diagram of Curb Bump outs for additional LID features
- Pepco standard details, if applicable
- DC Water standards specifications and details, if applicable