

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY



POTOMAC YARD METRORAIL STATION

SPECIFICATIONS MANUAL

Divisions 0 - 1

Huntington Route

RFP-FQ16146/NAC

November 28, 2016

Volume 1 of 10

DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES

SECTION 00 00 05.30
COMMONWEALTH OF VIRGINIA CERTIFICATIONS PAGE

Civil Engineer:

Civil Engineering Firm: _____
Street Address: _____
City, State, Zip Code: _____
Name Of Licensed Civil Engineer: _____

Professional Certification:

"I hereby certify that these documents were prepared or approved by me and that I am a duly licensed Civil Engineer under the laws of the Commonwealth of Virginia."

License No.: _____

Expiration Date: _____

Structural Engineer:

Structural Engineering Firm: _____
Street Address: _____
City, State, Zip Code: _____
Name Of Licensed Structural Engineer: _____

Professional Certification:

"I hereby certify that these documents were prepared or approved by me and that I am a duly licensed Structural Engineer under the laws of the Commonwealth of Virginia."

License No.: _____

Expiration Date: _____

Architect:

Architectural Firm: _____
Street Address: _____
City, State, Zip Code: _____
Name Of Licensed Architect: _____

Professional Certification:

"I hereby certify that these documents were prepared or approved by me and that I am a duly licensed Architect under the laws of the Commonwealth of Virginia."

License No.: _____

Expiration Date: _____

Mechanical Engineer:

Mechanical Engineering Firm: _____
Street Address: _____
City, State, Zip Code: _____
Name Of Licensed Mechanical Engineer: _____

Professional Certification:

"I hereby certify that these documents were prepared or approved by me and that I am a duly licensed Mechanical Engineer under the laws of the Commonwealth of Virginia."

License No.: _____

Expiration Date: _____

Electrical Engineer:

Electrical Engineering Firm: _____
Street Address: _____
City, State, Zip Code: _____
Name Of Licensed Electrical Engineer: _____

Professional Certification:

"I hereby certify that these documents were prepared or approved by me and that I am a duly licensed Electrical Engineer under the laws of the Commonwealth of Virginia."

License No.: _____

Expiration Date: _____

Landscape Architect:

Landscape Architecture Firm: _____
Street Address: _____
City, State, Zip Code: _____
Name Of Licensed Landscape Architect: _____

Professional Certification:

"I hereby certify that these documents were prepared or approved by me and that I am a duly licensed Landscape Architect under the laws of the Commonwealth of Virginia."

License No.: _____

Expiration Date: _____

END OF SECTION

SECTION 00 00 07
TABLE OF CONTENTS FOR CONTRACT DOCUMENTS

Volume 1 – Specifications: Divisions 0 and 1
Volume 2 – WMATA Standard Specifications: Divisions 2 through 49
Volume 3 – WMATA Standard and RFP Drawings
Volume 4 – Reports (Geotechnical, Environmental, etc.)
Volume 5 – WMATA Manual of Design Criteria
Volume 6 – WMATA CAD Manual
Volume 7 – WMATA Safety and Security Plans and Documents
Volume 8 – WMATA Specification Preparation Style and Usage Guide
Volume 9 – WMATA Forms
Volume 10 – City of Alexandria Project Requirements and Process Guide

END OF SECTION

SECTION 00 00 10
TABLE OF CONTENTS FOR PROJECT SPECIFICATIONS

PROCUREMENT AND CONTRACTING REQUIREMENTS GROUP

DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS

00 00 01	Project Title Page
00 00 05.30	Commonwealth of Virginia Certifications Page
00 00 07	Table of Contents for Contract Documents (RFP)
00 00 10	Table of Contents for Project Specifications
00 10 00	Proposing Requirements – Design Build (RFP)
00 10 10	Request for Proposal
00 10 11	General Statement of Work
00 10 12	General Scope of Work
00 10 13	Project Solicitation Schedule
00 20 00	Instructions to Proposers (RFP)
00 20 01	General Instructions
00 20 02	Proposal Format
00 20 03	Technical and Price Proposal Procedures, Evaluation Factors, and Instructions
00 21 00	Supplementary Instructions to Proposers
00 25 00	Pre-Proposal Meetings Schedule
00 26 00	Pre-Award Meeting
00 30 00	Information Available to Proposers (RFP)
00 30 01	RFP Documents and Proposal Drawings
00 30 02	General Conditions, Supplementary Conditions, and General Requirements
00 30 03	WMATA Manual of Design Criteria, Program Requirements, and Specifications
00 30 04	WMATA Standard Drawings and RFP Drawings
00 31 00	Existing Conditions
00 32 00	Geotechnical Report
00 33 00	Environmental Report
00 34 00	WMATA Safety and Security Requirements
00 35 00	Quality Assurance/Quality Control
00 40 00	Proposal Forms and Supplements (RFP)
00 41 10	Proposal Forms
00 41 20	Technical Proposal Form
00 41 30	Price Proposal Form
00 43 10	Proposal Security (Proposal Bond Form)
00 43 20	Compliance / Exception Information
00 43 30	Brand Name or Equal Form
00 43 40	Price Proposal Schedule
00 45 10	Representations and Certifications Form
00 45 20	Proposal Data Form
00 45 30	Disadvantaged Business Enterprise (DBE) Data
00 49 10	Technical Proposal As Finally Accepted
00 49 20	Price Proposal as Negotiated and Accepted
00 50 00	Agreement (RFP)
00 51 00	Design-Build Contract Form

00 54 00	Attachments to the Contract
00 54 10	Power of Attorney
00 54 20	Power of Execution
00 55 00	Notice to Proceed (NTP)
00 60 00	Bonds and Certificates (RFP)
00 61 00	Bond Requirements
00 61 10	Performance Bond
00 61 20	Payment Bond
00 61 30	Performance and Payment Bonds (Additional Bond Security)
00 62 00	Certificates
00 70 00	General Conditions (RFP)
00 70 01	Definitions
00 70 02	Order of Precedence
00 70 03	General Requirements, Drawings and Specifications
00 70 04	Intent of Contract
00 70 05	Legal Requirements
00 70 06	Permits and Responsibilities
00 70 07	Responsibility of the Design-Builder for Design-Related Services
00 70 08	Requirements for Professional Registration
00 70 09	Project Management and Superintendence and Key Staff
00 71 00	Work by Design-Builder
00 71 01	Subcontract Agreements
00 71 02	Other Contracts
00 71 03	Confidentiality
00 71 04	Conditions Affecting the Work
00 71 05	Site Investigation
00 71 06	Preconstruction Inspection
00 71 07	Differing Site Conditions
00 71 08	Role of the Authority
00 71 09	Authority Reviews
00 72 00	Submittals
00 72 01	Value Engineering Incentive
00 72 02	Quality Assurance/Quality Control
00 72 03	Progress Schedules and Requirements for Maintaining Progress Records
00 72 04	Project Schedule
00 72 05	Commencing the Work
00 72 06	Suspension or Delay of Work
00 72 07	Termination for Default, Damages for Delay, and Time Extensions
00 72 08	Termination for the Convenience of the Authority
00 72 09	Assignment
00 73 00	Dispute Resolution
00 73 01	Use and Possession Prior to Completion
00 73 02	Acceptance and Inspection of Work
00 73 03	Authority-Furnished Property
00 73 04	Material, Workmanship and Equipment
00 73 05	Hazardous Materials
00 73 06	Protection of Existing Vegetation, Structures, Utilities and Improvements
00 73 07	Operations and Storage Areas
00 73 08	Accident Prevention
00 73 09	Fire Protection Equipment and Life Safety Agreement
00 74 00	Protection of Persons and Property
00 74 01	Consideration and Basis of Payment

00 74 02	Contract Prices and Price Proposal Schedule
00 74 03	Variation in Estimated Quantities
00 74 04	Method of Payment
00 74 05	Progress Payments for Lump Sum Items
00 74 06	Garnishment of Payments
00 74 07	Subcontract Payments
00 74 08	Changes
00 74 09	Pricing of Adjustments
00 75 00	Accounting and Record Keeping
00 75 01	Audit - Price Adjustments
00 75 02	Certificate of Current Cost or Pricing Data
00 75 03	Price Reduction for Defective Cost or Pricing Data - Price Adjustments
00 75 04	Subcontractor Cost or Pricing Data
00 75 05	Final Payment
00 75 06	Access and Examination of Records
00 75 07	Warranty/Guarantee of Construction
00 75 08	Correction of Deficiencies
00 75 09	Covenant Against Contingent Fees
00 76 00	Officials Not to Benefit
00 76 01	Gratuities
00 76 02	Conflict of Interest
00 76 03	Employment Restriction Warranty
00 76 04	Civil Rights
00 76 05	Disadvantaged Business Enterprise
00 76 06	Utilization of Small Business Concerns
00 76 07	Labor Provisions - Davis-Bacon and Copeland Anti-Kickback Acts
00 76 08	Walsh-Healey Public Contracts Act
00 76 09	Notice to the Authority of Labor Disputes
00 77 00	Convict Labor
00 77 01	Federal, State and Local Taxes
00 77 02	Additional Bond Security
00 77 03	Patent and Copyright Indemnity
00 77 04	Notice and Assistance Regarding Patent and Copyright Infringement
00 77 05	Authority Rights in Technical Data - Limited
00 77 06	Authority Rights in Technical Data - Unlimited
00 77 07	Technical Data – Withholding Payment
00 77 08	Indemnification and Insurance Requirements
00 77 09	Liquidated Damages
00 78 00	Compliance with Copeland Act Requirements
00 78 00	Contract Work Hours and Safety Standards Act
00 78 01	Equitable Adjustment for Minor Contract Modifications
00 78 02	Drug and Alcohol testing (For Safety Sensitive Function Only) – FTA and WMATA
00 78 03	No Federal Government Obligation to Third-Parties by use of a Disclaimer
00 78 04	Program Fraud and False or Fraudulent Statements and Related Acts
00 78 05	Federal Changes
00 78 06	Incorporation of FTA Terms
00 78 07	Energy Conservation
00 78 08	Government-Wide Debarment and Suspension
00 78 09	Survival
00 79 00	Choice of Law, Consent to Jurisdiction and Venue
00 79 01	Whistleblower protection – Federal
00 79 02	Workplace Violence – Zero tolerance
00 79 03	Additional federal regulations and Clauses

- 00 80 00 Supplementary Conditions (RFP)
 - 00 81 00 Work by Design-Builder
 - 00 82 04 Project Schedule
 - 00 83 00 Disputes Resolution – NOT USED
 - 00 83 03 Authority Furnished Property
 - 00 84 01 Consideration and Basis of Payment
 - 00 84 04 Method of Payment
 - 00 86 05 Disadvantaged Business Enterprise
 - 00 86 07 Labor Provisions
 - 00 87 07 Indemnification and Insurance Requirements
 - 00 87 08 Liquidated Damages
 - 00 88 09 Partnering
 - 00 89 04 Living Wage
 - 00 89 05 Community Outreach
 - 00 89 06 Availability of Funds
 - 00 89 07 Access to Records
 - 00 89 08 Federal Standards
 - 00 89 09 Recycled Products
- 00 90 00 Amendments and Modifications
 - 00 91 00 Amendments
 - 00 92 00 Claims
 - 00 93 00 Clarifications and Proposals
 - 00 94 00 Modifications

SPECIFICATIONS GROUP

GENERAL REQUIREMENTS SUBGROUP

DIVISION 01 – GENERAL REQUIREMENTS

- 01 10 00 Summary (RFP)
 - 01 11 00 Summary of Work
 - 01 11 10 Design-Builder Key Staff
 - 01 11 20 Design and Program Requirements
 - 01 11 30 Systems Integration
 - 01 11 40 Safety/Environmental Requirements
 - 01 11 50 Safety and Security Certification
 - 01 11 60 Identification and Security
 - 01 14 10 Access to Site
 - 01 18 00 Project Utility Sources
- 01 20 00 Price and Payment Procedures (RFP)
 - 01 25 00 Contract Modifications Procedures
- 01 30 00 Administrative Requirements (RFP)
 - 01 31 20 Project Meetings
 - 01 32 10 Construction Photographs
 - 01 32 20 Contract Progress Reporting
 - 01 33 00 Submittal Procedures
- 01 40 00 Quality Requirements (RFP)

01 41 00	Regulatory Requirements
01 42 00	References
01 47 00	Quality Management System
01 50 00	Temporary Facilities and Controls (RFP)
01 51 00	Temporary Utilities
01 52 00	Temporary Construction Facilities
01 53 00	Temporary Decking
01 55 00	Maintenance of Traffic, Access and Parking
01 56 00	Temporary Barriers and Enclosures
01 57 00	Temporary Controls
01 58 00	Project Signs
01 60 00	Product Requirements (RFP)
01 61 00	Basic Product Requirements
01 63 00	Product Substitution Procedures
01 70 00	Execution Requirements (RFP)
01 71 10	Acceptance of Conditions
01 72 10	Layout of Work and Field Engineering
01 72 20	Mobilization
01 72 30	Protection of Adjacent Construction
01 73 10	Cutting and Patching
01 74 00	Cleaning
01 77 50	Closeout
01 80 00	Performance Requirements (RFP)
01 82 00	Demonstration and Training

END OF SECTION

SECTION 00 10 00
PROPOSING REQUIREMENTS – DESIGN BUILD

00 10 10 REQUEST FOR PROPOSAL:

This Section includes Project information for Proposers.

NOTICE TO OFFERORS

Contract No. FQ16146/NAC includes RFP Documents for:

Project Name: POTOMAC YARD METRORAIL STATION

TECHNICAL PROPOSAL for the Work described herein shall be submitted to the Contract Administrator, Nichel Crooks, through WMATA's PMSS. Technical and Price Proposals shall be separate proposals and submitted before 3:00 PM (local time) on February 3, 2017. All questions are to be directed to Contract administrator.

DIRECTIONS TO SUBMITTING PROPOSER: Read and comply with the Solicitation Instructions. In addition to other submission requirements set forth in this Request for Proposal and all Amendments, the following must be properly executed, completed, and submitted separately as part of the offer:

A. TECHNICAL PROPOSAL:

1. Technical Proposal Form (properly executed)¹
2. Technical Proposal

B. PRICE PROPOSAL:

1. Price Proposal Form (properly executed¹)
2. Price Schedule
3. Price Guarantee
4. Proposal Data Form with Supporting Data
5. Representations and Certifications
6. List of DBE Certified Firms²
7. DBE Data³

PROPOSAL(S) MUST SET FORTH FULL, ACCURATE, AND COMPLETE INFORMATION AS REQUIRED BY THIS REQUEST FOR PROPOSAL, INCLUDING ALL AMENDMENTS

¹ The separate sealed Technical and Price Proposal Forms must be marked with offer under Solicitation RFP No. FQ16146/NAC and with acknowledgement of all Amendments.

² Proposed DBE firms must be certified WMATA DBE firms prior to submittal of Schedule of DBE Participation and Letters of Intent in order to be applied toward the DBE goal established for the Contract. Non-WMATA Certified DBE firms may be utilized by the Proposer but will not be applied toward the goal calculations.]

³ DBE Data and List of WMATA DBE-Certified Firms must be updated and included in Best and Final Offer (BAFO) submission(s).

00 10 11 GENERAL STATEMENT OF WORK:

- A. This solicitation is for the submittal of separate Technical and Price Proposals through a "Best Value" method of procurement for a Design-Build Project that includes furnishing both design and construction services. The Design-Builder, through itself or others, shall provide professional design engineering and architectural services as well as technical, sub-professional, clerical, and other services necessary for the complete design and preparation of the Design Drawings and Design Specifications, as well as the schedules, cost estimates, cost accounting, quality assurance/control and other Contract requirements. The Design-Builder shall also furnish all labor, equipment, materials, quality assurance/quality control, construction and environmental/security/safety superintendence, and field engineering services required for the construction of the Project. The Design-Builder is responsible for managing program and project coordination with Jurisdictional Authorities and Utilities through the Contracting Officer Representative; obtaining all necessary permits, approvals, and easements; performing architectural and engineering services; providing Submittals, field engineering support, quality management system to ensure that all work conforms to specified requirements; and providing operation and maintenance training and manuals for the systems and equipment installed. No attempt has been made to separate the Work by trades or types of construction, and the Design-Builder shall make its own decision as to the types of services needed to accomplish the Work.
- B. It is the responsibility of the Design-Builder to gather all data necessary for the performance of the Work under this Contract that are needed in addition to Authority-furnished RFP Documents and to develop a complete and final design.
- C. All work under this Contract shall be performed in a logical sequence as developed by the Design-Builder. The Work is divided in two phases, the Design Phase and the Construction Phase, however, there is an overlap between the Phases. The construction for any design elements will not be approved until the balance of the design is advanced to a stage where in the judgment of the Authority the design element can be adequately evaluated. The Design-Builder will receive approval by the Authority of the design by element before proceeding to construction for that element.

00 10 12 GENERAL SCOPE OF WORK:

A. POTOMAC YARD METRORAIL STATION:

1. Design and Construct the Potomac Yard Metrorail Station, on City of Alexandria, and WMATA property, located in City of Alexandria, Virginia.

In addition to the Station, the project includes a separate building to contain the AC Room functions of the station. The AC Room building shall be sized and equipped to fully accommodate the AC Room functions of a WMATA Metrorail Station. New Track, as well as its associated Traction Power, Train Control, and amber light system, shall be constructed to accommodate the new Station location. Re-alignment of existing track shall be required to make the final connections to the new track. The Design Builder will be responsible for all furnishings, including, but not limited to, Furniture, Appliances, Kiosk, signage, pedestrian access, and entry pavilions.

2. Pedestrian bridges shall provide pedestrian and bicycle access over the CSX railroad corridor, and connect to the entry pavilions. The south pedestrian bridge will terminate with the additions of bicycle ramps that will allow bicycle access to, and from, both Potomac Greens Park, and Potomac Yard Park.
3. CSX Coordination, Reviews, Approvals, and Implementation:

WMATA and the City of Alexandria (the City) have had preliminary coordination discussions with CSX during the project development phase of the Potomac Yard Metrorail Station project. This section is to identify the coordination and implementation roles and responsibilities of WMATA, the City, and the Design Builder with CSX during the entirety of the project.

The City will pay directly to CSX costs incurred by CSX and their consultant(s) for any work performed during the design and construction of the project.

The Design Builder is responsible for all coordination, communication, and scheduling with CSX throughout the duration of the project. This includes the scheduling of required CSX personnel on site during construction and meeting all CSX, City, and WMATA specifications and requirements. The Design Builder is responsible for all of their own costs incurred as a result of their required coordination with CSX. This includes, but is not limited to, costs associated with engineering, legal, project management, scheduling, or any other elements associated with the implementation and coordination with CSX. The Design Builder is responsible for all costs except those paid directly to CSX.

The Design Builder shall be responsible for any additional cost it may incur due to its failure to receive CSX approvals, failure in scheduling and/or coordination with CSX, coordinating and scheduling CSX flagman, obtaining approval for and implementation of a CSX shutdown, completion of work within the approved shutdown period, and re-opening of the CSX corridor within the approved timeframe. WMATA and the City will not be responsible for Design Builder costs associated with CSX delays or any failures of coordination between CSX and the Design Builder regarding permits, approvals, obtaining shutdowns and re-opening of the CSX corridor, coordination with CSX flagman or for any other reason.

4. Site restoration and mitigation of public lands, wetlands, and parks, including the construction trailer complex and laydown areas, and off-site employee parking and storage area, will be required prior to completion of the project.
5. The Design Builder shall be responsible for completion of all City processes including, but not to Final Site Plan Approval, and Board of Architectural Review approvals, as well as all appropriate approvals and permits from the City of Alexandria, National Park Service, and the Corp of Engineers required to construct the Potomac Yard Metrorail Station, Potomac Greens Park, and Potomac Yard Park. The City of Alexandria permit and approval process is an integral element of the Potomac Yard Station project and the Design Builder shall not commence construction prior to completion of the City approval and permit process. See RFP FQ16146/NAC, Volume 10 - CITY OF ALEXANDRIA PROCESS GUIDE, for additional information regarding the City of Alexandria project requirements. Inquiries regarding the City of Alexandria processes and requirements must be submitted in writing and directed to:

Jason Kacamburas P.E., CCM
Potomac Yard Metro Coordinator
City of Alexandria - Department of Project Implementation
301 King Street, Suite 3200, Alexandria, VA 22314
703.746.4049
Jason.Kacamburas@AlexandriaVA.gov
www.alexandriava.gov

The City of Alexandria shall waive all fees associated with obtaining City of Alexandria Permits. Fee schedules for all other permits required for the Potomac Yard Station, including, but not limited to, National Park Service, Virginia Department of Transportation, Corps of Engineers, and any other State or Federal permit required shall be the responsibility of the Design Builder.

6. Due to the complexity of construction and the recognized need for increased integration, cooperation and coordination efforts during design, construction and commissioning, the Potomac Yard Station shall utilize Building Information Modeling (BIM) and Construction Operations Building

Information Exchange (COBie) tools. The Design-Builder shall provide all design, drawings, tables, charts and schedules in such a format for all deliverables, both interim and final.

7. It is the sole responsibility of the Design Builder to comply with commitments, allowances, and restrictions, stated or implied, which are included in the following:

- A. Potomac Yard Metro Station Final Environmental Impact Statement (FEIS),
- B. Record of Decisions (RODs) from the Federal Transit Administration (FTA) and the National Park Service (NPS),
- C. Section 106 Memorandum of Agreement (MOA),
- D. Phase II Environmental Site Assessment
- E. The City of Alexandria's Development Special Use Permit (DSUP2016-004, 2016-005, 2016-005) conditions

The above stated documents are provided in this Solicitation FQ16146/NAC. All cost associated with the required compliance shall be included in the Design Builders proposal. See SECTION 00 30 00 INFORMATION AVAILABLE TO PROPOSERS.

- B. Basis of Design: As specified in Section 01 11 20, DESIGN AND PROGRAM REQUIREMENTS.

00 10 13 PROJECT SOLICITATION SCHEDULE:

- A. The solicitation schedule for this Project is as follows:
 - 1. Issue Request for Proposal: November 28, 2016
 - 2. Pre-Proposal Conference: December 19, 2016
 - 3. Technical and Price Proposal: February 3, 2017
 - 4. Site Visit by Appointment: Subsequent to the Receipt of Technical Proposals Technical Evaluations: February through March, 2017
 - 5. Comments Returned to Proposers: March 28, 2017
 - 6. Oral Presentation by Proposer: Two weeks after comments are returned to Proposers
 - 7. Request for Best and Final Offer: April 25, 2017
 - 8. Receipt of Best and Final Offer: May 9, 2017
 - 9. Projected Contract Award: June 23, 2017

END OF SECTION

SECTION 00 20 00
INSTRUCTIONS TO PROPOSERS (RFP)

This Section includes procedures with which Proposers must comply and conditions affecting award of the Contract.

00 20 01 GENERAL INSTRUCTIONS

A. Definitions as used herein:

1. The term "Solicitation" used in this document means this Request for Proposals (RFP).
2. The term "Offer" and "Proposal" are synonymous and mean a response to this Solicitation.
3. The term "PMSS" used in this document refers to the Authority's project management software system.
4. For further explanation of Contract terms, refer to Section 00 70 01, DEFINITIONS, of the General Conditions.

B. Method of Procurement:

1. This is a Best Value, single-phase, negotiated procurement.
 - a. Requires the Proposer(s) to prepare and submit separately Technical and Price Proposals based on the scope of Work set forth in the Solicitation. See Section 01 11 10, SUMMARY OF WORK. The Technical and Price Proposals will be evaluated separately based on the Technical Evaluation Factors stated under Section 00 20 03, TECHNICAL AND PRICE PROPOSAL FORMAT, PROCEDURES AND EVALUATION FACTORS, AND INSTRUCTIONS, and the Price Evaluation Factors stated in the same section.
 - b. Upon completion of the evaluation of the Technical and Price Proposals, the Authority will select and notify up to three Proposers who it determines submitted the most highly-rated Technical Proposals and whose Price Proposals were considered to be most advantageous to the Authority.
2. Oral presentation and Best and Final Offers are required, however, the Authority may award a contract without Amendments, negotiations, or discussions.

C. Basis for Award:

1. Award will be made to that Proposer:
 - a. whose offer is judged by an integrated assessment of the evaluation criteria to be the most advantageous to the Authority based on technical merit and price as identified in Section 00 20 03, TECHNICAL AND PRICE PROPOSAL FORMAT, PROCEDURES AND EVALUATION FACTORS, AND INSTRUCTIONS, and
 - b. that the Authority deems responsible in accordance with the WMATA Procurement Procedures Manual.
2. The Authority reserves the right to conduct discussions with the Proposers. If it is determined that discussions are necessary, the Authority will establish a competitive range of all of the most highly rated technical Proposals.
3. The Authority will make a single award to one Proposer as the result of this Solicitation. See Notes to Proposers in Section 00 43 40, PRICE PROPOSAL SCHEDULE, for further award information.

4. A written award of acceptance of Proposal mailed or otherwise furnished by the Authority to the successful Proposer within the specified Acceptance Period shall result in a binding contract without further action by either party. The Authority may accept a Proposal whether or not it conducts discussions, unless the Authority receives from the Proposer a written notice of withdrawal before award.
- D. Type of Contract: The Authority contemplates award of a fixed price contract.
- E. Invitation Documents:
1. Invitation Documents are available on the Authority's PMSS and will be made available to the Proposer upon receipt of an e-mail sent to the Contract Administrator with the Proposer contact name, e-mail address, company name, and company physical address.
- F. Preparation of Proposals:
1. The Proposer shall complete the Proposal Forms furnished in Section 00 40 00, PROPOSAL FORMS AND SUPPLEMENTS, or copies thereof, and submit them according to the instructions given in this RFP. If erasures or other changes appear on the forms, they must be initialed by the person signing the Proposal.
 2. Each Proposer shall furnish the information required by the Solicitation. Proposers are expected to examine the RFP Documents. Failure to do so will be at the Proposer's risk.
- G. Explanation to Proposers:
1. All explanations desired by a Proposer regarding the meaning or the interpretation of this RFP or all other Solicitation documents must be requested in writing 14 Days prior to the date set for receipt of Proposals to allow sufficient time for a reply to reach all Proposers before the submittal of their Proposals. These requests shall be forwarded to the Contract Administrator at NCrooks@WMATA.com. Oral explanations or instructions given before the award of the Contract will not be binding. Any information given to a prospective Proposer concerning the Solicitation will be furnished promptly to all prospective Proposers as an Amendment to this RFP, if the information is necessary in submitting Offers or if lack of such information would be prejudicial to other prospective Proposers.
 2. The Authority reserves the right to amend the RFP prior to the date set for receipt of Proposals or Best and Final Offers. Copies of such Amendments as may be issued will be furnished to all prospective Proposers through the PMSS.
 3. If the revisions under Amendments would require material changes in the Proposals, the date set for the receipt of Proposals may be postponed by such number of Days as in the opinion of the Authority will enable Proposers to revise their Proposals. In such cases, the Amendment will include an announcement of the new date for the receipt of Proposals.
- H. Acknowledgment of Amendments:
1. Proposers are required to acknowledge receipt of all Amendments to this Solicitation on copies of the Proposal Forms, Sections 00 41 20, TECHNICAL PROPOSAL FORM, and 00 41 30, PRICE PROPOSAL FORM, in the space provided. Failure to acknowledge all Amendments may cause the Proposal to be considered non responsive to the Solicitation, which would require rejection of the Proposal.
 2. Modifications of Proposals already submitted due to the revisions listed in an Amendment will be considered if received at the office designated in this Request For Proposal by the time set for receipt of Proposals. Modifications of either Technical Proposal or Price Proposal shall be submitted separately and forwarded to the Contract Administrator through the PMSS.

3. If this Solicitation is amended, all terms and conditions, which are not modified, remain unchanged.
- I. Submission/Withdrawal of Proposals/Others:
1. Technical and Price Proposals shall be submitted as electronic files through the PMSS as directed in this Paragraph I.
 2. The Proposer shall show on the cover sheet of each separate Technical Proposal and Price Proposal electronic file the hour and date specified in the Solicitation for receipt of Proposals, the Contract number, the name and address of the Proposer and whether the enclosed Proposal is a Technical Proposal or a Price Proposal. Failure to do so may result in a premature opening of or a failure to open such Proposal.
 3. Proposals may be electronically submitted to the Contract Administrator as shown in Section 00 10 10, REQUEST FOR PROPOSAL.
 4. Facsimile Proposals will not be considered.
 5. Proposals may be withdrawn by written notice before award. Proposals may be withdrawn in person by a Proposer or an authorized representative, if the representative's identity is made known and the representative signs a receipt for return of the Proposal before award.
- J. Late Proposals, Modifications, or Withdrawals:
1. All Proposals not submitted electronically in the PMSS to the Authority's Office of Procurement, through the projects Contract Administrator, before the specified closing time on the date of closing will be late and considered non-responsive.
 2. All modifications of a Proposal, except a modification resulting from the Contracting Officer's request for a Best and Final Offer, are subject to the conditions stated above.
 3. A modification resulting from the Authority's request for Best and Final Offer received electronically in the PMSS after the time and date specified in the request will not be considered unless it is received before award.
- K. Proposal Guarantee:
1. A Proposal guarantee is required by the Request for Proposal. Failure to furnish a Proposal guarantee in the proper form and amount with the Price Proposal, by the time set for the receipt of Proposals, may be cause for rejection of the Proposal. Proposal guarantee shall be sealed, marked, and submitted in an envelope by the Proposer and received at the Office of Procurement, Washington Metropolitan Area Transit Authority, Office of Procurement, PRMT File Room 3C-02, 600 Fifth Street, N.W., Washington D.C., 20001 by the specified closing time on the date of closing.
 2. A Proposal guarantee shall be in the form of a firm commitment, such as a Proposal bond (see Section 00 43 10, PROPOSAL SECURITY (Proposal Bond Form)), postal money order, certified check, cashier's check, irrevocable letter of credit from a State or Federally chartered bank or, in accordance with Treasury Department regulations, or certain bonds or notes of the United States. Corporations executing the Proposal bond as sureties must be among those appearing on the Treasury Department's list of approved sureties and must be acting within the limitations set forth therein. Proposal guarantees, other than Proposal bonds, will be returned as follows:
 - a. To unsuccessful Proposers: As soon as practicable after the receipt of Proposals.
 - b. To the successful Proposer:

- 1) Upon execution of such further contractual documents and bonds as may be required by the Proposal as accepted.
- 2) If the successful Proposer, upon acceptance of its Proposals by the Authority within the Acceptance Period, fails to execute such further Proposal guarantees and give such bond(s) as may be required by the terms of the Contract, its Contract may be terminated for default. In such event, the successful Proposer shall be liable for any cost of procuring the Work, which exceeds the amount of its Proposal, and the Proposal guarantee shall be available toward offsetting such difference.

L. Minimum Proposal Acceptance Period:

1. Acceptance Period, as used in this Section, means the number of Days available to the Authority for awarding a contract from the most current date specified in this Solicitation for receipt of Proposals or from the most current date specified for receipt of Best and Final Offers if applicable.
2. The Authority requires an Acceptance Period of 120 Days from the due date of Best and Final Offer.

M. Contract and Bonds: The Proposer whose Technical and Price Proposals are accepted shall, within the time established in this Solicitation, enter into a written contract with the Authority and furnish performance and payment bonds on standard Authority forms in the amounts indicated in Section 00 60 00, BONDS AND CERTIFICATES.

N. Solicitation Documents:

1. Solicitation Documents are available as indicated in Article 00 20 01, E – Invitation Documents.

O. Conditions Affecting the Work:

1. Proposers are required to visit the Project Site to conduct a preliminary Site-condition survey to ascertain the nature and location of the Work and the general and local conditions, which can affect the Work or the cost thereof. See Section 00 25 00, PRE-PROPOSAL MEETINGS SCHEDULE, for further details.
2. As discussed in Section 00 31 00, EXISTING CONDITIONS, Proposers may examine records of all original borings, test excavations, and other subsurface investigations and existing utilities and environmental investigations, if any, made for the Authority prior to the design and construction of the Project.
3. After Site visit, Proposers shall provide existing Site conditions based on RFP Documents and the preliminary Site-condition survey in the Proposal Drawings prepared by the Proposer with submittal of the Best and Final Offer.

P. Opportunity for Disadvantaged Business Enterprises to Propose: The Washington Metropolitan Area Transit Authority hereby notifies all Proposers that the Proposer shall ensure that in regard to any contract entered into pursuant to this Solicitation, disadvantaged business enterprises will be afforded full opportunity to submit Proposals in response to this Solicitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for award.

Q. Disadvantaged Business Enterprises: (See Section 00 45 30, DBE DATA)

1. It is the policy of the Authority (WMATA) that Disadvantaged Business Enterprises (DBEs) shall have an equal opportunity to receive and participate in performing WMATA contracts, including contracts and subcontracts at any tier, and of the Federal Transit Administration (FTA) and the U. S. Department of Transportation (US DOT) in receiving and participating in federally assisted contracts. The DBE requirements, if any, are set forth in Section 00 45 30,

DBE DATA, and in Section 00 76 05, DISADVANTAGED BUSINESS ENTERPRISE, to this Solicitation, and are applicable if the Proposal is \$500,000 or more for construction (and construction-related) contracts and for supply and service contracts having a total dollar value of \$100,000 or greater. The DBE goal percentages, if applicable, are listed in Section 00 86 05, DISADVANTAGED BUSINESS ENTERPRISE.

2. If the Proposer is not a DBE, then the DBE goal set forth in Section 00 86 05, DISADVANTAGED BUSINESS ENTERPRISE, if any, shall be met by Subcontracts or joint ventures with DBEs.
3. If a DBE goal is specified in Section 00 86 05, DISADVANTAGED BUSINESS ENTERPRISE, the Proposer shall submit with its initial Price Proposal a list of WMATA-certified DBE firms that it intends to enter into subcontract agreements with for this Contract. The documentation requirements of Section 00 45 30, DBE DATA, shall be completed and submitted at the time set forth for the submittal of Best and Final Offer to the Authority for any contract in which a DBE goal is applicable. Also, if no goal is specified in Section 00 86 05, DISADVANTAGED BUSINESS ENTERPRISE, but the Proposer still intends to utilize DBEs in the performance of this Contract, the Proposer shall submit with its initial Price Proposal a list of those WMATA-certified DBE firms. Proposers who fail to complete and return this information, if applicable, with their Best and Final Offer Price Proposal will be deemed to be non-responsive and will be ineligible for contract award. The documentation requirements, if applicable, are as follows:
 - a. SCHEDULE OF DBE PARTICIPATION and executed LETTER(S) OF INTENT TO PERFORM AS A SUBCONTRACTOR/JOINT VENTURE with agreed price sufficient to meet the DBE goal set forth in Section 00 86 05, DISADVANTAGED BUSINESS ENTERPRISE; or
 - b. A request for waiver of the DBE goal or portion of the goal, if any, and reasons therefore as stipulated in Paragraph F.3 of Section 00 45 30, DBE DATA. Request must be made on company stationery and signed by the responsible official.
4. Proposers that fail to meet the DBE goal set forth in Section 00 86 05, DISADVANTAGED BUSINESS ENTERPRISE, if any, and fail to demonstrate "good faith efforts" to justify waiver of the DBE goal, if any, may be deemed to be non-responsive and will be ineligible for contract award.
5. In connection with the performance of this Contract, the Design-Builder agrees to cooperate with the Authority in meeting its commitments and goals with regard to the maximum utilization of Disadvantaged Business Enterprises (DBE), and further agrees to exert good faith efforts to satisfy the requirements of Section 00 45 30, DBE DATA, if applicable, by subcontracting portions of the Work to disadvantaged firms, by entering into joint ventures with disadvantaged firms, or both.
6. If there is no goal in this Contract, DBE participation is encouraged and pursuant to the Authority's race-neutral program, is anticipated to be as specified in Section 00 86 05, DISADVANTAGED BUSINESS ENTERPRISE.
- R. Civil Rights: The Design-Builder will be required to comply with all applicable Equal Employment Opportunity laws and regulations of Section 00 76 04, CIVIL RIGHTS.
- S. Debarred or Ineligible Proposers: All Proposers will be required to certify that they are not on any list of ineligible or debarred contractors (see Section 00 45 10, REPRESENTATIONS AND CERTIFICATIONS FORM).
- T. Notice of Protest Policy:
 1. WMATA policy and procedure for the administrative resolution of protests is set forth in Chapter 20 of the Procurement Procedures Manual (PPM). The PPM contains strict rules for

- filing a timely protest, for responding to a notice that a protest has been filed, and other procedural matters. The Contracting Officer can furnish a copy of Chapter 20 upon request.
2. FTA Circular C 4220.1F, paragraph 7.I addresses Bid Protests. Review of protests by FTA is discretionary and will be limited to:
 - a. a grantee's failure to follow its protest procedures or its failure to review a complaint or protest; or
 - b. violations of Federal law or regulation.
 3. A protester must exhaust all administrative remedies with the Authority before filing an appeal to the FTA. An appeal to FTA must be received by the cognizant FTA regional or Headquarters Office within five working days of the date the protester learned or should have learned of an adverse decision by the Authority of other basis of appeal to FTA.
 4. Alleged violations on other grounds must be submitted to the Contracting Officer who will decide the protest.
 5. The judicial authorities having jurisdiction over court actions concerning protest decisions are the United States District Courts for the Districts of the Commonwealth of Virginia, and the District of Columbia, and the local courts in State of Maryland, Commonwealth of Virginia, and the District of Columbia.
- U. Requirement for Cost Data Prior to Contract Award: The Authority has determined that certified cost or pricing data are not required for this Solicitation based on the anticipation of adequate price competition. If after receipt of Price Proposals the Authority determines that adequate price competition no longer exists, the Authority will require the Proposer(s) to submit cost data in sufficient detail to permit analysis of the cost elements which make up the proposed price(s). The preparation, submittal, and certification of Certified Cost or Pricing Data shall be as described by FAR 15.4 and in Section 00 70 00, GENERAL CONDITIONS.
- V. Davis-Bacon Wage Determination Decision: The Authority's Compact requires that all mechanics and laborers employed by Design-Builder, Subcontractors, or employed as an Independent Contractor or contract employee on construction and maintenance contracts be paid wages not less than those prevailing on similar contracts in this locality as determined by the Secretary of Labor in accordance with Section 00 76 07, LABOR PROVISIONS. The Wage Determination Decision of the Secretary of Labor is referred to in Section 00 76 07, LABOR PROVISIONS, and attached as APPENDIX D in Section 00 80 00, SUPPLEMENTARY CONDITIONS.
- W. WMATA's Tax Exempt Status:
1. Pursuant to Article XVI, Paragraph 78, of the Washington Area Metropolitan Transit Authority Compact, as adopted by the State of Maryland, the District of Columbia, and the Commonwealth of Virginia, with the authorization and consent of the Congress of the United States, the Authority has been accorded exemption from taxes as follows:
 - a. "The Authority and the Board of Directors shall not be required to pay taxes or assessments upon any of the property acquired by it or under its jurisdiction, control, possession or supervision, or upon its activities in the operation and maintenance of any transit facility or upon any revenues there from, and the property and income derived there from shall be exempted from all Federal, State, District of Columbia, municipal, and local taxation. This exemption shall include without limitation, all motor vehicle license fees, sales taxes and motor fuel taxes."
 2. It has been the practice of the District of Columbia to apply the Authority's tax-exempt status to certain purchases of materials required under Authority construction contracts and acquired by Design-Builders for physical incorporation into the Work. This has not been the practice in either Maryland or Virginia. The Authority does not represent or warrant that the District of

Columbia practice applies to this Project or, if it does, that it will continue in effect during the term of this Project. It is the responsibility of the Design-Builder to determine its liability for any and all taxes applicable to this Project. Assessment or payment of taxes by the Design-Builder, including taxes resulting from changes in existing laws or the application thereof or of new or additional taxes, shall not constitute the basis for an increase in the Contract price, except as otherwise allowed under Section 00 77 01, FEDERAL, STATE, AND LOCAL TAXES.

3. By submission of its Proposal, the Proposer certifies that none of the taxes to which the Authority is exempt are included in its Proposal price(s) or the final Contract Price. In the event that the Authority learns that any taxes to which the Authority is exempt are included in the final Contract Price, the Authority shall be entitled to a reduction in the Contract Price reflecting such amount and a refund of monies paid related to such taxes, plus applicable interest.
- X. Advance Cost Agreement: Within 30 Days after Notice of Award, the Design-Builder shall make available for audit review, information on its accounting system used to project fixed and variable overhead rates applicable to possible Contract Modifications. The Authority's Office of the Auditor General, to the extent possible, will review and approve said accounting system. When appropriate and if possible, as a result of the audit review, Advance Cost Agreements may be executed between the Contracting Officer and the Design-Builder. The Cost Agreements shall be a supplemental agreement to the Contract.
- Y. Proprietary Data in Proposals:
 1. The Authority will provide all reasonable precautions to ensure that proprietary, technical, and pricing information remains within the review process except where otherwise ordered by an administrative or judicial body or necessary to use in a judicial or administrative proceeding. Proposers shall attach to each page of all proprietary data submitted with the Solicitation the following notation:
 - a. "This data furnished pursuant to this RFP shall not be disclosed outside the Authority, be duplicated, or used in whole or in part for any purpose other than to evaluate the offer; provided that, if a contract is awarded on the basis of that offer, the Authority shall have the right to duplicate, use, and disclose this data, in any manner and for any purpose whatsoever."
 2. The Authority's right to use information contained in these data is not limited if the information is or has been obtained by the Authority from another independent legitimate source.
 3. Except for the foregoing limitation, the Authority may duplicate, use, and disclose in any manner and for any purpose whatsoever and have others so do, all data furnished in response to this Solicitation.
- Z. Contract Performance Evaluation: The Proposer is advised that a Performance Evaluation will be completed at the end of the Contract. Factors to be included in the Performance Evaluation are as follows: Quality of Work, Timely Performance, Effectiveness of Management, Compliance with Labor Standards, Compliance with Safety Standards, and an Overall Evaluation. The Performance Evaluation may be used in determinations of responsibility for future WMATA contracts.

00 20 02 PROPOSAL FORMAT

- A. Proposal Page and Character Size: The page size shall not exceed 8-1/2 by 11 inches, except for foldouts, which may not exceed 11 by 17 inches. The page margins shall not be smaller than one inch on all four sides. The type size for text shall not be smaller than 10 point, with at least a line spacing of one. The type size for figures and tables shall be no smaller than 8 point.
- B. Elaboration: Legibility, clarity, and completeness are essential. Unnecessarily elaborate brochures or other presentations beyond that sufficient to present a complete and effective Proposal are not

desired and may be construed as an indication of the Proposer's lack of cost consciousness. Elaborate artwork, expensive paper and bindings, and expensive visual and other presentation aids are neither necessary nor wanted.

- C. **Completeness:** Include all forms and Project-specific information as required in this Section. Include pre-printed literature if directly relevant to this Project. Failure to provide forms or any other information required in the response to this Solicitation may cause the Offer to be deemed non-responsive, and the Offer may be subsequently rejected.
- D. **Organization:** The Technical Proposal and the Price Proposal shall be submitted in separate volumes. The Technical Proposal shall not contain any information that either directly or indirectly indicates the price of the Project as a whole or of any individual elements.
- E. Identify each volume with the RFP number, the Project Name and Contract Number, the Volume Number of the total number of volumes (i.e., Volume 1 of 3, etc.), the Volume Title, and the Proposer's identity, all identified on the Cover Sheet of the Volume. Provide electronic copies as specified in this Section. The Technical Proposal shall be submitted in both its native electronic format and in a bookmarked Adobe (.PDF) format. The native format is to include the latest Microsoft Word (.DOCX), Microsoft Excel (.XLSX) and/or AutoCAD (.DWG) drawing format. Price Proposal documents shall be submitted as a separate document in both its native electronic format and in a bookmarked Adobe (.PDF) format. The native format is to include the latest Microsoft Word (.DOCX) and/or Microsoft Excel (.XLSX) format. Electronic documents shall also be submitted for all Amendments in the same format as specified in this Section.
1. The Design Builder is advised that the minimum requirement for AutoCAD file format shall be coordinated with the Contract Administrator.
- F. **Proposal Copies and Page Count Limits:** Provide one electronic copy as specified in this Section. Proposals are limited to the following page limits listed below and will be evaluated up to these page limits. Page limits include all text, charts, figures, diagrams, and schematics. Cover pages, title pages, tables of contents, tabbed dividers, and blank pages are not included in the page limitations.

Volume	Part	Title	Copies	Page Limits
1	1	Work Approach	N/A	N/A
1	2	Past Performance and Experience	N/A	25
1	3	Key Personnel	N/A	N/A
1	4	Designer	N/A	15
1	5	Safety	N/A	1
1	6	Schedule	N/A	N/A
1	7	Project Challenges	N/A	15
1	8	Community Outreach	N/A	15
1	9	Quality Control Experience	N/A	15

G. Price Proposal

Volume	Part	Title	Copies	Page Limits
2	A	Price Submission	4	N/A
2	B	Forms and Contractual Information	4	N/A

00 20 03 TECHNICAL AND PRICE PROPOSAL PROCEDURES AND EVALUATION FACTORS, AND INSTRUCTIONS

A. Technical Proposal Evaluation Procedures:

1. Each Technical Proposal will be reviewed and evaluated individually by the Authority in accordance with procurement policy and procedures.
2. Proposals will be evaluated by their strengths, weaknesses, and deficiencies against the evaluation factors and these attributes will be communicated to the proposers for follow-up action as appropriate.
3. Definitions:
 - a. Discussions: Oral or written communications including negotiations between the Authority and an Offeror (other than clarifications) that involve information essential for determining the acceptability of the Proposal or to rectify identified defects in the Proposal.
 - b. Clarifications: Communication with an Offeror for the sole purpose of eliminating minor irregularities, informalities, or apparent clerical mistakes in the Proposal. Unlike discussions, clarification does not give the Proposer an opportunity to revise or modify its Proposal, except to the extent that correction of apparent clerical mistakes results in revision. All clarifications submitted by the Proposer must be in one location and in accordance with Section 00 43 40, PRICE PROPOSAL SCHEDULE.
 - c. Deficiencies: Defects in the Proposal could preclude acceptance. Involves any part of the Proposer's Proposal, which would not satisfy the Authority's evaluation standards established in the Solicitation. Includes failures to meet specifications, submit information, or questionable technical or management approaches. Deficiencies identified during the evaluation of the Proposal will be of one of two categories:
 - 1) Material: Material-basis for rejection because further discussions would not be prudent.
 - 2) Curable: May be corrected by clarification or discussions and brought into the acceptable range.
 - d. Weakness: Includes ambiguities, lack of complete descriptions, errors in interpretation, omissions of essential information, and inadequate information, all of which are considered reparable in discussions. An excessive number of clarifications may in itself constitute a weakness.
 - e. Strengths: Elements of the Proposal that exceed the evaluation standards of the Solicitation and provide an identified benefit to the Authority.
4. Ratings: Based upon the evaluations, an adjectival rating will be given depicting how well the Proposer's Proposal meets the stated evaluation factors and Solicitation requirements for the Technical Proposal. The adjectival criteria are as follows:

- a. Exceptional: Exceeds evaluation standards in a beneficial way to the Authority, has many significant strengths and no weaknesses or deficiencies, and is innovative, comprehensive, and complete in all details.
 - b. Exceeds: Exceeds evaluation standard in a beneficial way to the Authority, has some strengths and no significant weaknesses, and is comprehensive and complete in all details.
 - c. Acceptable: Meets evaluation standards and any weaknesses are readily correctable.
 - d. Marginal: Fails to meet evaluation standards, however, any significant deficiencies are correctable. The Proposal lacks essential information to support Proposal.
 - e. Unacceptable: Fails to meet an evaluation standard and the deficiency is uncorrectable. Proposal would have to undergo a major revision to become acceptable. The Proposal has demonstrated lack of understanding of the Authority's requirements or omissions of major areas.
5. Each Technical Proposal Evaluation Factor is equally important and is not listed in any order in regards to importance or weighting.

B. Technical Proposal Evaluation Factors:

1. Work Approach:

- a. Proposer shall describe in detail its means and methods of prosecuting the Work described in this Solicitation.

The Proposer's response will be rated based on its application of its expertise working on a live railroad performing design and construction of the work included in the scope; and credibility and realism of the proposed approach.

Response to this Evaluation Factor shall not exceed 25 single-sided pages with 12 pt. font text.

2. Past Performance and Experience:

The Proposer must detail its experience on Design-Build project(s) of similar size and complexity. The list shall describe similar projects completed within the last (10) ten years or currently in progress. The list of projects shall include:

1. Name and location of project;
2. Name of the owner;
3. Name and phone number of contact person;
4. Value of contract;
5. Percentage of Contract that was self-performed, and
6. General description of the project.

Proposers are advised that the Authority reserves the right to contact any and all clients and Transit Agencies listed.

Response to this Evaluation Factor shall not exceed 25 pages with 12 pt. font text.

3. Key Personnel

Submit the following information regarding the qualification and experience of individuals proposed by Design Builder as Key Personnel.

1. Identify the Key Personnel and their company affiliation within Design Builder's Team.
2. Resumes with appropriate details and work history for those individuals from the Design Build team who will have overall responsibility for the delivery of The Potomac Yard Metrorail Station.
 - Project Manager, In charge of design and construction of the Project as a whole, with overall responsibility for the successful and timely completion of the Project
 - Design Engineering Manager, Architect of Record, Engineers of Record, who will be responsible for key design activities and decisions in their respective disciplines.
 - Construction Manager, who will be responsible for implementation of the design during construction and for all construction activities.
 - Safety Superintendent/Manager, who will be responsible for overall project safety.
 - Construction General Superintendent, responsible for oversight of the day-to-day construction at the site
 - LEED Coordinator, responsible for managing all aspects of LEED Certification
 - Systems Integrator, who will be a liaison between the Design Manager, Construction Manager, Project Director, and the City of Alexandria.
 - Quality Manager, who will be responsible for all quality assurance and quality control on the project.
4. Designer:
 - b. The proposer shall identify the Designer that completes the Design-Build team and describe similar projects completed within the last ten (10) years or currently in progress. The list of similar projects shall include:
 1. Name and location of project;
 2. Name of the owner;
 3. Name and phone number of contact person;
 4. Value of contract;
 5. General description of the project.

Response to this Evaluation Factor shall not exceed 15 pages with 12 pt. font text.

The Authority reserves the right to contact any and all clients and/or transit agencies listed.

5. Safety

Proposers must provide the Design-Builder's OSHA Lost Time Injury Incidence Rate (LTIIR) and Experience Modification Rating (EMR) for each of the preceding 3 years. If the Proposer is a Joint Venture, the EMR will be an Average of the Joint Venture Partners.

Note: The Authority will not award the Contract to any Proposer whose EMR exceeds 1.0.

6. Schedule

- a. Proposer must develop and submit an Executive Summary of the Project Schedule, not exceeding 500 items. The schedule shall depict the Work submitted for Item 1, Work Approach. The schedule shall include durations for all major activities.

Response to this Evaluation Factor does not have a page limit but shall not exceed 500 items.

7. Project Challenges

- a. Design Builders must demonstrate their understanding of the issues and challenges associated with the design, construction and commissioning of the Potomac Yard Metrorail Station, and identify potential solutions. This shall consist of a narrative and graphics that identifies such issues and challenges and describes potential solutions

Response to this Evaluation Factor shall not exceed 15 pages with 12 pt. font text.

8. Community Outreach

- a. The Design Builder shall demonstrate that it has the capability and capacity to successfully manage public relations, community outreach, and stakeholder coordination throughout the duration of the Contract including design and construction.

Response to this Evaluation Factor shall not exceed 15 pages with 12 pt. font text.

9. Quality Control Experience

- a. Provide the Table of Contents of the proposed Project Quality Management Plan with a one sentence description of each item in the Table of Contents. Provide internal audits (include documentation of close-out of audit findings) of a project submitted under the Past Experience factor. One audit shall be from the mid-point of the design phase. A second audit shall be from the mid-point of construction.

Response to this Evaluation Factor shall not exceed 15 pages with 12 pt. font text.
Copies of required audits will not count against page limits.

- C. Technical Proposal Instructions: The information provided should be complete and clearly presented. If the information requested under a factor is presented elsewhere in the Proposal, the Proposer should cross reference this information that is provided elsewhere rather than duplicate it.

1. Complete, sign, and submit Section 00 41 20, TECHNICAL PROPOSAL FORM.

- D. Price Proposal Evaluation Procedures: Price Proposals will be evaluated only for those Proposers, who's Technical Proposals have been determined to be technically acceptable.

1. The Authority will evaluate Price Proposals for price reasonableness using cost or price analysis as deemed appropriate by the Authority in accordance with FAR 15.4. If cost analysis is appropriate, then the Proposer will furnish all necessary cost data of all direct and indirect cost elements and profit for all major work efforts in sufficient detail to permit an analysis by the Authority.
2. The Authority may determine that a Price Proposal is unacceptable if the prices proposed are materially unbalanced between line items or sub-line items. A price is materially unbalanced when the price of one or more line items is significantly overestimated or underestimated as indicated by the application of price analysis techniques. A materially unbalanced price presents an unacceptable risk to the Authority.

- E. Price Proposal Evaluation Factors:

1. The Authority will evaluate Price Proposals for completeness, clarity, conciseness, and responsiveness to the RFP-requested information.
2. Submittal of proposed prices for both the Base and the Options, if any. Failure to do so will necessitate rejection of the Proposal.
3. Materially unbalanced prices: Proposals that are materially unbalanced as to prices for the various categories of work items may be rejected as non-responsive.

4. The Authority will compare the Price Proposals to the Authority estimate and otherwise determine reasonableness by performing a price analysis if adequate competition exists. A cost analysis will be performed, if adequate price competition does not exist, to ascertain whether or not the proposed price is fair and reasonable. The Authority may request that Proposers provide a cost breakdown, which identifies major cost drivers and request supporting documentation, such as Supplier and Subcontractor quotes in support of their Proposal.
- F. Price Proposal Instructions: The information provided should be complete and clearly presented. If the information requested under a factor is presented elsewhere in the Proposal, the Proposer should cross reference this information that is provided elsewhere rather than duplicate it.
1. Complete, sign, and submit Section 00 41 30, PRICE PROPOSAL FORM. Additionally, submit the following:
 - a. Signed and completed Section 00 45 10, REPRESENTATIONS AND CERTIFICATIONS FORM.
 - b. A completed Section 00 43 40, PRICE PROPOSAL SCHEDULE, with an amount on each line item where one is requested and a total amount representing the sum of individual amounts requested.
 - 1) Price Proposal Schedule prices shall include all services, labor, material, equipment, overhead, incidentals, and profit, unless otherwise specified.
 - 2) In case of a discrepancy between a unit price and an extended price, the unit price will be presumed to be correct, subject however, to correction to the same extent and in the same manner as any other mistake.
 - 3) Where the Price Proposal Schedule explicitly requires that the Proposer propose on all items; failure to do so will disqualify the Proposal. When submittal of a price on all items is not required, Proposers shall insert the words NO PROPOSAL in the space provided for an item on which no price is submitted.
 - 4) Proposals for design and construction services other than those specified will not be considered unless authorized by the Solicitation. Unless specifically called for, alternate Proposals will not be considered.
 - c. List of DBE-certified firms that it intends to enter into subcontract agreements with (if a DBE goal is specified in Section 00 86 05, DISADVANTAGED BUSINESS ENTERPRISE, or if no goal is specified in Section 00 86 05, DISADVANTAGED BUSINESS ENTERPRISE, but the Proposer still intends to utilize DBEs in the performance of this Contract).
- NOTE: The submittal of certain items with the Offer is required if Offer is \$100,000 or greater for the design portion and \$500,000 or greater for the construction portion. Failure to submit Section 00 45 30, DBE DATA, forms waiver (if applicable), may cause the Offer to be found non-responsive and subsequently rejected.
- d. An executed Proposal Guarantee with Surety Certificate (Section 00 43 10, PROPOSAL SECURITY (PROPOSAL BOND FORM)). The Proposal Guarantee shall be based on the Total Base Proposal Plus Total Option Price, if any. The Performance and Payment Bonds shall be based on the award amount.
 - e. A signed and completed Section 00 45 20, PROPOSAL DATA FORM, with attachments.

G. Oral Technical Presentations:

1. Oral presentations may be requested only from Proposers that have not been eliminated from the competition. The oral presentation shall address the same topics as in the written Technical Proposal. The oral presentation shall be provided by the proposed key members of the Proposer's project team. Proposers' major Subcontractors/DBE representatives are also urged to attend. Total presentation time, including clarifications, shall be no longer than 2 hours.
2. At its sole discretion, the Authority will schedule oral presentations at the Headquarters of the Washington Metropolitan Area Transit Authority at 600 Fifth Street, N.W., Washington, D.C. 20001. Requests from Proposers to reschedule their oral presentations are discouraged. No rescheduling will be done unless determined necessary by the Contracting Officer. The oral presentations will take place after Proposals have been received by the Authority and prior to the Authority's request for a Best and Final Offer (BAFO),
3. Oral presentations will be held in a conference room with conference-room style seating. The Authority will provide only a projection screen.
4. Oral presentations will not constitute discussions or oral Proposals, as the Authority reserves the right to make an award without discussions. The Authority will not inform the Proposer of its strengths, deficiencies, or weaknesses during the presentation.
5. No cost/price information shall be included in the oral presentation or in any accompanying written information.
6. The Proposer shall provide six printed copies of its presentation in 8.5-inch by 11-inch format to the Contracting Officer at the time of the presentation. No other documentation of the oral presentations will be accepted. No change to the Proposer's written Proposal will be accepted at the oral presentation.
7. After completion of the oral presentation, the Authority may request clarification of any of the points addressed during the oral presentation, which are unclear, and may ask for elaboration by the Proposer on any point, which was not adequately supported in the presentation. Any such exchange will be for clarification only and will not constitute discussions. Further, no exchange during the oral presentation shall constitute a change to the Solicitation. The time required for Clarifications will be counted against the Proposer's 2-hour time limit.
8. The Authority reserves the right to videotape or to audiotape each Proposer's oral presentation.

H. Clarifications and Discussions:

1. Clarifications: Anytime during the evaluation process of the Technical and Price Proposals, the Authority may engage in limited exchanges with the Proposers to request clarifications of any of the points, which are unclear, and to resolve minor or clerical errors. Any such exchange will be for clarification only, and will not constitute Discussions within the meaning of FAR 15.306.
2. Discussions: The Authority contemplates that discussions will be necessary to maximize the Authority's ability to obtain best value. However, the Authority reserves the right to award a contract without discussions or any contact with the Proposers. If the Authority determines that discussions are necessary, it will establish a competitive range and schedule discussions with all Proposers in the competitive range. The Authority will maintain confidentiality of all Proposals.
 - a. Discussions will be held at the Headquarters of the Washington Metropolitan Area Transit Authority at 600 Fifth Street, N.W., Washington, D.C. 20001. Requests from Proposers to reschedule their discussions are discouraged, and no rescheduling will be done unless determined necessary by the Authority.

- b. A description of Proposal deficiencies will be provided to Proposers in the competitive range for revision or modification of their Proposal. Technical Proposal weaknesses and deficiencies will be discussed as well as adverse past performance information with all Proposers in the competitive range.
 - c. Negotiations will be conducted and may include bargaining and trade-offs. The Authority will establish pre-negotiation objectives with regard to price and technical factors tailored to each Proposal. The Authority may negotiate with Proposers to increase its performance for additional technical merit. Also, the Authority may suggest to Proposers that they decrease their performance and reduce their costs to make their Proposals more competitive. The Proposers will also be given an opportunity to correct errors and omissions in their Price Proposals.
 - d. After discussions have begun, the Authority may determine that a proposer is no longer considered among the highest rated proposers and may eliminate that proposer from the competition whether or not all material aspects have been discussed or the Proposer has been afforded the opportunity to submit a Proposal revision.
 - e. If discussions are held, the Authority will request Proposal revisions, and Best and Final Offers as appropriate from all Proposers remaining in the competitive range.
- I. Best Value Determination: The technical merit of the Proposal is significantly more important than the price, and the price must be fair and reasonable. The Authority may select other than the lowest priced Proposal if it is determined by value analysis, or technical/cost trade-offs, that the Proposal offers the greatest overall benefit to the Authority. As Proposals become more technically equivalent, then price becomes more important.

00 21 00 SUPPLEMENTARY INSTRUCTIONS TO PROPOSERS

- A. Procedures for Product Substitutions During the Proposal Period - Use of brand names within the technical requirements (as used in this clause, the term "brand name" includes identification of products by make and model in either the Technical Proposal or the design submittals approved by the Authority):
- 1. If items called for by the WMATA Standard Specifications have been identified by a "brand name or equal" description, such identification is intended to be descriptive, but not restrictive, and is to indicate the quality and characteristics of products that will be satisfactory. Proposers offering "equal" products including products of the brand name manufacturer other than the one described by brand name, will be considered by the Authority if such products are clearly identified in the Technical Proposal and are determined by the Authority to meet fully the salient characteristics requirements in the WMATA Standard Specification. The Authority will not consider "equal" products when the Authority has specified a sole source product.
 - 2. Unless the Proposer clearly indicates that it is offering an "equal" product by submitting Section 00 43 30, BRAND NAME OR EQUAL FORM, the Proposer shall be considered as offering a brand name product referenced in the RFP Documents.
 - 3. If the Proposer proposes to furnish an "equal" product, the brand name, if any, of the product to be furnished shall be otherwise clearly identified and the determination as to equality of the product offered shall be the responsibility of the Authority and will be based on information reasonably available to the Authority.
 - 4. If the Proposer proposes to modify a product so as to make it conform to the requirements of the WMATA Standard Specification, it shall (i) include a clear description of such proposed modifications, and (ii) clearly mark descriptive material to show the proposed modifications.
 - 5. Caution to Proposers: The Authority is not responsible for locating or securing any information, which is not identified and reasonably available to the Authority. Accordingly, to ensure that sufficient information is available, the Proposer must furnish all descriptive material (such as

catalogue cuts, illustrations, drawings, or other information) necessary for the Authority to (i) determine whether the product offered meets the salient characteristic requirements of the WMATA Standard Specification and (ii) establish exactly what the Proposer proposes to furnish and what the Authority would be binding itself to purchase by approval by the Authority. The information furnished may include specific references to information previously furnished or to information otherwise available to the Authority.

00 25 00 PRE-PROPOSAL MEETINGS SCHEDULE

- A. Unless otherwise notified, a pre-Proposal conference will be held as noted in the Project Solicitation Schedule, Section 00 10 13, PROJECT SOLICITATION SCHEDULE. The purpose of this conference will be to answer questions regarding, or requests for clarifications of, the Solicitation documents. It is requested that Proposers submit their questions and requests for clarifications of the terms, conditions, and requirements of this Request for Proposal to the Contracting Officer in writing either in advance of the meeting or during the meeting. Questions from the floor, however, are permissible.
- B. Site visits will be limited to those Design Builders who submit a proposal and will be scheduled after the proposals are received.
- C. Proposers are required to visit the Site of the Work and inform themselves of all local conditions that may affect the Work or the cost thereof.
- D. The Site Visit will be scheduled by the Authority in advance and each appointment shall be limited to no more than 45 minutes. The Design Builders will be limited to one (1) appointment with a maximum number of six (6) members of the Design Build team in attendance. The Authority will not grant access to areas within the WMATA Right of Way including the tracks and Traction Power Substation (TPSS).
- E. The Proposer acknowledges and agrees that it shall be bound by all the terms of the Contract regardless of its attendance at the pre-Proposal conference, or the thoroughness of its preliminary Site-condition investigation prior to submitting its Proposal.

00 26 00 PRE-AWARD MEETING

- A. The Authority requires that a pre-award meeting with the successful Proposers be held prior to the actual award of the Contract. The purpose of the meeting will be to review the successful Proposer's understanding of the Contract Documents, contractual requirements prior to award, and to confirm the successful Proposer's capabilities, financial standing, and past experience.
- B. The pre-award meeting will be held in the Washington Metropolitan area and shall be chaired by the Authority and attended by representatives of the Authority, the successful Proposer, and its Key Staff nominated for assignment to the Contract, the Designer, the Design-Builder, including major subcontractors if so requested by the Authority. Concerned parties shall each be represented by persons thoroughly familiar with and authorized to conclude matters relating to the Work described in the RFP Documents.
- C. Agenda discussion items for the meeting may include, but are not limited to, the following:
 - 1. Requirements for acceptability of payment and performance bonds.
 - 2. Requirements for DBE participation.
 - 3. Verification of qualifications of Key Staff. The Design-Builder shall not substitute any Key Staff identified in its Technical Proposal As Finally Accepted without the written approval of the Authority. The Design-Builder shall provide the Authority with all information as may be reasonably requested regarding substitutions, and any proposed substitutes shall share similar or better qualities than the person substituted.

4. Requirements for quality assurance/quality control.
 5. Percentage of construction work to be performed by Design-Builder's forces.
 6. Verification of successful Proposer's experience with similar work, including previous Authority contracts, scheduling capabilities, and financial standing.
 7. Understanding of work described in the RFP Documents and the physical constraints associated with the Work.
 8. Instructions for required submittals due at the Pre-Design-Build Meeting including updated Key Staff; Organizational Chart; firm, and Subcontractor identifications and qualifications; initial Project Management Plan, Quality Management Plan, Systems Integration Plan, Health and Safety Plan; Temporary Facilities Plan; and Permit and Regulatory Requirements Plan; 180-Day Schedule with cost loading; Description of Compliance with Contract Documents; Executed Contract Agreement; Power of Attorney Form; Power of Execution Form; performance Bond Form; Payment Bond Form; Insurance Certificates; and preliminary Schedule of Required Submittals.
- D. Representations and commitments made by the successful Proposer or its Subcontractors will be construed as binding to the Contract.

END OF SECTION

SECTION 00 30 00
INFORMATION AVAILABLE TO PROPOSERS

This Section includes information made available to the Proposers.

00 30 01 RFP DOCUMENTS AND PROPOSAL DRAWINGS

- A. The RFP Documents, including General Conditions, Supplementary Conditions, General Requirements, WMATA Manual of Design Criteria, Program Requirements, WMATA Standard Specifications, WMATA Standard Drawings, RFP Drawings, reports, safety and security requirements, and quality requirements of this Solicitation FQ16146/NAC and referenced in this Section establish requirements for the design and construction of the Project. These RFP Documents shall be used by the Proposer to prepare the Proposal and by the Design-Builder to advance and complete the design. The Design-Builder shall be solely responsible for the design, including the requirements established by these RFP Documents.
- B. WMATA anticipates providing the Potomac Yard Station project requirements for Traction Power and Automatic Train Control (ATC) as an Amendment to the RFP prior to issuing a request for Best and Final Offer (BAFO) from the Proposers.

00 30 02 GENERAL CONDITIONS, SUPPLEMENTARY CONDITIONS, AND GENERAL REQUIREMENTS

- A. The General Conditions, Supplementary Conditions, and General Requirements contain requirements for execution of the design and construction of the Project.

00 30 03 WMATA MANUAL OF DESIGN CRITERIA, PROGRAM REQUIREMENTS, AND SPECIFICATIONS

- A. The WMATA Manual of Design Criteria establishes general design criteria for the Project that shall govern the design of the Project unless Program Requirements or jurisdictional codes and regulations are more stringent, in which case the Program Requirements or codes and regulations shall govern.
- B. The Program Requirements defined in Section 01 11 20, DESIGN AND PROGRAM REQUIREMENTS, supplement the WMATA Manual of Design Criteria and establish Project-specific design criteria. The Program Requirements represent the criteria to be used, in combination with the WMATA Manual of Design Criteria, unless jurisdictional codes and regulations are more stringent, in which case the codes and regulations shall govern.
- C. The WMATA Standard Specifications for Divisions 2 through 49 represent the specification requirements to be used unless jurisdictional codes and regulations are more stringent, in which case the codes and regulations shall govern. The WMATA Standard Specifications have been prepared to serve as standard requirements for products and execution requirements for all WMATA projects and are not specifically edited for the Project. The Design-Builder shall incorporate the WMATA Standard Specifications without edits into the Design Specifications, and shall clearly reflect the specified products on the Design Drawings to establish which WMATA Standard Specification products shall be used on the Project.
- D. Specification sections in Division 02 through 49 that are not governed by WMATA Standard Specifications are not included in the RFP Documents. Design-Builder shall develop additional Division 02 through 49 specification Sections as needed to complete the Design Specifications for the Project.

00 30 04 WMATA STANDARD DRAWINGS AND RFP DRAWINGS

- A. WMATA Standard Drawings illustrate WMATA standards for various items and are provided for unedited inclusion in any Proposal Drawings prepared by the Proposer and in the Design Drawings prepared by the Design-Builder. RFP Drawings represent requirements for the Project

that shall be further developed into Proposal Drawings by the Proposer and Design Drawings by the Design Builder.

- B. The WMATA CAD Manual is provided in the Request for Proposal Documents and shall be adhered to for the preparation of Proposal Drawings by the Proposer and Design Drawings and As-built Drawings by the Design-Builder.

00 31 00 EXISTING CONDITIONS

- A. The Proposer shall prepare a preliminary site-condition survey depicting existing conditions of the proposed Site(s). The Authority will make the Site(s) available to the Proposer for this purpose.
- B. Proposers may examine records of all original borings, test excavations, and other subsurface investigations and existing utilities and environmental investigations, if any, made for the Authority prior to the design and construction of the Project. These materials may be examined by appointment made with the Contracting Officer.
- C. As-Built Drawings of the original construction of the segment are included in Volume 3 of the RFP. These drawings may not reflect the current existing conditions and are included for reference only.

00 32 00 GEOTECHNICAL REPORT

- A. Geotechnical Report is included in the RFP Documents and is provided as an aid for the Proposer's preparation of their Proposals and for preparation of the Design Drawings by the Design-Builder.
 - 1. Potomac Yard Metrorail Station – Geotechnical Data Report
 - 2. WMATA Potomac Yard – Presentation of Geotechnical Site Investigations Results

00 33 00 ENVIRONMENTAL REPORTS

- A. Project Environmental documentation is included in the RFP Documents and is provided as an aid for the Proposer's preparation of their Proposals and for preparation of the Design Drawings by the Design-Builder.
- B. Due to the complexity and involvement of various jurisdictional entities, including, but not limited to the National Park Service, Federal Transit Administration, City of Alexandria, and the Washington Metropolitan Area Transit Authority, the following information contains project requirements and commitments which applies to the Potomac Yard Metrorail Station Project. The Design Builder shall adhere to the requirements and commitments present in the following documents. Should there be conflicting requirements or commitments between jurisdictional agencies, the Design Build shall adhere to the requirement and commitments that are the most stringent.
- C. All Project requirements and commitments stated in the following Environmental documentation shall be included in the Design Builders price proposal.
 - 1. Final Environmental Impact Statement
 - 2. Federal Transit Administration (FTA) Record of Decision (ROD)
 - 3. FTA Mitigation Commitments Attachment A
 - 4. National Park Service (NPS) Record of Decision (ROD)
 - 5. Section 106 Memorandum of Agreement (MOA)
 - 6. Final Phase I and Phase II Environmental Site Assessments
 - 7. Cultural Effects Reports

00 34 00 WMATA SAFETY AND SECURITY REQUIREMENTS

- A. This Section lists the safety and security related documents that establish the safety requirements for the Project.
 - 1. WMATA Construction Safety and Environmental Manual (CSEM) Requirements: A compilation of the safety and reporting requirements for the Project.
 - 2. WMATA Safety and Security Certification Program Plan (SSCPP): A compilation of the safety and security certification requirements for the Project.

00 35 00 QUALITY ASSURANCE AND QUALITY CONTROL

- A. Section 01470, QUALITY MANAGEMENT SYSTEM, establishes the quality requirements for the development of the Quality Management Plan by the Design-Builder for execution of the Project.

END OF SECTION

SECTION 00 40 00
PROPOSAL FORMS AND SUPPLEMENTS

This Section includes forms and supplements for submitting Proposals.

THIS PAGE NOT USED

SECTION 00 41 10
PROPOSAL FORMS

This Section includes the Technical and Price Proposal Forms that are required to be submitted with either the Technical or Price Proposal.

THIS PAGE NOT USED

SECTION 00 41 20
TECHNICAL PROPOSAL FORM

Contract Number: FQ16146

Date of Request: November 28, 2016

Project Name: POTOMAC YARD METRORAIL STATION

Project Location: Alexandria, Virginia

REQUEST FOR TECHNICAL PROPOSAL containing information requested herein shall be submitted to the Contract Administrator NCrooks@WMATA.com through WMATA's PMSS by the Proposer so as to be received before the time and date listed in Section 00 10 10, REQUEST FOR PROPOSAL. Questions may be directed to NCrooks@WMATA.com through WMATA's PMSS.

In response to your Request For Technical Proposal for the above referenced Contract, the undersigned hereby proposes to furnish all labor, equipment and materials and perform all work to design and construct the Project in strict accordance with the Contract requirements for the consideration of the amount proposed on the Price Schedule under the Price Proposal. If awarded the Contract within the Proposal Acceptance Period, the undersigned agrees to execute the Design-Build Contract within 10 Days and to furnish, if required, performance and payment bonds on standard Authority forms with good and sufficient surety or sureties.

If the Contract is executed, the undersigned further agrees to commence the work within 10 Days after the receipt of Notice to Proceed and to complete the work within the time specified in the Contract.

The undersigned acknowledges receipt of the following Amendments to the Request for Technical Proposal under FQ16146.

Amendment Number _____, dated _____.

Amendment Number _____, dated _____.

Amendment Number _____, dated _____.

Note: Failure to acknowledge receipt of all Amendments may cause the Technical Proposal to be considered non responsive to the request, which would require rejection of the Technical Proposal as unacceptable.

PROPOSER:

Firm Name: _____

Firm Address: _____

Telephone Number: _____

DUNS # _____

Name and Title of Proposer's Authorized
Representative

Representative authorized to act on Proposer's
behalf: _____

Alternate authorized representative:

Directions for Submitting Proposal

1. Read and comply with the Solicitation Instructions. This form is to be submitted with your Technical Proposal. The Price Proposal and its Attachments shall be submitted separately from the Technical Proposal, and the Technical Proposal shall not contain any information relating to costs.
2. Technical Proposal Form and related required documents must be signed, sealed and submitted as specified in Section 00 20 00, INSTRUCTIONS FOR PROPOSERS (RFP).
3. Technical proposals shall be submitted through WMATA's PMSS before 3:00 pm (Eastern Standard Time) on day of proposal closing.

SECTION 00 41 30
PRICE PROPOSAL FORM

Contract Number: FQ16146

Date of Request: November 28, 2016

Project Name: POROMAC YARD METRORAIL STATION

Project Location: Alexandria, Virginia

REQUEST FOR PRICE PROPOSAL containing information requested herein shall be submitted to the Contract Administrator [Nichel Crooks (NCrooks@WMATA.com)] through WMATA's PMSS by the Proposer so as to be received before the time and date listed in Section 00 10 10, REQUEST FOR PROPOSAL. Questions may be directed to NCrooks@WMATA.com through WMATA's PMSS.

In response to your Request For Price Proposal for the above referenced Contract, the undersigned hereby proposes to furnish all labor, equipment and materials and perform all work to design and construct the Project in strict accordance with the Contract requirements for the consideration of the amount proposed on the Contract Price Schedule. If awarded the Contract within the Proposal Acceptance Period, the undersigned agrees to execute the Design-Build Contract within 10 Days and to furnish, if required, performance and payment bonds on standard Authority forms with good and sufficient surety or sureties.

If the Contract is executed, the undersigned further agrees to commence the work within 10 Days after the receipt of Notice to Proceed and to complete the Work within the time specified in the Contract.

The undersigned acknowledges receipt of the following amendments to the **Request for Price Proposal** under FQ16146.

Amendment Number _____, dated _____.

Amendment Number _____, dated _____.

Amendment Number _____, dated _____.

Note: Failure to acknowledge receipt of all amendments may cause the Price Proposal to be considered non responsive to the request, which would require rejection of the Price Proposal as unacceptable.

PROPOSER:

Firm Name: _____

Firm Address: _____

Telephone Number: _____

DUNS # _____

Name and Title of Proposer's Authorized
Representative

Representative authorized to act on Proposer's
behalf: _____

Alternate authorized representative:

Directions for Submitting Price Proposal

1. Read and comply with the Solicitation Instructions. This form is to be submitted with your Price Proposal. The Price Proposal and its Attachments shall be submitted separately from the Technical Proposal, and the Technical Proposal shall not contain any information relating to costs.
2. Price Proposal Form and related required documents must be signed, sealed and submitted as specified in Section 00 20 00, INSTRUCTIONS FOR PROPOSERS (RFP).
3. Price proposals shall be submitted through WMATA's PMSS before 3:00 pm (Eastern Standard Time) on day of proposal closing.

SECTION 00 43 10
PROPOSAL SECURITY (PROPOSAL BOND FORM)
(Submit with Price Proposal)

This Section includes the Supplementary Proposal Forms that are required to be submitted with either the Technical Proposal or with the Price Proposal.

PROPOSAL BOND

Request for Proposal No.: RFP FQ16146/NAC

Proposal Closing Date: _____

Penal Sum of Bond: _____

5% of Proposed Price or Amount: \$_____

Date Bond Executed: _____

KNOW ALL MEN BY THESE PRESENTS, that we, the Principal and Surety(ies) hereto, are firmly bound to the Washington Metropolitan Area Transit Authority in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally: provided, that, where the Sureties are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" as well as "severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal has submitted the Proposal identified above:

NOW, THEREFORE, if the Principal, upon acceptance by the Authority of his proposal identified above, within the period specified therein for acceptance (60 Days if no period is specified), shall execute such further contractual documents, if any, and give such bond(s) as may be required by the terms of the Proposal as accepted within the time specified 10 Days if no period is specified) after receipt of the forms by him, or in the event of failure so to execute such further contractual documents and give such bonds, if the Principal shall pay the Authority for any cost of procuring the work which exceeds the amount of its Proposal, then the above obligation shall be void and of no effect.

Each Surety executing this instrument hereby agrees that its obligation shall not be impaired by any extension(s) of the time for acceptance of the Proposal that the Principal may grant to the Authority notice of which extension(s) to the Surety(ies) being hereby waived provided that such waiver shall apply only with respect to extensions aggregating not more than 60 Days in addition to the period originally allowed for acceptance of the Proposal.

Principals

1 Firm Name: _____
Firm Address: _____

Corporate Seal

Name and Title
State of Incorporation: _____

2 Firm Name: _____
Firm Address: _____

Corporate Seal

Name and Title
State of Incorporation: _____

3 Firm Name: _____ Corporate Seal
Firm Address: _____

Name and Title
State of Incorporation: _____

Corporate Surety(ies)

Surety A Firm Name: _____ Liability Limit: Corporate Seal
Firm Address: _____ \$ _____

Name and Title
State of Incorporation: _____

Surety B Firm Name: _____ Liability Limit: Corporate Seal
Firm Address: _____ \$ _____

Name and Title
State of Incorporation: _____

Surety C Firm Name: _____ Liability Limit: Corporate Seal
Firm Address: _____ \$ _____

Name and Title
State of Incorporation: _____

Attach additional pages as needed.

Instructions

1. This form is authorized for use whenever a proposal guaranty is required in connection with design-build work.
2. The full legal name and business address of the Principal shall be inserted in the space designated "Principal" on the face of this form. The bond shall be signed by an authorized person. Where such person is signing in a representative capacity (e.g., an attorney-in-fact), but is not a member of the firm, partnership or joint venture, or an officer of the corporation involved, evidence of his authority must be furnished.
3. The penal sum of the bond may be expressed as a percentage of the proposal price (e.g., 5% of the proposal price) if desired or may be expressed in dollars and cents.
4. Corporation executing the bond as sureties must be among those appearing on the Treasury Department's list of approved sureties and must be acting within the limitations set forth therein. Where more than a single corporate surety is involved, their names and addresses (city and State) shall be inserted in the spaces (Surety A, Surety B, etc.) headed "Corporate Surety(ies)".
5. Corporations executing the bond shall affix their corporate seals.
6. The name of each person signing this proposal bond should be typed in the space provided.

THIS PAGE NOT USED

SECTION 00 43 20
COMPLIANCE/EXCEPTION INFORMATION

(Submit with Technical Proposal)

Indicate whether the Proposal submitted is intended to fully comply with the RFP Documents of this Request for Proposals, or if certain exceptions are taken. If exceptions are taken, the Proposer shall clearly identify all exceptions to the requirements, terms, or conditions of any part of this RFP. Each exception must be specifically related to the particular part of the RFP to which the exception is taken. The Proposer must support and explain the reason for all exceptions taken and explain the impact, if any, on the RFP requirements and state the necessity for or advantage of the exception.

Check one statement below.

- ☐ The Proposer certifies that its proposal is intended to comply fully with all RFP Documents.
- ☐ The Proposer certifies that its Proposal is intended to comply fully with all RFP Documents, except as noted (add additional sheets to explain).

THIS PAGE NOT USED

SECTION 00 43 30
BRAND NAME OR EQUAL FORM
(Submit with Technical Proposal)

Proposer is required to state in the spaces below the Manufacturer's Name, Part/Product Number, Description, and to provide relevant specifications, including technical data and Material Safety Data Sheets. Be advised that these items, if any, are only set apart for identification. If products, other than those specified, are not listed here, the Proposal will be viewed as providing the as-specified products.

Spec Section/Product Specified: _____

Manufacturer: _____

Product Proposed: _____

Manufacturer: _____

Spec Section/Product Specified: _____

Manufacturer: _____

Product Proposed: _____

Manufacturer: _____

Spec Section/Product Specified: _____

Manufacturer: _____

Product Proposed: _____

Manufacturer: _____

Spec Section/Product Specified: _____

Manufacturer: _____

Product Proposed: _____

Manufacturer: _____

NOTE: If applicable, attach additional sheets as necessary in this format. This form is included to establish a format for submission by the Proposer of an "or Equal" and will be utilized for the Technical Proposal submittal to the Authority for equal products by the Design-Builder. *This form may also be used during the Design and Construction Phases of the Contract.*

THIS PAGE NOT USED

SECTION 00 43 40
PRICE PROPOSAL SCHEDULE
(Submit with Proposal)

A. DESCRIPTION OF WORK

1. The Design-Builder shall Design and Build the Facilities in the manner and at the locations set forth in the RFP Documents of this solicitation, and in accordance with the Technical and Price Proposals as finally accepted by the Authority. The Design-Builder shall design the Work pursuant to the Contract Documents and the Rules and Regulations of the Jurisdictional Authorities, and shall construct the facility in strict accordance with the Issued for Construction Specifications and Issued for Construction Drawings and in full compliance with the Rules and Regulations of the Jurisdictional Authorities.

B. BASIS FOR AWARD

1. The best value evaluation of the Proposal by the Authority will consider the Total Base as Finally Accepted.

C. PRICE PROPOSAL

Price Proposal Schedule

Item #	Description	Note #	Est. Qty.	Unit	Unit Price	Total Amount
Base						
1	Mobilization	1		LS	\$3,000,000	\$3,000,000
2	General Conditions	2		LS	\$_____	\$_____
3	Site Work	3		LS	\$_____	\$_____
4	Potomac Greens Park	4		LS	\$_____	\$_____
5	Potomac Yard Park	5		LS	\$_____	\$_____
6	Site Restoration and Mitigation	6		LS	\$_____	\$_____
7	Station Structure	7		LS	\$_____	\$_____
8	Station Finishes	8		LS	\$_____	\$_____
9	AC Room Building Construction and Equipment	9		LS	\$_____	\$_____
10	South Pedestrian Bridge, Pavilion, and Bike Ramps	10		LS	\$_____	\$_____
11	North Pedestrian Bridge and Pavilion	11		LS	\$_____	\$_____
12	Design Items 3 through 11			LS	\$_____	\$_____
13	Traction Power	12		LS	\$_____	\$_____
14	Communications	12		LS	\$_____	\$_____
15	Automatic Train Control	12		LS	\$_____	\$_____
16	Hazardous Waste	13		CY	\$_____	\$_____
17	PCB-Contaminated Soil	14		CY	\$_____	\$_____
18	Petroleum-Contaminated Soil	15		CY	\$_____	\$_____
19	Non-Hazardous Contaminated Soil	16		CY	\$_____	\$_____
20	Uncontaminated Soil	17		CY	\$_____	\$_____

22	Permitting Allowance	18	Allow	\$50,000	\$50,000
23	Utility Allowance	19	Allow	\$250,000	\$250,000
Total Base Price					\$ _____

Notes to Proposers

- (1) Mobilization shall be paid monthly in twelve (12) equal installments over the first six months of the contract.
- (2) Contractor shall provide a quotation for all cost elements that make up General Conditions. General Conditions costs shall not be included with any other cost elements proposed under items 1 and 3 through 24 above.
- (3) Contractor shall provide a quotation for all work below station platform level, which includes, but is not limited to:
 - earthwork
 - retaining walls
 - demolition
 - grading and drainage
 - stormwater management
 - erosion and sediment control
 - pavement, striping
 - signage
 - utilities
 - perimeter fence
 - treatment of contaminated water
- (4) Contractor shall provide a quotation for all work on Potomac Greens Park which includes, but is not limited to:
 - demolition
 - grading
 - pervious and impervious pavement
 - gazebo
 - playground equipment
 - site furnishings
 - sodding
 - seeding
 - erosion and sediment control
 - drainage
 - utility(s) relocation
 - irrigation
 - site lighting
 - retaining walls
 - landscaping
- (5) Contractor shall provide a quotation for all work on Potomac Yards Park, which includes, but is not limited to:
 - grading
 - pervious and impervious pavement
 - gazebo
 - playground equipment
 - site furnishings
 - sodding
 - seeding
 - erosion and sediment control
 - drainage
 - utility(s) relocation
 - irrigation
 - site lighting
 - retaining walls
 - bicycle parking area
 - bicycle ramps
 - pedestrian bridges
 - raised high visibility crosswalk(s)
 - landscaping

- (6) Contractor shall provide a quotation for the demolition and restoration of the Potomac Greens Drive traffic circle, the demolition and restoration of Old Town Greens tot lots and tennis courts removed for construction access and temporary relocation of tot lot. Old Town Greens tot lot shall be relocated to a site within Old Town Greens HOA.
- (7) Contractor shall provide a quotation for all station structure work at and above the platform level, including platforms, mezzanines, and vertical transportation.
- (8) Contractor shall provide a quotation for station finishes, which include, but are not limited to:
 - paver tiles
 - kiosks
 - light fixtures
 - platform edge
 - platform lighting
 - bathrooms
 - benches
- (9) Contractor shall provide a quotation for all costs related to the construction of off-site AC room and access road as well as all electrical equipment, ductbanks, conduit, and connections. Equipment costs include, but are not limited to design, installation, testing, and commissioning.
- (10) Contractor shall provide a quotation for the south pedestrian bridge, which includes east ramp (bicycle ramp north of the South Pavilion) and west ramp (connecting to Potomac Greens area).
- (11) Contractor shall provide a quotation for the north pedestrian bridge and Entry Pavilion, connecting to the future North Potomac Yard development.
- (12) Traction Power, Automatic Train Control, and Communications: Contractor shall provide a quotation for equipment costs which include, but are not limited to design, supply, installation, and testing.
- (13) Hazardous Waste: The contractor shall provide a quotation for the removal and disposal of hazardous waste from the site. For inclusion in this category, soil must fail the toxicity characteristic leaching procedure. Quote shall include the cost of characterization, removal, transportation, and disposal.
- (14) PCB-Contaminated Soil: The contractor shall provide a quotation for the removal and disposal of PCB-contaminated soil from the site. For inclusion in this category, concentration of PCBs shall exceed 1 mg/kg. Soil shall be assumed to be contaminated with other constituents. Quote shall include the cost of characterization, removal, transportation, and disposal. Soil shall be transported to a TSCA-licensed facility.
- (15) Petroleum Contaminated Soil: The contractor shall provide a quotation for the removal and disposal of petroleum-contaminated soil from the site. For inclusion in this category, concentration of petroleum hydrocarbons shall exceed 1000 mg/kg. Soils shall assumed to be contaminated with arsenic above background. Quote shall include the cost of characterization, removal, transportation, and disposal.
- (16) Non-Hazardous Contaminated Soil: The contractor shall provide a quotation for the removal and disposal of non-hazardous contaminated soil from the site not otherwise specified. Quote shall include the cost of characterization, removal, transportation, and disposal.
- (17) Uncontaminated Soil: The contractor shall provide a quotation for the removal and disposal of uncontaminated soil from the site. Quote shall include the cost of characterization, removal, transportation, and disposal.
- (18) The City of Alexandria shall waive all fees associated with obtaining City of Alexandria Permits. Fee schedules for all other permits required for the Potomac Yard Station, including, but not limited to, National Park Service, Virginia Department of Transportation, Corps of Engineers, and any other State or Federal permit required shall be the responsibility of the Design Builder.

Contractor shall provide a quotation for an allowance to cover costs associated with permit fees for any permit fees not expressly waived by the City of Alexandria.

- (19) Contractor shall provide an invoice for an allowance applicable to the cost incurred by the Design Builder which is paid directly to the utility companies for fees. Allowance will cover Design Builder costs such as tap and connection fees, applications, and inspections fees. Other utility cost including, but not limited to, design and utility installation do not apply to this allowance and shall be included in the Site Work Bid Item in the Design Builder's proposal.

SECTION 00 45 10

REPRESENTATIONS & CERTIFICATIONS
(FEDERALLY FUNDED SUPPLY/SERVICE/CONSTRUCTION CONTRACTS)

REPRESENTATIONS

Instructions: Check or complete all applicable boxes or blocks on this form and submit it with your offer.

1. TYPE OF BUSINESS ORGANIZATION

By submission of this offer, the offeror represents that it operates as ☐ an individual, ☐ a partnership, ☐ a limited liability company, ☐ a joint venture, ☐ a nonprofit organization, or ☐ a corporation, incorporated under the laws of the State of _____.

Name	Signature
Title	Company
Date	

2. AFFILIATION AND IDENTIFYING DATA

Each offeror shall complete 2.1, 2.2 if applicable, and 2.3 below, representing that:

2.1 It ☐ is, ☐ is not, owned or controlled by a parent company. For this purpose, a parent company is defined as one that either owns or controls the activities and basic business policies of the offeror. To own another company, means that the parent company must own at least a majority, i.e., more than fifty percent (50%), of the voting rights in that company. To control another company, such ownership is not required. If another company is able to formulate, determine or veto the offeror's basic business policy decisions, such other company is considered the parent of the offeror. This control may be exercised through the use of dominant minority voting rights, use of proxy voting, Contractual arrangements or otherwise.

2.2 If the offeror is owned or controlled by a parent company, it shall insert in the space below the name and main office address of the parent company:

Name of Parent Company

Main Office Address (including ZIP Code)

2.3 If the offeror has no parent company, it shall provide in the applicable space below its own employer's identification number (E.I.N.), (i.e., number used on Federal tax returns or, if it has a parent company, the E.I. N. of its parent company).

Offeror E.I. N.: _____ or, Parent Company's E.I. N.: _____

Name	Signature
Title	Company
Date	

3. PREVIOUS CONTRACTS AND COMPLIANCE REPORTS

This representation is applicable to federally assisted contracts. By submission of this offer, the offeror represents that:

- 3.1** It [] has, [] has not, participated in a previous contract or subcontract subject to either the Equal Opportunity Clause of this solicitation, or the clause contained in Parts II and IV of Executive Order 11246, as amended; that prohibits discrimination on the basis of race, color, creed, national origin, sex, age; and
- 3.2** It [] has, [] has not, filed all required compliance reports; and
- 3.3** Representations indicating submittal of required compliance reports signed by proposed subcontractors will be obtained prior to subcontract awards.

Name	Signature
Title	Company
Date	

4. DISADVANTAGED BUSINESS ENTERPRISE

This representation is applicable to federally assisted contracts. By submission of this offer, the offeror represents that:

- 4.1** It [] is, [] is not, a disadvantaged business enterprise.

"Disadvantaged Business Enterprise" means a for-profit small business concern that is at least fifty one percent (51%) owned by one or more individuals who are both socially and economically disadvantaged individuals or, in the case of a corporation, in which fifty one percent (51%) of the stock is owned by one or more such individuals; and whose management and daily business operations are controlled by one or more socially and economically disadvantaged individuals who own it.

"Socially and Economically Disadvantaged Individual" is defined in Appendix B. Notice of Requirements for Disadvantaged Business Enterprise (DBE). By submission of this offer, the offeror represents that:

- 4.2** It [] is, [] is not, currently certified by Metropolitan Washington Unified Certification Program (MWUCP) as a disadvantaged business enterprise.
- 4.3** **Special Certification Requirements for Transit Vehicle Manufacturers.** Each transit vehicle manufacturer, as a condition of being authorized to bid or propose on FTA funded transit vehicle procurements, must certify that it has complied with the DBE requirements of 49 C.F.R. Part 26.

The offeror represents that it [] is or [] is not a transit vehicle manufacturer and [] has or [] has not complied with the DBE requirements of 49 C.F.R Part 26.

Name	Signature
Title	Company

5. SMALL BUSINESS ENTERPRISE (MAY 2015)

“Small Business Enterprise” means a for profit small business concern that is at least fifty one percent (51%) owned by one (1) or more individual(s) who are economically disadvantaged. “Economically Disadvantaged Individual” is defined in Appendix B-1, Definitions, in Notice of Requirements for Small Business Enterprise (SBE) Program.

5.1 It [] is, [] is not, a small business enterprise. A firm must be a small business as defined by the U.S. Small Business Administration (SBA) by applying current SBA business size standards found in 13 C.F.R. Part 121 that are applicable to the type of work the firm seeks to perform in USDOT assisted contracts. The fifty one percent (51%) owner must be a U.S. citizen or permanent resident. A firm must be organized for profit in order to be eligible for SBE certification. The firm's average gross receipts cannot exceed the overall USDOT size standard for a small business [\$23.98 million averaged over the three (3) previous fiscal years or part of year that the business has been in existence.] Set forth in 49 C.F.R. § 26.65, at least fifty one percent (51%) of the firm's ownership must be held by individuals who meet the personal net worth (PNW) cap of \$1.32 million as prescribed by 49 C.F.R. § 26.67.

5.2 It [] is, [] is not, currently certified by WMATA as a small business enterprise.

Name	Signature
Title	Company
Date	

6. AFFIRMATIVE ACTION COMPLIANCE

This representation is applicable to federally assisted contracts of \$50,000 or more that are awarded to contractors with fifty (50) or more employees. By submission of this offer, the offeror represents that:

6.1 It has a workforce of _____ employees.

6.2 It [] has developed and has on file, or [] has not developed and does not have on file, at each establishment, affirmative action programs required by the rules and regulations of the Secretary of Labor (41 C.F.R. §§ 60.1 and 60.2), or

6.3 It [] has not previously had contracts subject to the written affirmative action program requirements of the rules and regulations of the U.S. Secretary of Labor.

Name	Signature
Title	Company
Date	

CERTIFICATIONS

7. COVENANT AGAINST GRATUITIES

By submission of this offer, the offeror certifies, and in the case of a joint offer, each party thereto certifies as to its own organization, that in connection with this procurement:

Neither it nor any of its employees, representatives or agents have offered or given gratuities (in the form of entertainment, gifts or otherwise) to any Board member, employee or agent of the Authority with the view toward securing favorable treatment in the awarding, or administration of this Contract.

Name	Signature
Title	Company
Date	

8. CONTINGENT FEES

By submission of this offer, the offeror certifies, and in the case of a joint offer, each party thereto certifies as to its own organization, that in connection with this procurement:

8.1 It [] has, [] has not, employed or retained any company or persons (other than a full-time, bona fide employee working solely for the offeror) to solicit or secure this Contract, and

8.2 It [] has, [] has not, paid or agreed to pay any company or person (other than a full-time, bona fide employee working solely for the offeror) any fee, commission, percentage, or brokerage fee contingent upon or resulting from the award of this Contract.

Name	Signature
Title	Company
Date	

9. CLEAN AIR ACT AND CLEAN WATER ACT CERTIFICATION

This certification is applicable if the Contract will be federally assisted and the offer exceeds \$150,000, or the Contracting Officer believes that orders under an indefinite type Contract in any year will exceed \$150,000 or a facility to be used has been the subject of a conviction under the Clean Air Act [42 U.S.C. § 7413(c)(1)] or the Clean Water Act [33 U.S.C. § 1319(c)], is listed by the U.S. Environmental Protection Agency (EPA) as a violating facility, and the acquisition is not otherwise exempt:

9.1 Any facility to be utilized in the performance of this Contract [] is, or [] is not listed on the EPA's List of Violating Facilities;

- 9.2** Offeror will immediately notify the Contracting Officer, before award, of the receipt of any communications from the Administrator, or a designee of the EPA, indicating that any facility that it proposes to use in the performance of this Contract is under consideration to be listed on the EPA's List of Violating Facilities; and
- 9.3** Offeror will include a certification substantially the same as this certification, including this paragraph, in every non-exempt subcontract.

Name	Signature
Title	Company
Date	

10. DEBARMENT, SUSPENSION, INELIGIBILITY, AND VOLUNTARY EXCLUSION

This certification is applicable to federally assisted contracts over \$25,000.

- 10.1** Primary Covered Transactions. This certification applies to the offer submitted in response to this solicitation and will be a continuing requirement throughout the term of any resultant Contract.
- 10.1.1** In accordance with the provisions of 2 C.F.R. Part 1200 and 2 C.F.R. Part 180, Subpart C, the offeror certifies to the best of its knowledge and belief that it and its principals:
- 10.1.1.1** are not currently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal or state department or agency;
- 10.1.1.2** have not, within a three (3) year period preceding this offer, been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) transaction or contract under a public transaction; violation of Federal or state antitrust statutes, or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- 10.1.1.3** are not currently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, state, or local) with commission of any of the offenses enumerated in paragraph (1) (ii) of this certification; and have not, within a three (3) year period preceding this offer, had one (1) or more public transactions (Federal, state, or local) terminated for cause or default.
- 10.1.2** Where the offeror is unable to certify to any of the statements in this certification, the offeror shall attach an explanation to this offer.
- 10.2** Lower Tier Covered Transactions. This certification applies to a subcontract at any tier expected to equal or exceed \$25,000 and will be a continuing requirement throughout the term of this Contract.

- 10.2.1** The prospective lower tier subcontractor certifies, by submission of this offer, that neither it nor its principals is currently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal or state department or agency.
- 10.2.2** Where the prospective lower tier subcontractor is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.
- 10.3** The Certification required by 10.2, above, shall be included in all applicable subcontracts and the Contractor shall keep a copy on file. The Contractor shall be required to furnish copies of certifications to the Contracting Officer upon his or her request.

Name	Signature
Title	Company
Date	

11. CERTIFICATION OF INDEPENDENT PRICE DETERMINATION

- 11.1** By submission of its offer, the offeror certifies, and in the case of a joint offer, each party thereto certifies as to its own organization, that in connection with this procurement:
- 11.1.1** The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or with any other competitor;
- 11.1.2** Unless otherwise required by law, the prices that are quoted in this offer have not been knowingly disclosed by the offeror and will not be knowingly disclosed by the offeror prior to award (in the case of a negotiated procurement), directly or indirectly, to any other offeror or to any competitor; and
- 11.1.3** No attempt has been made or will be made by the offeror to induce any other person or firm to submit or not to submit an offer, for the purpose of restricting competition.
- 11.2** Each person signing this offer certifies that:
- 11.2.1** He or she is the person in the offeror's organization responsible for the decision regarding the prices being offered herein and that he/she has not participated, and will not participate, in any action contrary to 11.1.1 through 11.1.3 above; or
- 11.2.2** He or she is not the person in the offeror's organization responsible for the decision regarding the prices being offered herein, but that he/she has been authorized in writing to act as agent for the persons responsible for such decision in certifying that such persons have not participated; and will not participate, in any action contrary to 11.1.1 through 11.1.3 above; or and as their agent he or she does hereby so certify.

Name	Signature
Title	Company
Date	

12. CERTIFICATION OF NONSEGREGATED FACILITIES

This certification is applicable to federally assisted contracts over \$10,000.

12.1 By submission of this offer, the offeror certifies, and in the case of a joint offer, each party thereto certifies as to its own organization, that in connection with this procurement:

12.1.1 It does not and will not maintain or provide for its employees, any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control, where segregated facilities are maintained.

12.1.2 The offeror agrees that a breach of this certification is a violation of the Equal Opportunity clause in this Contract.

12.1.3 As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion or national origin, because of habit, local custom or otherwise.

12.1.4 It further agrees that (except where it has obtained identical certifications from proposed subcontractors for specific time periods) it will:

12.2 Obtain identical certifications from proposed subcontractors before the award of subcontracts under which the subcontractor will be subject to the Equal Opportunity clause;

12.3 Retain such certifications in its files; and

12.4 Forward the following notice to such subcontractors (except if the proposed subcontractors have submitted identical certifications for specific time periods):

NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENTS FOR CERTIFICATIONS OF NONSEGREGATED FACILITIES

A Certification of Nonsegregated Facilities must be submitted prior to award of a subcontract exceeding \$10,000 that is not exempt from the provisions of the Equal Opportunity clause. The certification may be submitted either for such subcontract or for all subcontracts during a period (i.e., quarterly, semiannually or annually).

Name	Signature
Title	Company
Date	

13. NONDISCRIMINATION ASSURANCE

- 13.1** By submission of this offer, the offeror certifies, and in the case of a joint offer, each party thereto certifies as to its own organization, in connection with this procurement, that it will not discriminate on the basis of race, color, creed, religion, national origin, sex, age, disability, sexual preference and/or gender identity in the performance of this Contract. The offeror is required to insert the substance of this clause in all subcontracts and purchase orders. The Contractor's failure to carry out these requirements is a material breach of this Contract, that may result in the termination of this Contract or such other remedy as the Authority deems appropriate. The offeror further agrees by submitting this offer, that it will include this certification, without modification, in all subcontracts and purchase orders.

Name	Signature
Title	Company
Date	

14. CERTIFICATION OF RESTRICTIONS ON LOBBYING

This certification is applicable to federally assisted contracts if the offer exceeds \$100,000.

- 14.1** By submission of this offer, the offeror certifies, and in the case of a joint offer, each party thereto certifies as to its own organization, that to the best of his or her knowledge or belief:
- 14.1.1** No federally appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
 - 14.1.2** If any funds other than federally appropriated funds have been paid or will be paid to any person for making lobbying contacts to an officer or employee of any agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with this Contract, the undersigned shall complete and submit Standard Form--LLL, "Disclosure of Lobbying Activities."
 - 14.1.3** The undersigned shall require that the language of this certification be included in all sub-awards (including subcontracts, sub-grants and contracts under grants, loans and cooperative agreements) at all tiers and that all sub-recipients shall certify and disclose accordingly.
- 14.2** This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. § 1352, as amended. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

- 14.3** The Contractor certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C.A. § 3801, *et seq.* apply to this certification and disclosure, if any.

Name	Signature
Title	Company
Date	

15. BUY AMERICA ACT CERTIFICATION

The Buy America Act requirements apply to federally assisted construction contracts, and acquisition of goods or rolling stock contracts valued at more than \$150,000.¹

- 15.1** By submission of this offer, the offeror certifies, and in the case of a joint offer, each party thereto certifies as to its own organization, that in connection with this procurement it will comply with 49 U.S.C. § 5323(j) and 49 C.F.R. Part 661, which provide that Federal funds may not be obligated unless steel, iron, and manufactured products used in FTA funded projects are produced in the United States, unless a waiver has been granted by FTA or the product is subject to a general waiver. General waivers are listed in 49 C.F.R. § 661.7. Separate requirements for rolling stock are set out at 49 U.S.C. § 5323(j)(2)(C) and 49 C.F.R. § 661.11.

- 15.2** An offeror must submit to the Authority, the appropriate Buy America Act certification (below) with all offers on FTA funded contracts, except those subject to a general waiver. Offers that are not accompanied by a completed Buy America Act certification must be rejected as nonresponsive. This requirement does not apply to lower tier subcontractors. Mark the applicable certifications below:

15.2.1 Certification requirement for procurement of steel, iron, or manufactured products:

☐ *Certificate of Compliance with 49 U.S.C. § 5323(j)(1)*

The offeror hereby certifies that it will meet the requirements of 49 U.S.C. § 5323(j)(1) and the applicable regulations in 49 C.F.R. § 661.5.

☐ *Certificate of Non-Compliance with 49 U.S.C. § 5323(j)(1)*

The offeror hereby certifies that it cannot comply with the requirements of 49 U.S.C. § 5323(j)(1) and 49 C.F.R. § 661.5, but it may qualify for an exception pursuant to 49 U.S.C. §§ 5323(j)(2)(A), 5323(j)(2)(B), or 5323(j)(2)(D), and 49 C.F.R. § 661.7.

15.2.2 Certification requirement for procurement of buses, other rolling stock and associated equipment:

☐ *Certificate of Compliance with 49 U.S.C. § 5323(j)(2)(C)*

The offeror hereby certifies that it will comply with the requirements of 49 U.S.C. § 5323(j)(2)(C) and the regulations at 49 C.F.R. § 661.11.

☐ *Certificate of Non-Compliance with 49 U.S.C. § 5323(j)(2)(C)*

¹ If the funding for this Contract comes from an FTA grant issued before December 26, 2014, then the limit is \$100,000.

The offeror hereby certifies that it cannot comply with the requirements of 49 U.S.C. § 5323(j)(2)(C) and 49 C.F.R. § 661.11, but may qualify for an exception pursuant to 49 U.S.C. §§ 5323(j)(2)(A), 5323(j)(2)(B), or 5323(j)(2)(D), and 49 C.F.R. § 661.7.

Name	Signature
Title	Company
Date	

16. CERTIFICATION OF NON-DELINQUENT TAXES

This certification is applicable to federally assisted contracts.

- 16.1** By submission of this offer, the offeror certifies, and in the case of a joint offer, each party thereto certifies as to its own organization, that in connection with this procurement:
- 16.1.1** It has not been convicted over the past three (3) years of violating any Federal criminal tax law or failed to pay any tax.
 - 16.1.2** It has certified if it has been notified of an unresolved tax lien or any unsatisfied Federal tax delinquency in excess of \$3,000 and that it is paying tax debts through an installment agreement or has requested a collections due process hearing.
 - 16.1.3** The offeror agrees that a breach of this certification is a violation of the Federal Acquisition Regulation (FAR).
 - 16.1.4** As used in this certification, the term "tax delinquency" means an outstanding debt for which a notice of lien has been filed in public records.
 - 16.1.5** It further agrees that (except where it has obtained identical certifications from proposed subcontractors for specific time periods) it will:
- 16.2** Obtain identical certifications from proposed subcontractors before the award of subcontracts under which the subcontractor will be subject to the FAR.;
- 16.3** Retain such certifications in its files; and
- 16.4** Forward the following notice to such subcontractors (except if the proposed subcontractors have submitted identical certifications for specific time periods):

NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENTS FOR CERTIFICATION OF NON-DELINQUENT TAXES

A Certification of Non-Delinquent Taxes must be submitted prior to award of a subcontract exceeding \$100,000 that is not exempt from the provisions of the FAR. The certification may be submitted either for such subcontract or for all subcontracts during a period (i.e., quarterly, semiannually or annually).

Name	Signature
Title	Company
Date	

17. **DISCLOSURES OF INTERESTS OF WMATA BOARD MEMBERS**

For purposes of this disclosure, terms in bold are defined by the Code of Ethics for Members of the WMATA Board of Directors a copy of which is available at www.wmata.com. Financial interests include ownership interests and prospective and actual income. Firm includes parents, subsidiaries and affiliates.

By submission of this offer, the offeror certifies, and in the case of a joint offer, each party thereto certifies as to its own organization, that to the best of its knowledge, information and belief in connection with this procurement:

17.1 [] No WMATA **Board member, household member or business associate** has a financial interest in this firm, in a **financial transaction** with the Authority to which this firm is a party or prospective party, or in an **actual or prospective business relationship with the Authority** to which this firm is a party.

17.2 [] The following WMATA **Board member(s), household member(s) or business associate(s)** has a financial interest in this firm, in a **financial transaction** with the Authority to which this firm is a party or prospective party, or in an **actual or prospective business relationship with the Authority** to which this firm is a party, Include in "Nature of Interest" below, a description of the financial interest and (1) for ownership interests, the value of the interest, the name and address of the firm in which the interest is held, and the total equity or equivalent interest of the firm; and (2) for income, the amount of all income received by the **Board member, household member or business associate** in the current and preceding fiscal year for services provided, and the name and address of the firm from which the income was received.

Name of Board Member Household Member or Business Associate	Nature of Interest
---	--------------------

_____	_____
_____	_____
_____	_____

17.3 The certifications required by 17.1 and 17.2 above shall be included in all subcontracts. The prime contractor shall furnish copies of certifications to the Contracting Officer and retain a copy for inspection upon his or her request.

Name	Signature
Title	Company
Date	

**SECTION 00 45 20
PROPOSAL DATA FORM**

(Submit with Price Proposal)

Contract Number: FQ16146
Project Name: POTOMAC YARD METRORAIL STATION
Project Location: Alexandria, Virginia

Date of Request: November 28, 2016

1. Name of Firm: _____
2. Legal Address: _____
3. Legal Entity: ☐ Individual ☐ Partnership ☐ Joint venture ☐ Corporation
4. Date Organized: _____
5. State in which incorporated: _____
6. Names and Addresses of Officers or Partners:
 - a. _____
 - b. _____
 - c. _____
 - d. _____
 - e. _____
7. How long has your firm been in business under its present name? _____ years.
8. Attach as SCHEDULE 7 a list of current contracts, each with contract amount, owner, architect-engineer, and character or type of work and percentage of completion. Also, include those projects on which you are apparent low bidder, but for which you have not received an award of contract.
9. Attach as SCHEDULE 8 a list of contracts, each with contract amount, owner, architect engineer, and character or type of work, for contracts completed in the last 5 years.
10. What is the estimated work placement value required per year to complete the work described in SCHEDULE 7. **2017: \$** _____ **2018: \$** _____ **2019: \$** _____
2020: \$ _____ **2021: \$** _____
11. Have you ever been denied an award on which you were low bidder? ☐ Yes ☐ No If the answer is YES, attach as SCHEDULE 10 the full particulars regarding each occurrence.
12. Have you ever failed to complete any contract, other than current, on which you were the low bidder? ☐ Yes ☐ No If the answer is YES, attach as SCHEDULE 11, the full particulars regarding each occurrence.
13. Have you ever been assessed liquidated damages or actual damages for late completion within the last five years? ☐ Yes ☐ No If the answer is YES, attach as SCHEDULE 12 the full particulars regarding each occurrence.
14. Financial resources available as working capital for this Contract:
 - a. Cash on hand: \$ _____ Date: _____
 - b. Sources of credit: _____
15. Attach as SCHEDULE 14 audited financial statements and letters from banks regarding credit as required by Section 00 20 00, INSTRUCTIONS TO PROPOSERS (RFP), of this Contract.
16. Attach as SCHEDULE 15 the design and construction experience of each officer and principal individual of your organization; include present position, years of design and construction experience, magnitude and type of work, and in what capacity.
17. What percentage of the Work (Contract amount) do you intend performing with your own personnel?
_____ %
18. Attach as SCHEDULE 17 a list of all Subcontractors and the percentage and character of work (contract amount) which each will perform.
19. Attach as exhibits completed Proposal Data Forms for each of the Subcontractors listed in SCHEDULE 17 above.
20. If the Design-Builder or Subcontractor is a joint venture, submit Proposal Data Forms for each member of the joint venture.

The above information is confidential and will not be divulged to any unauthorized person or persons. The signatory of this questionnaire certifies to the truth and accuracy of all statements, answers, and attachments.

Contract No. FQ16146
Date: November 28, 2016

Washington Metropolitan Area Transit Authority
Design-Build RFP FQ16146/NAC

For: _____

DUNS # _____

Name and Title, _____

Dated: _____

Location: _____

SECTION 00 45 30

DISADVANTAGED BUSINESS ENTERPRISE (DBE) DATA

(Submit with the Best and Final Proposal [BAFO] Price Proposal)

For Disadvantaged Business Enterprise (DBE) Data and forms, refer to Appendix B of Section 00 40 00, PROPOSAL FORMS AND SUPPLEMENTS.

THIS PAGE NOT USED

SECTION 00 49 10
TECHNICAL PROPOSAL AS FINALLY ACCEPTED

- A. **Instructions:** Insert here the Technical Proposal as finally accepted.
- B. See Section 00 91 00, AMENDMENTS, for Amendment Letters.

THIS PAGE RESERVED

SECTION 00 49 20
PRICE PROPOSAL AS NEGOTIATED AND ACCEPTED

- A. **Instructions:** Insert here the Price Proposal as Negotiated and Accepted.
- B. See Section 00 91 00, AMENDMENTS, for Amendment Letters.

THIS PAGE RESERVED

END OF SECTION

SECTION 00 50 00
AGREEMENT

NOTICE TO PROPOSERS:

- A. This Section includes the Design-Build Contract Form to be submitted by the successful Proposer and represents the legal instrument binding the two parties to the Work once the document is signed by the Authority and the Design-Builder.
- B. The following form is included for the Proposer's information and use in the event Proposer is awarded the Contract. It is not required to be submitted with the Proposal.

THIS PAGE NOT USED

SECTION 00 51 00
DESIGN-BUILD CONTRACT FORM

Design/Builder: _____

Contract Number: FQ16146/NAC

Date: November 28, 2016

Contract For: POTMAC YARD METRORAIL STATION

Contract Price: \$_____

Contract Performance Time: _____ calendar days

In consideration of the covenants contained herein, the Washington Metropolitan Area Transit Authority (hereinafter called the Authority), represented by the Contracting Officer executing this Contract, and the individual, partnership, joint venture, or corporation named above (hereinafter, the Design-Builder), mutually agree to perform this Contract in strict accordance with its provisions. The Contract consists of: the RFP Documents and all documents referenced or attached to the RFP Documents including the following:

1. Technical Proposal and Price Proposal as finally accepted.
2. Other publications referenced in the RFP Documents.
3. Amendment Number(s): _____

ALTERATIONS: The following alterations were made to this Contract before it was signed by the parties hereto:

In Witness Whereof, the parties hereto have executed this Contract as of the date entered above.

Design Builder

Attest _____

*By: _____

Design Builder

Attest _____

*By: _____

Design Builder

Attest _____

*By: _____

Washington Metropolitan Area Transit Authority

By: _____

*NOTE: Execution for the Design-Builder that is an individual, corporation or partnership shall be accompanied by the Power of Execution (Section 00 54 20) that follows. A Joint Venture Design-Builder must complete the Power of Attorney (Section 00 54 10) that follows. All persons executing this Contract must complete the appropriate Certification of the person's authority to act on behalf of the Design-Builder.

SECTION 00 54 00
ATTACHMENTS TO THE CONTRACT

The following attachments to supplement the Agreement Form are included for the Proposer's information and use in the event Proposer is awarded the Contract. They are not required to be submitted with the Proposal.

THIS PAGE RESERVED

SECTION 00 54 10
POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS,

that _____,

constituting all of the venturers of the joint venture known as

_____,

which is desirous of entering into a contract with the

Washington Metropolitan Area Transit Authority,

do hereby designate and appoint

_____,

one of the venturers hereinafter called the "Managing Sponsor," as their true and lawful attorney with the power, on their behalf and in the name and on behalf of the joint venture, to represent and bind the undersigned and the joint venture in all matters in connection with Contract, to make, execute, seal, and deliver on behalf of the joint venture and as its act and deed, any and all contracts, change orders, monthly and final payment certificates, and other like instruments. The undersigned specifically acknowledge and agree that the execution of such Proposal or Contract by the Managing Sponsor shall constitute the agreement of each venturer to be jointly and severally liable for any and all of the duties and obligations of the joint venture arising from such Proposal or Contract.

IN WITNESS WHEREOF, the undersigned have executed this Power of Attorney

this _____ day of _____, 20_____.

Design Builder

Attest _____

By: _____

Design Builder

Attest _____

By: _____

Design Builder

Attest _____

By: _____

THIS PAGE NOT USED

SECTION 00 54 20
POWER OF EXECUTION

KNOW ALL PERSONS BY THESE PRESENTS,

that _____,

constituting all of the venturers of the joint venture known as

_____,

which is desirous of entering into a contract with the

Washington Metropolitan Area Transit Authority,

do hereby designate and appoint

_____,

one of the venturers hereinafter called the "Managing Sponsor," as their true and lawful attorney with the power, on their behalf and in the name and on behalf of the joint venture, to represent and bind the undersigned and the joint venture in all matters in connection with Contract, to make, execute, seal, and deliver on behalf of the joint venture and as its act and deed, any and all contracts, change orders, monthly and final payment certificates, and other like instruments. The undersigned specifically acknowledge and agree that the execution of such Proposal or Contract by the Managing Sponsor shall constitute the agreement of each venturer to be jointly and severally liable for any and all of the duties and obligations of the joint venture arising from such Proposal or Contract.

IN WITNESS WHEREOF, the undersigned have executed this Power of Execution

this _____ day of _____, 20____.

Design Builder

Attest _____

By: _____

Design Builder

Attest _____

By: _____

Design Builder

Attest _____

By: _____

THIS PAGE NOT USED

SECTION 00 55 00
NOTICE TO PROCEED (NTP)

THIS PAGE RESERVED

END OF SECTION

SECTION 00 60 00
BONDS AND CERTIFICATES

This Section includes bond forms required to be submitted by the Design-Builder.

THIS PAGE NOT USED

SECTION 00 61 00
BOND REQUIREMENTS

- A. Requirements: Within 10 Days after the prescribed forms are presented for signature to the Proposer to whom award is made, a written Contract and Attachments (Power of Attorney and Power of Execution) on the forms provided in Section 00 50 00, AGREEMENT, shall be executed and delivered to the Contracting Officer, together with a performance bond and payment bond if the Contract price is \$100,000 or more, each with good and sufficient surety or sureties acceptable to the Authority. Corporations executing the bonds as sureties must be among those appearing on the U. S. Treasury Department's list of approved sureties and must be acting within the limitations set forth therein. The penal sums of such bonds shall be as follows:
1. Performance Bond: The penal sum of the performance bond shall equal 100 percent of the Contract Price.
 2. Payment Bond: The penal sum of the payment bond shall equal 100 percent of the Contract Price.
 - a. When the Contract Price is one million US dollars (\$1,000,000) or less, the penal sum of the payment bond shall be fifty (50) percent of the Contract price.
 - b. When the Contract Price is in excess of one million US dollars (\$1,000,000) but not more than five million US dollars (\$5,000,000) the penal sum shall be forty (40) percent of the Contract Price.
 - c. When the Contract Price is more than five million US dollars (\$5,000,000), the penal sum shall be two and a half million US dollars (\$2,500,000).
- B. Failure to Furnish: In the event the required bonds are not furnished as specified, the Contracting Officer may issue the Notice To Proceed, however, no payment will be made to the Design-Builder until the required bonds are furnished.

THIS PAGE NOT USED

Surety A Firm Name: _____ Liability Limit: Corporate Seal
 Firm Address: _____ \$ _____

Name and Title
State of Incorporation: _____.

Surety B Firm Name: _____ Liability Limit: Corporate Seal
 Firm Address: _____ \$ _____

Name and Title
State of Incorporation: _____.

Surety C Firm Name: _____ Liability Limit: Corporate Seal
 Firm Address: _____ \$ _____

Name and Title
State of Incorporation: _____.

Attach additional pages as needed.

Bond Premium Schedule	Total Premium	\$ _____
-----------------------------	---------------	----------

Performance Bond Instructions:

1. This form is authorized for use in connection with contracts for design and construction work or the furnishing of labor, materials, equipment, supplies, and services.
2. The full legal name and business address of the Principal shall be inserted in the space designated "Principal" on the face of this form. The bond shall be signed by an authorized person. Where such person is signing in a representative capacity (e.g., an attorney-in-fact), but is not a member of the firm, partnership or joint venture, or an officer of the corporation involved, evidence of their authority must be furnished.
3. Corporation executing the bond as sureties must be among those appearing on the Treasury Department's therein. Where more than a single corporate surety is involved, their names and addresses (city and State) shall be inserted in the spaces (Surety A, Surety B, etc.) headed "Corporate Surety(ies)".

SECTION 00 61 20
PAYMENT BOND

Contract Number: FQ16146

Date: November 28, 2016

Penal Sum of Bond: \$ _____

Date Bond Executed: _____

KNOW ALL MEN BY THESE PRESENTS, that we, the Principal and Surety(ies) hereto, are firmly bound to the Washington Metropolitan Area Transit Authority (hereinafter called the Authority) in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally: Provided, that, where the Sureties are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" as well as "severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

THE CONDITION OF THIS OBLIGATION IS SUCH that, whereas the Principal entered into the Contract identified above:

NOW, THEREFORE, if the Principal shall promptly make payment to all claimants as hereinafter defined supplying services, labor, material, and/or equipment in the prosecution of the Work provided for in said Contract, and any and all duly authorized modifications of said Contract that may hereafter be made, notice of which modifications to the Surety(ies) being hereby waived, then the above obligation shall be void and of no effect, otherwise it shall remain in full force and effect, subject, however, to the following conditions:

1. A claimant is defined as one having a direct contract with the Principal or with a subcontractor of the Principal for labor, material, or both, used or reasonably required for use in the performance of the Contract, labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service, or rental of equipment directly applicable to the Contract.
2. The above-named Principal and Surety hereby jointly and severally agree with the Authority that every claimant as herein defined, who has not been paid in full before the expiration of a period of 90 Days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due the claimant, and have execution thereon. The Authority shall not be liable for the payment of any costs or expenses of any such suit.
3. No suit or action shall be commenced hereunder by any claimant:
 - a. Unless claimant, other than one having a direct contract with the Principal, shall have given written notice to the Principal within 90 Days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal at any place where it maintains an office or conducts business, or its residence or such notice shall be served in any manner in which legal process may be served in the state or District of Columbia in which the aforesaid Project is located, save that such service need not be made by a public officer.
 - b. After the expiration of one year following the date of final settlement of said Contract, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof, such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

- c. Other than in a state court of competent jurisdiction in and for the county or other political subdivision of the state in which the Project, or any part thereof, is situated or in the United States District Court for the district in which the Project, or any part thereof, is situated, and not elsewhere.

IN WITNESS WHEREOF, the Principal and Surety(ies) have executed this payment bond and have affixed their seals on the date set forth above.

Principals

1 Firm Name: _____ Corporate Seal
Firm Address: _____

Name and Title
State of Incorporation: _____.

2 Firm Name: _____ Corporate Seal
Firm Address: _____

Name and Title
State of Incorporation: _____.

3 Firm Name: _____ Corporate Seal
Firm Address: _____

Name and Title
State of Incorporation: _____.

Corporate Surety(ies)

Surety A Firm Name: _____ Liability Limit: Corporate Seal
Firm Address: _____ \$ _____

Name and Title
State of Incorporation: _____.

Surety B Firm Name: _____ Liability Limit: Corporate Seal
Firm Address: _____ \$ _____

Name and Title
State of Incorporation: _____.

Surety C Firm Name: _____ Liability Limit: Corporate Seal
Firm Address: _____ \$ _____

Name and Title
State of Incorporation: _____.

Attach additional pages as needed.

Payment Bond Instructions

4. This form is authorized for use in connection with contracts for design work, construction work, or the furnishing of labor, materials, equipment, supplies, and services.
5. The full legal name and business address of the Principal shall be inserted in the space designated "Principal" on the face of this form. The bond shall be signed by an authorized person. Where such person is signing in a representative capacity (e.g., an attorney-in-fact), but is not a member of the firm, partnership or joint venture, or an officer of the corporation involved, evidence of their authority must be furnished.
6. Corporation executing the bond as sureties must be among those appearing on the Treasury Department's list of approved sureties and must be acting within the limitations set forth therein. Where more than a single corporate surety is involved, their names and addresses (city and State) shall be inserted in the spaces (Surety A, Surety B, etc.) headed "Corporate Surety(ies)".
7. Corporations executing the bond shall affix their corporate seals.
8. The name of each person signing this performance bond should be typed in the space provided.
9. The date this bond is executed must be later than the Contract execution date.

THIS PAGE NOT USED

SECTION 00 61 30

PERFORMANCE AND PAYMENT BONDS (ADDITIONAL BOND SECURITY)

- A. If any surety upon any performance bond furnished in connection with this Contract becomes unacceptable to the Contracting Officer, or if any such surety fails to furnish reports as to its financial condition from time to time as requested by the Contracting Officer, the Design-Builder shall promptly furnish such additional security as may be required from time to time to protect the interest of the Authority and of persons supplying labor or materials in the prosecution of the Work contemplated by this Contract.
- B. If any surety upon any payment bond furnished in connection with this Contract becomes unacceptable to the Contracting Officer, or if any such surety fails to furnish reports as to its financial condition from time to time as requested by the Contracting Officer, the Design-Builder shall promptly furnish such additional security as may be required from time to time to protect the interest of the Authority and of persons supplying labor or materials in the prosecution of the Work contemplated by this Contract.

THIS PAGE NOT USED

SECTION 00 62 00
CERTIFICATES

- A. This Section provides an area for conforming the RFP Documents with required Affidavits and Certificates provided by the Design-Builder; i.e., Certificates of Acceptance, Application for Payment, Insurance, Compliance including ADAAG Design and Construction Compliance and Checklists, Substantial Completion, Acceptance, and Final Payment.
- B. Instructions: Insert here all required Certificates to conform to the Contract Documents.

THIS PAGE NOT USED

END OF SECTION

SECTION 00 70 00
GENERAL CONDITIONS

This section includes a compilation of contractual and legal requirements that list the rights, responsibilities, and relationships of the parties to a Contract and define duties and limits of authority for design professionals and construction management.. This section shall be read in conjunction with "Section 00800, Supplementary Conditions," which specifies modifications to these General Conditions, and which will be cited using the same last 2 digits of the Section number; i.e., a modification to Section 00 72 04 will be indicated as Section 00 82 04.

00 70 01 DEFINITIONS

A. As used throughout the Contract , the following terms shall have the meanings set forth below:

1. Acceptance: Acknowledgement by the Authority of full and satisfactory physical completion and commissioning of all work including punch list items, all in accordance with the Contract.
2. Agreement: The Authority's form intitled "Design-Build Contract Form" in this Request for Proposals (RFP) that, upon execution by the Design-Builder and the Authority, creates the Contract between the two parties.
3. Amendment: Written or graphic instructions issued to clarify, revise, add, or delete RFP requirements that are issued before the execution of an Agreement.
4. Approval of a Submittal or any other item shall be solely for the purpose of establishing conformance to the RFP Documents.
5. As-Built Drawings: Drawings prepared by or through the Design-Builder, which reflect final as-built condition of the project and include all known changes to the issued "For Construction" drawings.
6. As-Built Specifications: Those specifications prepared by or through the Design-Builder in CSI format to reflect final information only and showing revisions from the "Issued for Construction" specifications.
7. As shown, as indicated, as detailed, as described, as specified or words of similar import: Shall be understood to mean that reference is made to the RFP..
8. Authority: The Washington Metropolitan Area Transit Authority ("WMATA," or "Metro"), created effective February 20, 1967, by Interstate Compact by and between Maryland, Virginia, the District of Columbia, and the Federal Government pursuant to Public Law 89-774, approved November 6, 1966.
9. Basis of Design: The RFP that shall be used by the Design-Builder for the preparation of the "Issued for Construction" specifications and drawings.
10. Board of Directors: The Board of Directors of the Washington Metropolitan Area Transit Authority.
11. Claim: A written demand or assertion by the Design-Builder seeking, as a legal right, the payment of money, adjustment or interpretation of Contract terms, or other relief, arising under or relating to this Contract.
12. Contract: The written Agreement between the Authority and the Design-Builder covering the work as set forth therein. The Contract consists of the RFP , all amendments issued before the effective date of the agreement, and all modifications issued after the effective date of the Contract; the Notice to Proceed; including the Design-Builder's price and technical proposals, as finally accepted by the Authority.
13. Contracting Officer (CO): An employee with authority duly delegated from the Chief Procurement Officer to legally bind the Authority by signing a contractual instrument. The Contracting Officer is

the Authority's primary point of contact for pre-award administration, modifications/changes above the limits of the Contracting Officer's Representative (COR), and final settlement.

14. Contracting Officer Representative (COR): The person to whom the Contracting Officer delegates authority and responsibility for certain post- award administration duties. The Contracting Officer's Representative is the Authority's primary point of contact with its Design-Builder.
15. Contract price: The amount payable to the Design-Builder under the Contract based on lump-sum prices, unit prices, fixed prices or combination thereof, with adjustments made in accordance with the Contract.
16. Day: Calendar day except where the term "work day" or like terms are used.
17. Design-Builder: The individual, partnership, firm, corporation, or other business entity that is contractually obligated to the Authority to furnish, through itself or others, the design and construction services described in the Contract, including all incidentals that are necessary to complete the work in accordance with the Contract.
18. Designer: The individual, partnership, firm, corporation or other business entity that is either the Design-Builder, or employed or retained by the Design-Builder, to manage and perform the design services for the project.
19. Design Drawings: Those drawings prepared by or through the Design-Builder to demonstrate compliance with the RFP..
20. Design Specifications: Those specifications prepared by or through the Design-Builder to demonstrate compliance with the RFP. Equivalent: Equal or better quality and performance to that specified in the RFP. Equivalency determinations shall be made in WMATA's sole discretion.
21. Final Payment: The last payment made to the Design-Builder following acceptance of the work, as more fully described herein. General Conditions: A compilation of contractual and legal requirements that lists the rights, responsibilities, and relationships of the parties to the Contract and defines duties and limits of authority for design professionals and construction management in performance of the contract.
22. General Requirements: A compilation of the conditions and performance requirements (Division 1) that govern the design and construction work.
23. Industry Standards: Drawings, documents, and specifications or portions thereof published by industry organizations. Industry Standards are not part of the Contract unless specifically listed as such in the technical specifications.
24. Issued "For Construction" Drawings/Specifications: Drawings, specifications, and documents that are prepared by the Design-Builder to be used in construction, fabrication, and implementation of the project.
25. Jurisdictional Authority: Refers to Federal, State and local authorities or agencies having approval authority over work to which reference is made.
26. Legal Requirements: All Federal, State and local laws, ordinances, rules, orders, decrees, and regulatory requirements such as: building codes, mechanical codes, electrical codes, fire codes, Americans with Disabilities Act Accessibility Guidelines (ADAAG) and other regulations of any government or quasi-government entity that are applicable to the project.
27. Milestone: A specified date in the Contract by which the Design-Builder is required to complete a designated portion or segment of the work
28. Modification: A written document issued pursuant to Section 00 74 08, CHANGES, that alters the Statement/Scope of the Work, the Schedule, the Contract price, the the Project Schedule, or makes any other change to the Contract after execution of the Contract.

29. Notice to Proceed: Written notice issued by the Authority establishing the date on which the Design-Builder may commence work and directing the Design-Builder to proceed with all or a portion of the work.
30. Operations Readiness Date (ORD): The date upon which WMATA certifies that the system and equipment are complete and capable of supporting revenue service.
31. Option: A unilateral right in the Contract by which, for a specified time or in a specified amount, the Authority may elect to purchase, at a predetermined price specified in the Contract, additional equipment, supplies, services, or work called for by the Contract.
32. Period of Performance: The time required for all work to be completed in accordance with the Contract. The period of performance begins upon the effective date of the Notice to Proceed and ends on the date of final acceptance.
33. Product Data: Information furnished by the Design-Builder to describe materials used for some portion of the work, such as written or printed descriptions, illustrations, standard schedules, performance charts, instructions, brochures, and diagrams.
34. Project: The design and construction of the facility described in the RFP..
35. Project Schedule: The time allotted in the contract to complete the work without assessment of liquidated damages, or without the Authority's written extension of the work completion date.
36. Proposal: The written offer of a proposer submitted to the Authority as required by the RFP.
37. Proposer: The prospective Design-Builder who submits proposals to perform the work of the Contract.
38. Punch List: Work that remains to be completed after substantial completion. This work must be completed as a condition of final completion and acceptance.
39. Request for Information (RFI): The document by which the Proposers or Design-Builder request clarification, verification, or information concerning a portion of the RFP or the Work.
40. NOT USED.
41. Shop Drawings: Fabrication, erection, layout, setting, schematic, and installation drawings prepared by the Design-Builder for permanent structures, equipment, and systems that it designsto comply with the Contract , the "Issued for Construction" specifications and "Issued for Construction" drawings.
42. Site: The areas upon which construction work will be performed that are used by the Design-Builder and subcontractors during the project as indicated in the RFP..
43. Subcontract: Any Contract between the Design-Builder and an individual, firm, partnership, corporation or other business entity at any tier, to perform a portion of the work.
44. Submittal: Written or graphic document or sample prepared by the Design-Builder or a subcontractor and submitted to the Authority , including shop drawings, product data, samples, schedules of material, or other data.
45. Substantial completion: Work or a portion thereof that has progressed to the point where it is sufficiently complete in accordance with the Contract (including receipt of test and inspection reports) so that it can be utilized for its intended purpose(s). After substantial completion, only incidental work will remain for physical completion in accordance with the Contract.
46. Substitution: A significant difference in material, equipment, or configuration, that meets the requirements of the RFP, but the Design-Builder submits it in lieu thereof.

47. Supplementary Conditions: The term "Supplementary Conditions" means modifications to the General Conditions for requirements unique to a specific project.
48. Utility: A public and/or private facility or installation, other than a WMATA system facility, which relates to (1) the conveyance and supply of water, sewage, gas, chemicals, steam, petroleum products, and other piped installations, or (2) electrical energy, telephone, internet? communications, radio, television, and cellular or wireless communications.
49. Utility standards: Drawings and specifications for utilities published or issued by municipalities or utility companies.
50. WMATA CAD Manual: Manual that establishes drafting criteria for drawings and electronic files and provides templates for drawing/plotter configuration to Design-Builders.
51. WMATA Manual of Design Criteria: Document that outlines the design criteria, measures and process requirements that must be followed for the submittal of project information to WMATA, when constructing a project in the vicinity of, or impacting WMATA's systems and facilities.
52. WMATA Safety Manual: A compilation of the appropriate safety and reporting requirements for the project as specified herein.
53. WMATA Safety and Security Certification Program Plan: A compilation of the appropriate system safety and security certification requirements for the project.
54. NOT USED.
55. Work: All design and construction services, including supervision, quality control and quality assurance, labor, materials, machinery, equipment, tools, supplies and facilities required to complete the project, or the various separately identifiable parts thereof including, but not limited to safety, security, system safety certification and commissioning requirements, in accordance with the terms of the Contract.
56. Working Drawings: Plans prepared by the Design-Builder for temporary structures such as decking, temporary bulkheads, excavation support, utilities support, groundwater control systems, and forming and falsework; for underpinning and for such other work as may be required for construction, but which do not become an integral part of the completed project, as specified in Section 01330, SUBMITTAL PROCEDURES.

00 70 2 ORDER OF PRECEDENCE

- A. Any inconsistency in this solicitation or Contract shall be resolved by giving precedence in the following order:
 1. Contract Modifications (only) in Section 00 90 04, AMENDMENTS AND MODIFICATIONS.
 2. The Agreement Form and Attachments in Section 00 50 00, AGREEMENT, Section 00 60 00, BONDS AND CERTIFICATES, and Amendments (only) in Section 00 90 00, AMENDMENTS AND MODIFICATIONS.
 3. Representations and Certifications in Section 00 45 01, REPRESENTATIONS AND CERTIFICATIONS FORM.
 4. Supplementary Conditions in Section 00 80 00, SUPPLEMENTARY CONDITIONS.
 5. General Conditions in Section 00 70 00, GENERAL CONDITIONS.
 6. General Requirements - Division 1.
 7. Project Specific Documents – RFP Drawings, Reports and Studies.
 8. WMATA's Manual of Design Criteria

- 9. WMATA's Standard Specifications
- 10. WMATA's Standard Drawings.
- 11. Issued "For Construction" Specifications.
- 12. Issued "For Construction" Drawings.

- B. In the event of a conflict within, between, or among the above listed order of precedence, the more stringent requirement shall apply.

00 70 03 GENERAL REQUIREMENTS, DRAWINGS, AND SPECIFICATIONS

- A. During the design phase of the project, the Design-Builder shall keep at the work site, a copy of the Contract . During the construction phase of the project, the Design-Builder shall keep at the jobsite, a copy of the "Issued For Construction" Specifications and "Issued For Construction" Drawings. The Design-Builder shall at all times give the Contracting Officer's Representative access thereto.
- B. The Division 1, General Requirements, shall govern the Contract.
- C. All provisions of WMATA's Standard Specifications and WMATA's Standard Drawings shall be incorporated into each respective document.
- D. In case of discrepancy between WMATA's Standard Specifications and WMATA's Standard Drawings, WMATA's Standard Specifications shall govern. In case of discrepancy among the figures within WMATA's Standard Drawings, the matter shall be promptly submitted, in writing, to the Contracting Officer's Representative in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, who will promptly resolve the discrepancy in writing. Conflicts among the requirements and criteria indicated in either WMATA's Standard Specifications, WMATA's Standard Drawings, or required by local, State, or Federal jurisdictions or utilities, as specified in Section 01 11 02, DESIGN AND PROGRAM REQUIREMENTS, that affect the scope, cost, or quality of the work, shall be promptly submitted, in writing, to the Contracting Officer's Representative for a written determination in accordance with Section 01 33 00, SUBMITTAL PROCEDURES. Any adjustment by the Design-Builder without such a determination shall be at the Design-Builder's own risk and expense.
- E. Wherever in WMATA's Standard Specifications and/or in the "Issued for Construction" Specifications the imperative form of a verb is used, such as the words "directed," "ordered," "designated," "prescribed," or words of like import, it shall be understood that the "direction," "requirement," "order," "designation," or "prescription" of the Contracting Officer's Representative is intended. Similarly, the words "approved," "acceptable," "satisfactory," or words of like import, shall mean "approved by," "acceptable to," or "satisfactory to" the Contracting Officer's Representative.
- F. Should it appear that the work to be performed is not sufficiently detailed or explained in the Contract , then the Design-Builder shall promptly ask the Contracting Officer's Representative, in writing, in accordance with Section 01330, SUBMITTAL PROCEDURES, for a written explanation.. The Design-Builder shall promptly notify the Contracting Officer's Representative , of all errors, omissions, inconsistencies, or other defects including inaccuracies, that it discovers in the Contract , and shall provide options to the Contracting Officer's Representative to remedy such errors, omissions, or other defects. The Design-Builder shall obtain from the Contracting Officer's Representative, in writing, specific instructions regarding any such error, omission, or defect before proceeding with the design work affected thereby. Omission or miss description of details of the work from the Contract that are necessary to carry out its intent o, shall not relieve the Design-Builder from performing such omitted or miss described work no matter how extensive.0704 INTENT OF CONTRACT

00 70 04 INTENT OF CONTRACT

- A. The Design-Builder shall, upon execution of this Contract and receipt of the Notice to Proceed (NTP), perform all work as defined herein to complete the project as described in this Contract. The Authority has detailed its requirements in the Contract. . The Authority has not specified the precise details of

performing the work, unless such details are essential for the successful completion of the work. The Design-Builder shall not deviate from the Contract without the written Approval of the Authority.

- B. The Design-Builder shall conduct a pre-design meeting jointly with the Authority. During the design of the project, the Design-Builder and the Authority shall meet periodically and confer about the progress of the design as specified in Section 01 31 02, PROJECT MEETINGS. At these design review meetings, the Design-Builder shall identify the evolution of the design and all changes or deviations from the requirements of the Contract, as well all associated potential changes. The Design-Builder, in a timely manner, shall provide minutes of all such meetings to all attendees to review and approve as specified in Section 01 31 02, PROJECT MEETINGS, in accordance with Section 01 33 00, SUBMITTAL PROCEDURES. The Authority will review and approve subsequent design submittals that are consistent with the Contract, the Design Specifications and the Design Drawings pursuant to agreements reached at the design review meetings and documented in meeting minutes approved by the Authority. Any agreement that involves changes to the Contract shall be documented in a fashion consistent with Section 00 74 08, CHANGES. The Authority will perform its design reviews solely for the purpose stated in Section 00 71 09, AUTHORITY REVIEWS.
- C. It is the intent of the Contract to describe a functionally complete project to be designed and constructed in accordance with the "Issued for Construction" Specifications and "Issued for Construction" Drawings. All work, materials, or equipment that may reasonably be inferred from the Contract, from prevailing custom, or trade usage as being required to produce the intended results will be furnished and performed whether or not specifically listed. Unless otherwise defined in the Contract, when words or phrases having a well-known technical, construction industry, or trade meaning are used to describe work, labor, services, materials, tools, or equipment, such words or phrases shall be interpreted in accordance with that meaning.
- D. The Design-Builder accepts the relationship of trust and confidence established between it and the Authority by the Contract. The Design-Builder agrees to furnish the architectural, engineering, and construction services set forth herein, and agrees to furnish efficient business administration and superintendence, including quality control and quality assurance, and use its best efforts to complete the project in the most expeditious and economical manner consistent with the requirements of the Contract, the "Issued for Construction" Specifications and "Issued for Construction" Drawings. The Design-Builder agrees to perform its design services in accordance with the responsibilities and requirements set forth in Section 00 70 07, RESPONSIBILITY OF THE DESIGN-BUILDER FOR DESIGN RELATED SERVICES, in Section 00 70 08, REQUIREMENTS FOR PROFESSIONAL REGISTRATION, Section 01 11 01, KEY DESIGN-BUILDER FUNCTIONS, and in Section 01 11 02, DESIGN REQUIREMENTS AND PROGRAM CRITERIA.
- E. The Design-Builder shall be responsible for performing and requiring its subcontractors to perform design, construction services and related services in all phases of the project in accordance with the best general practices as specified in Section 01 11 01, KEY DESIGN-BUILDER FUNCTIONS. Only new materials and workmanship of the best standard quality shall be used. Unless otherwise specified, the Design-Builder shall furnish all work, services, labor, materials, tools, equipment, and incidentals, that are necessary to complete the work in a proper, substantial, and workmanlike manner in accordance with the Contract the "Issued for Construction" Specifications and the "Issued for Construction" Drawings.
- F. Nothing contained herein shall create a contractual relationship between the Authority and any party other than the Design-Builder. However, it is understood and agreed that the Authority is an intended third-party beneficiary of all subcontracts for design, engineering, or construction services between the Design-Builder and third parties related to those services. The Design-Builder shall incorporate the obligations of this Contract into its respective subcontracts, supply agreements, and purchase orders.

00 70 05 LEGAL REQUIREMENTS

- A. The Design-Builder shall perform the work in accordance with all requirements as specified in Section 01 41 00, REGULATORY REQUIREMENTS, in Section 01 42 00, REFERENCES, in Section 00 70 06, PERMITS AND RESPONSIBILITIES, and in Section 00 70 07, RESPONSIBILITY OF THE DESIGN-BUILDER FOR DESIGN RELATED SERVICES. The Contract price and Project

Schedule may be adjusted to compensate the Design-Builder for changes in the requirements enacted after the date of this Contract affecting the performance of the work. Such effects may include, without limitation, revisions the Design-Builder is required to make to the Design Specifications and Design Drawings because of changes in requirements. Any change in requirements, which affects the method or manner of performance of the work, but not the final design of the work incorporated into the project, shall be at the Design-Builder's risk and at no additional cost to the Authority.

- B. The Design-Builder's failure to design or construct the work in conformance with all applicable requirements in force as of the Notice to Proceed shall not be the basis for a change to either the contract price or Project Schedule. The Design-Builder shall remedy all such failures to design or construct the work in conformance with all such requirements at its own expense.
- C. The Design-Builder shall be responsible for remaining informed of all changes in requirements that may occur after the Notice to Proceed and shall perform the work in accordance with such changed requirements.

00 70 06 PERMITS AND RESPONSIBILITIES

- A. The Design-Builder shall, without additional expense to the Authority, be responsible for obtaining necessary licenses, permits, and easements and for complying with applicable International, Federal, State, local, or municipal laws, codes, or regulations in connection with this Contract. .
- B. The Design-Builder shall be responsible for all damages to persons or property that occur as a result of its or its subcontractors' fault or negligence subject to an allocation or proportion of any such liability, loss, cost, or expense, if caused by a party indemnified hereunder. The Design-Builder shall take proper safety and health precautions to protect the work, the workers, the public, and the property of others. The Design-Builder shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire project , except for any completed unit of construction that was accepted, in writing, by the Authority.

00 70 07 RESPONSIBILITY OF THE DESIGN-BUILDER FOR DESIGN-RELATED SERVICES

- A. The Design-Builder shall be responsible for performing professional design and related services in all phases of the project as specified in Section 01 11 01, DESIGN-BUILDER KEY STAFF, and in Section 01 11 02, DESIGN AND PROGRAM REQUIREMENTS. The Design-Builder shall require its Designer to perform the services in accordance with the Contract and in accordance with professional standards of skill, care, and diligence adhered to by firms recognized for their expertise, experience, and knowledge in performing services of a similar nature. The Design-Builder shall be responsible for the professional quality, technical accuracy, completeness, and coordination of the services. The Authority will be relying upon such professional quality, technical accuracy, completeness, and coordination in utilizing the services for implementation of the project.
- B. The Design-Builder shall, without additional compensation, correct or revise all errors or deficiencies in its designs, drawings, specifications, and other services. In addition, the Design-Builder, in performing its design services,, shall be responsible for project management, quality control/quality assurance, and other elements of the work required for the successful completion of the project.
- C. The Design-Builder shall be liable to the Authority for all costs of any kind caused by or resulting from the Design-Builder's failure to perform design services consistent with the terms and conditions of this Contract. Disagreements regarding the responsibility for costs, shall constitute a dispute within the meaning of Section 00 73 00, DISPUTE RESOLUTION.
- D. Neither the Authority's review, approval, or acceptance of, nor payment for, the services required under this Contract shall be construed as a waiver of any rights or cause of action arising out of this Contract. The Design-Builder shall remain liable to the Authority in accordance with applicable law for all damages caused by the Design-Builder's performance of any of the services furnished under this Contract.

- E. The Design-Builder shall be responsible to the Authority for acts, errors, and/or omissions of its designer, subcontractors, suppliers, agents, and employees , whether employed directly or as subcontractors..
- F. The rights and remedies of the Authority provided for under this Contract are in addition to any other rights and remedies at law or in equity.

00 70 08 REQUIREMENTS FOR PROFESSIONAL REGISTRATION

- A. All architecture, engineering, and other design services rendered by or through the Design-Builder under this Contract shall be accomplished, reviewed, and approved by Designers licensed to practice in the particular professional field involved in the jurisdiction where the project being designed will be constructed. The Design-Builder shall comply with local laws regarding the licensing of design firms and personnel providing services for the project.

00 70 09 PROJECT MANAGEMENT AND SUPERINTENDENCE AND KEY STAFF

- A. The Design-Builder shall provide project management and supervision.
- B. The Design-Builder shall provide personnel for the positions specifically identified by the Authority in this Contract as required Key Staff and other personnel it deems essential for performance of the work. (see the Design-Builder's Section 00 49 01, TECHNICAL PROPOSAL AS FINALLY ACCEPTED).(See Section 01 11 01, DESIGN-BUILDER KEY STAFF, for responsibilities of key personnel.) All positions shall be filled by competent, full-time personnel satisfactory to the Contracting Officer's Representative.. Individuals holding any key position, shall not be changed without permission of the Contracting Officer's Representative. The Design-Builder shall acquire written Authority approval for substitutions of key personnel as specified in Section 01 11 01, DESIGN-BUILDER KEY STAFF. The Design-Builder shall provide the Authority, (in accordance with Section 01 33 00, SUBMITTAL PROCEDURES), with all information as may be reasonably requested regarding proposed and actual substitutions.. The proposed and actual substitutions shall share similar or better qualities than the personnel being substituted. The Authority shall be entitled to satisfactory performance of all services described in this Contract, and the Design-Builder shall promptly remove from the project, any employee or other person performing services hereunder in a manner that the Authority deems is contrary to its best interests.
- C. The Design-Builder shall present, as specified in Section 00 72 05, COMMENCING THE WORK, and Section 01 11 01, DESIGN-BUILDER KEY STAFF, confirmation of the credentials of the individuals listed in Section 00 49 01, TECHNICAL PROPOSAL AS FINALLY ACCEPTED, to the Contracting Officer's Representative for his or her review and acceptance in accordance with Section 01 33 00, SUBMITTAL PROCEDURES.

00 71 00 WORK BY DESIGN-BUILDER

- A. The Design-Builder shall perform, with its own organization, work equivalent to at least the percentage specified in Section 00 81 00, WORK BY DESIGN-BUILDER, for the construction work.
- B. The percentage shall be determined by the dollar value of the construction work done by its own organization in comparison to total value of construction work in the Contract. The cost of the work performed by skilled and unskilled labor carried on the Design-Builder's own payroll, together with the cost of materials installed, may be included in the above percentage. The Design-Builder's markup for overhead and profit on work performed by Subcontractors shall not be included in determining the percentage.
- C. If, during the progress of the Work, the Design-Builder requests a reduction in such percentage, and if the Contracting Officer's Representative determines that it would be in the Authority's best interests, , the Contracting Officer's Representative may approve such a reduction at his or her sole discretion.

00 71 01 SUBCONTRACTS AGREEMENTS:

- A. After Contract award, the Design-Builder will be required to submit copies of a conformed and signed subcontract agreement with all subcontractors to be used on the Contract to the Contracting Officer or designee.. The terms of payment for the subcontracts shall be in conformance with Section 00744, Method of Payment. The divisions or sections of the specifications are not intended to control the Design-Builder in dividing the work among subcontractors or to limit the work performed by a trade.
1. The Design -Builder shall not enter into subcontracts totaling in amount, more than the percentage of the total Contract price permissible under Section 00 71 00, WORK BY DESIGN-BUILDER, without the written permission of the Contracting Officer.
 2. No subcontractor will be permitted to perform work until the subcontractor, or the Design-Builder, in compliance with the provisions of Section 00 77 07, INDEMNIFICATION AND INSURANCE REQUIREMENTS, has furnished satisfactory evidence of insurance, as required.
 3. The Contractor shall, under this Contract, establish procedures to ensure timely payment of amounts due pursuant to the terms of its subcontracts. The Contractor shall pay each subcontractor for satisfactory performance of its contract, or any billable portion thereof, no later than ten (10) days from the date of the Contractor's receipt of payment from the Authority for work by that subcontractor. The Contractor shall also release, any retention withheld from the subcontractor within ten (10) days of satisfactory completion of all work required by that subcontractor.
- (a) The Contractor shall certify on each payment request to the Authority that payment has been or will be made to all subcontractors in accordance with paragraph (a) above. The Contractor shall notify the Contracting Officer with each payment request, of any situation where scheduled subcontractor payments have not been made.
 - (b) In the event of a claim by any subcontractor that the Contractor has failed to comply with the terms of this article, the Contractor agrees to fully cooperate in any Authority investigation, and, if deemed appropriate by the Authority, to implement appropriate remedial measures to ensure future compliance.
 - (c) The Contractor agrees that the Contracting Officer may provide information that he or she deems appropriate in response to inquiries from subcontractors seeking to determine the status of the Authority's payments to the Contractor.
 - (d) Nothing contained in this article or elsewhere in this Contract shall create a Contractual relationship between the Authority and any subcontractor, shall make the subcontractor an intended beneficiary of this Contract or shall alter or affect traditional concepts of privity of contract.

00 71 02 OTHER CONTRACTS

- A. The Authority may award other contracts for additional work, and the Design-Builder shall fully cooperate with such other contractors as may be directed by the Contracting Officer's Representative. The Design-Builder shall not commit or permit any act, that will interfere with the performance of work by any other contractor.
- B. The Design-Builder shall conduct all work in a manner that will minimize interference with the operations of other contractors involved in the performance of related work. All work shall be brought to a stage of completion that will conform to the Contract, the "Issued for Construction" Specifications and the "Issued for Construction" Drawings.

00 71 03 CONFIDENTIALITY

- A. The Design-Builder or its Subcontractors shall not divulge any confidential or proprietary information, which is so designated by the Authority in the course of performance of this Contract.

00 71 04 CONDITIONS AFFECTING THE WORK

- A. The Design-Builder shall be responsible for ascertaining the nature and location of the work, and the general and local conditions, that can affect the work or the cost thereof as described in Section 01 71 01, ACCEPTANCE OF CONDITIONS. Any failure by the Design-Builder to do so will not relieve the Design-Builder from responsibility for successfully performing work without additional expense to the Authority. The Authority assumes no responsibility for any understanding or representations concerning conditions made by any of its officers or agents prior to the execution of this Contract, unless such understanding or representations are expressly stated in the Contract.

00 71 05 SITE INVESTIGATION

- A. The Design-Builder acknowledges that it has investigated and satisfied itself as to the conditions affecting the work including, but not restricted to, those bearing upon transportation, disposal, handling, and storage of materials; availability of labor, water, electric power, and roads; and uncertainties of weather, river stages, tides, or similar physical conditions at the site, the conformation and conditions of the ground, and the character of equipment and facilities needed preliminary to and during prosecution of the work as described in Section 01 71 01, ACCEPTANCE OF CONDITIONS. The Design-Builder further acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered as reasonably ascertainable from an inspection of the site, including a review of all exploratory work and information provided by the Authority, and made a part of this Contract. The Design-Builder shall also examine the character and extent of existing work on the site or adjacent thereto, and any other work being performed thereon, at the time of the submission of its proposal as described in Section 01 71 01, ACCEPTANCE OF CONDITIONS. Any failure by the Design-Builder to review the available information will not relieve it from responsibility for estimating properly the difficulty or cost of successfully performing the work. The Authority assumes no responsibility for any of the Design-Builder's conclusions or interpretations made on the basis of Authority-provided information.

00 71 06 PRECONSTRUCTION INSPECTION

- A. The Design-Builder will conditionally inspect buildings and/or structures in the immediate vicinity of the project, that may reasonably be expected to be affected by the work..
- B. Prior to beginning excavation or any other work, the Design-Builder shall inform the Authority of buildings or structures on which it intends to perform work or that performance of the work will affect.
- C. The Design-Builder shall provide the Authority with sufficient notice of this inspection and afford it an opportunity to participate in the inspection. The Design-Builder shall submit for approval, in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, the preconstruction inspection records as specified in Section 01 71 01, ACCEPTANCE OF CONDITIONS, to the Authority prior to beginning work.

00 71 07 DIFFERING SITE CONDITIONS

- A. The Design-Builder shall promptly, and before such conditions are disturbed, notify in writing the Contracting Officer, through the Contracting Officer's Representative, of (1) subsurface or latent physical conditions at the site that materially differ from those indicated in this Contract or (2) unknown physical conditions at the Site, of an unusual nature, that materially differ from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this Contract .
- B. The Contracting Officer's Representative will promptly investigate the site conditions, after receiving the notice. If the Contracting Officer's Representative finds that such conditions do materially so differ and cause an increase or decrease, in the Design-Builder's cost of, or the time required for,

performance of any part of the work under this Contract, whether or not changed as a result of such conditions, an equitable adjustment shall be made and the Contract modified, in writing, accordingly.

- C. No claim or request for equitable adjustment by the Design-Builder under this section will be allowed unless the Design-Builder has given the notice required in Paragraph A above; provided, however, that the time prescribed therefore may be extended by the Contracting Officer's Representative.
- D. No claim by the Design-Builder for an equitable adjustment hereunder will be allowed if asserted after final payment under this Contract.

00 71 08 ROLE OF THE AUTHORITY

- A. The character and extent of the work to be performed by the Design-Builder shall be subject to the general oversight and approval of the Authority.
- B. The Authority will not supervise, direct, or have control over, or be responsible for, the Design-Builder's means, methods, techniques, sequences, or procedures of design and construction or the safety precautions and programs incidental to the work, or for any failure of the Design-Builder to comply with requirements. The Authority will not be responsible for the Design-Builder's failure to perform or furnish the work in accordance with the Contract, the "Issued for Construction" Specifications and "Issued for Construction" Drawings.

00 71 09 AUTHORITY REVIEWS

- A. The Authority will review information submitted by the Design-Builder, furnish required information and required approvals, and render decisions pertaining thereto, all in a timely manner in order to facilitate the orderly progress of the work in cooperation with the Design-Builder and in accordance with the planning, scheduling, and budgetary requirements and constraints of the project.
- B. The Authority will review and approve design submittals solely for the purpose of establishing their conformance to the Contract. Such review and approval shall not be deemed to transfer any liability from the Design-Builder to the Authority.
- C. The Authority will review and approve identified construction submittals solely to determine if the items covered by the submittal will, after installation or incorporation in the construction, conform to the requirements set forth in the "Issued for Construction" Specifications and "Issued for Construction" Drawings and be compatible with the design concept of the completed project as a functioning whole as indicated in the Contract.. Construction submittals requiring Authority review and approval are specified in WMATA's Standard Specifications. Construction submittals not so specified shall be submitted to the Authority for information only. The Authority's review and approval of construction submittals will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for in this Contract) or to safety precautions or programs incidental thereto. The Authority's approval will be general and shall not be construed as: (1) permitting any departure from the Contract ; (2) relieving the Design-Builder of the responsibility for any errors including details, dimensions, and materials; or, (3) approving departures from details furnished by the Design-Builder or the Authority, except as otherwise specified.
- D. The Authority reserves the right to review design and construction submittals and to disapprove any submittal when, in its sole judgment, the submittal deviates from the requirements of the Contract the "Issued for Construction" Specifications and the "Issued for Construction" Drawings and compromises the integrity of the construction element. The Authority's review, approval, or acceptance of any submittal required under this Contract shall not be construed to operate as a waiver of the Design-Builder's responsibility for the professional quality, technical accuracy, and the coordination of all designs, drawings, specifications, construction, and other services provided by the Design-Builder under this Contract.

00 72 00 SUBMITTALS

- A. The Design-Builder shall submit for review and approval a preliminary schedule of required submittals, as described in Section 01 33 00, SUBMITTAL PROCEDURES, including the times for submitting, reviewing, and processing each submittal.
- B. The Design-Builder shall maintain a "Document Submittal Log" as described in Section 01 33 00, SUBMITTAL PROCEDURES, to show the status of all submittals. The submittal log and all approved submittals shall be kept at the project site and shall at all times be made available for Authority inspection. Approved submittals and certificates shall be turned over to the Authority at completion as part of the project records in accordance with Section 01 77 05, CLOSEOUT.
- C. The Authority will, in a timely manner, review and approve those submittals that it deems necessary. during the design, construction, and closeout of the project. The Authority's review of design or construction submittals shall be solely for the purposes stated in Section 00 71 09, AUTHORITY REVIEWS. The Authority's review and approval of separate items, will not indicate approval of the assembly in which the item functions. The Design-Builder shall make corrections to submittals as required and shall return corrected copies for additional review and approval.
- D. The Authority's review and approval of any submittal that it deems necessary shall not relieve the Design-Builder from responsibility for any variations from the requirements of the Contract , the "Issued for Construction" Specifications, and the "Issued for Construction" Drawings unless the Authority has given written approval of each such variation by written notice incorporated in or accompanying the submittal.
- E. Where a submittal is required by the Contract, the "Issued for Construction" Specifications and the "Issued for Construction" Drawings, any related work provided prior to the appropriate review and approval of a submittal shall be at the sole risk, expense, and responsibility of Design-Builder.

00 72 01 VALUE ENGINEERING INCENTIVE

- A. This section applies to those value engineering change proposals (VECPs), that the Design-Builder initiates and develops during Contract performance to modify the Authority's Design Criteria or other requirements of this Contract including commitments made in the Design-Builder's proposal, as finally accepted. In order to be accepted under this section, each VECP shall:
 - 1. Be identified by the Design-Builder at the time of submittal to the Contracting Officer's Representative using the prescribed Authority VECP form;
 - 2. Require a significant change to this Contract;;
 - 3. Decrease the Contract price;
 - 4. Maintain the Contract requirements such as safety, service life, reliability, economy of operation, ease of maintenance, and necessary standardized and architectural features of the facility or system;
 - 5. Not require an unacceptable extension of original Project Schedule; and
 - 6. Be reviewed and evaluated by way of a two-phase process.
- B. Phase One - Conditional Approval: In addition to the use of the Authority's VECP form, all VECPs that the Design-Builder submits shall be in sufficient detail to clearly define the proposed change including the following items:
 - 1. A description of the difference between the existing and the proposed Contract requirements and the comparative advantages and disadvantages of each;
 - 2. Contract requirements recommended by the Design-Builder to be changed;

3. Separate detailed cost estimates for both the basic Contract requirement and the proposed change, and an estimate of the change in Contract price including an accounting of the costs of development, implementation, Authority review of the VECP and the sharing arrangement as set forth in Paragraph E;
 4. A statement from the Design-Builder predicting all effects that the proposed VECP will have on the life-cycle costs of the work to include and identify separately, the cost for increased or decreased maintenance and operations;
 5. A statement of the time by which the proposal must be accepted to obtain the maximum price reduction and not delay the original Project Schedule. The time required for VECP review shall be considered and included in this statement and in a separate bar chart;
 6. A list of codes and the Authority standards applicable to the work to be carried out by the VECP and a statement that the proposed VECP will be in compliance with the requirements set forth in listed codes and standards;
 7. The identification of a project where the materials, methods of construction, and/or special equipment have been previously and successfully performed on construction similar to that which is being proposed under this Contract;
 8. Preliminary architectural and engineering analysis, including calculations and 11 x 17-inch drawings, in sufficient detail, for each Contract requirement that must be changed if the VECP is accepted. The Design-Builder shall make recommendations for accomplishing each change and state its effect on unchanged work.
- C. The Contracting Officer's Representative may, at any time during the two-phase review and evaluation process, reject part or all of the VECP by giving the Design-Builder written notice thereof. Until final approval, the Design-Builder shall remain obligated to perform in accordance with the terms of the original Contract. VECPs will be processed expeditiously, however, the Authority shall not be liable for any delay in acting upon any proposal submitted pursuant to this section. The Contracting Officer's Representative's acceptance or rejection of any such proposal shall be final and shall not be subject further review, under this Contract, at law or in equity.
1. The Design-Builder has the right to withdraw part or all of the VECP at any time prior to acceptance or rejection by the Authority. Such withdrawal shall be made, in writing, to the Contracting Officer through the Contracting Officer's Representative. If the Design-Builder desires to withdraw the proposal, it shall be liable for the cost incurred by the Authority in reviewing the proposal.
- D. Upon notice of conditional approval of the concept of the VECP, the Design-Builder shall proceed with final VECP design in accordance with the agreed schedule.
- E. Phase Two - Final Approval: Final Approval of the VECP by the Authority will be contingent upon the following :
1. The Design-Builder shall address, to the Authority's satisfaction, all design issues and review all comments prior to submitting the VECP to the Authority for final approval.
 2. An equitable adjustment to the Contract Price and appropriate changes to all other affected provisions of the Contract shall be made, in accordance with Section 00 74 08, CHANGES, or other applicable sections of this Contract.
 3. Fifty percent (50%) of the net savings resulting from the change shall be provided to the Design-Builder and fifty percent (50%) of the net savings shall be provided to the Authority. Net savings shall be determined by deducting from the estimated gross savings, the Design-Builder's costs of developing and implementing the proposal, including any amount attributable to a subcontractor and the estimated amount of increased costs to the Authority resulting from the change, such as costs for review, implementation, inspection, related items, and Authority-furnished property. Estimated gross savings shall include Design-Builder's labor, material, equipment, overhead,

profit, and bond. The Contract Price shall be reduced by the sum of the Authority's costs and share of the net savings.

4. The Design-Builder is entitled to share in instant contract savings only, to the full extent provided for in this Section. For purposes of sharing, the term 'instant contract' shall not include any supplemental agreements to or other Modifications of this Contract, executed subsequent to acceptance of the particular VECP, by which the Authority increases the quantity of any item or adds any item.
 5. Notwithstanding any review, Approval, or acceptance of any VECP by the Authority, the Design-Builder agrees to be liable to the Authority for all costs of any kind whatsoever caused by or resulting from any error, omission, deficiency, negligence, or combination thereof, of any kind in the design, drawings, or specifications submitted to the Authority in connection with any VECP proposal under this Contract. The rights and remedies of the Authority provided in this Section are in addition to any other rights or remedies provided by law or under this Contract.
- F. The Design-Builder shall use its best efforts to include Value Engineering arrangements in any Subcontract, which in its judgment, appears to offer sufficient value engineering potential.
- G. A VECP identical to one submitted under any other contract, by this or any other contractor, may also be submitted under this Contract.
- H. The Design-Builder may restrict the Authority's right to use any VECP data by marking it with the following statement:
1. "This data, furnished pursuant to the VALUE ENGINEERING INCENTIVE Section of this Contract, shall not be duplicated, used, or disclosed, in whole or in part, for any purpose except to evaluate the VECP, unless the proposal is accepted by the Authority. This restriction does not limit the Authority's right to use information contained in this data if it is or has been obtained, or is otherwise available, from the Design-Builder or from other source, without limitations. When this proposal is accepted by the Authority, the Authority shall have the right to duplicate, use, and disclose any data in any manner and for any purpose whatsoever, and have others do so whether under this or any other Authority contract."

00 72 02 QUALITY ASSURANCE / QUALITY CONTROL

- A. The Design-Builder shall be responsible for conducting an ongoing Design-Build Quality Plan as described in Section 01 47 00, QUALITY MANAGEMENT SYSTEM, during the entire term of the Contract based on the approved detailed Design-Build Quality Plan. The purpose of the Design-Build Quality Plan is to effectively and economically ensure technical quality in the Design, other Contract deliverables, and construction of the Work, thus reducing the potential for:
1. Adverse construction schedule and cost impacts;
 2. Personal and public safety problems and incidents and their attendant costs;
 3. Those operational and maintenance problems, disruptions, and costs that result from design errors and omissions; and,
 4. A poor quality design,
 5. Poor construction quality,
 6. Design deliverables and completed work, which does not comply with applicable codes and regulations.
- B. The Design-Builder shall Submit for Approval in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, all required quality Submittals as specified in Section 01 47 00, QUALITY MANAGEMENT SYSTEM.

- C. An effective Design-Build Quality Program is fundamental to all work performed by the Design-Builder and will be considered by the Authority in assessing the Design-Builder's progress, performance, and earnings entitlement.

00 72 03 PROGRESS SCHEDULES AND REQUIREMENTS FOR MAINTAINING PROGRESS RECORDS

- A. Progress Schedules. Prepare and Submit to the Contracting Officer Representative for Approval schedules showing the order in which the Design-Builder proposes to carry on the Work, the dates on which it will start the several major features of the Work, including procurement of materials, plant, and equipment, and the contemplated dates for completing the same for both design and construction. The schedules shall be in a form acceptable to the Authority, and as described in Section 01 32 02, CONTRACT PROGRESS REPORTING, and shall be in such detail that, in conjunction with the progress reports hereinafter required, the Authority will be able to chart the status and progress of the Work while it is being performed. If actual progress deviates from the schedule, update the schedule to show the accurate progress. Failure to comply with the terms of this Section may affect the processing of progress payment requests submitted by the Design-Builder as provided for in this Contract.
- B. If, in the opinion of the Contracting Officer Representative, the Design-Builder falls significantly behind the Approved progress schedule for design or construction, take any and all steps necessary to improve the progress of the Work. In this event, without cost to the Authority, the Contracting Officer Representative may require the Design-Builder to Submit for Approval supplemental progress schedules detailing the specific operational changes to be instituted to regain the Approved schedule. Additionally, the Contracting Officer Representative may require the Design-Builder to increase the number of shifts, initiate or increase overtime operations, increase days of work in the work week, or increase the amount of construction plant. Such requirements by the Authority shall not be construed or interpreted in such a way as to infer that the Authority is in any way responsible for the means, methods, or sequencing of the Work. The additional cost of such requirements shall be borne solely by the Design-Builder.
- C. Failure of the Design-Builder to comply with the requirements of the Contracting Officer Representative under this Section shall be grounds for determination that the Design-Builder is not prosecuting the Work with such diligence as will ensure completion within the time specified. Upon such determination, the Authority may terminate the Design-Builder's right to proceed with the Work, or any separate part thereof, in accordance with Section 00 72 07, TERMINATION FOR DEFAULT, DAMAGES FOR DELAY, AND TIME EXTENSIONS.

00 72 04 PROJECT SCHEDULE

- A. Perform, *complete, and* advance all work under this Contract in accordance with the schedule set out in Section 00 82 04, PROJECT SCHEDULE.
- B. The Authority may modify the Contract, pursuant to Section 00 74 08, CHANGES, to extend the Project Schedule as often and in periods as deemed necessary until completion of this Contract.
- C. Early Completion: If the Design-Builder submits a schedule or expresses an intention to complete the work earlier than any required milestone, interim, or final completion date, the Authority shall not be liable for any costs incurred because of delay or hindrance should the Design-Builder be unable to complete the work before such milestone, interim, or final completion date. The duties, obligations, and warranties of the Authority to the Design-Builder shall be consistent with and applicable only to the completion of the Work and completion dates set forth in this Contract.

00 72 05 COMMENCING THE WORK

- A. The Design-Builder will commence the work within ten (10) days after the date of receipt of the Notice to Proceed (NTP). The Design-Builder will prosecute the work diligently to complete it within the time specified in the Contract and meet all specified interim milestone dates.
- B. A Pre-Design-Build Conference will be held to establish a working understanding among the parties and to discuss the design concepts, schedules, procedures for handling submittals, processing applications for payment, maintaining required records, quality control, and other matters.

C. The following items require submittal and approval prior to commencement of design activities, construction activities, or offsite fabrication associated with the project. Submit in accordance with Section 01 33 00, SUBMITTAL PROCEDURES:

1. Executed Contract (as specified in Section 00 52 01, DESIGN-BUILD CONTRACT FORM), with Power of Attorney (as specified in Section 00 54 01, POWER OF ATTORNEY), and Power of Execution (as specified in Section 00542, POWER OF EXECUTION); Required Performance Bond (as specified in Section 00611, PERFORMANCE BOND), and Payment Bond, (as specified in Section 00 61 02, PAYMENT BOND); Insurance Certificates (as specified in Section 00 77 08, INDEMNIFICATION AND INSURANCE REQUIREMENTS), within ten (10) days after award of Contract.
2. Designer, builder, major subcontractors, and key project personnel confirmations (as specified in Section 00 70 09, PROJECT MANAGEMENT AND SUPERINTENDENCE AND KEY PERSONNEL, and Section 01 11 01, KEY DESIGN-BUILDER FUNCTIONS), within ten (10) days after award of Contract.

00 72 06 SUSPENSION OR DELAY OF WORK

- A. The Authority may order the Design-Builder in writing to suspend, delay, or interrupt all or any part of the work for such period as it may determine to be appropriate for the convenience of the Authority.
- B. If the performance of all or any part of this Contract is delayed in a material manner or extent by the Authority's acts or omissions that are not expressly or impliedly authorized by this Contract or by applicable provisions of law, the Contracting Officer shall make an adjustment (excluding profit) for any increase in the cost of performance of this Contract caused by such delay and shall modify the Contract, in writing. The Contracting Officer shall make an adjustment to the delivery or performance dates and to any other Contractual provision, if such delay or interruption affected Contract compliance. The Contracting Officer shall make no adjustment under this Contract for any delay or interruption, if performance was or could have been delayed by any other cause, including, without limitation: (i) the fault or negligence of the Contractor or any subcontractor; (ii) an act constituting a force majeure event pursuant to this Contract; or (iii) any other cause for which an adjustment is provided under any other article of this Contract, at law or in equity.
- C. An adjustment pursuant to paragraph (B) shall not be allowed:
 1. For any costs incurred more than twenty (20) days before the Contractor notifies the Contracting Officer, in writing, of the delay.
 2. Unless the claim, in a sum certain, is asserted in writing as soon as practicable after the termination of the delay. In no event, shall a Contractor assert a delay claim later than thirty (30) days after its termination. The delay claim shall be accompanied by appropriate documentation, specifically supporting the nature and extent of the claimed impact upon the cost and/or time required for performance. In any instance where it is not possible for the Contractor to fully project such impact within the thirty (30) day period, it shall support the claim with such documentation as is then reasonably available, along with a statement of the anticipated time frame when the Contractor expects to provide the additional materials. The Contracting Officer shall maintain the right throughout the process to request such additional materials as he or she shall reasonably require in consideration of the claim and shall be under no obligation to conclude his or her consideration of the claim prior to review of all relevant materials. Any adjustment to the Contract price pursuant this clause must be determined prior to final payment under this Contract.

00 72 07 TERMINATION FOR DEFAULT, DAMAGES FOR DELAY, AND TIME EXTENSIONS

- A. If the Design-Builder refuses or fails to prosecute the work, or any separable part thereof, with such diligence as will ensure its completion within the time specified in this Contract, or any extension thereof, or fails to complete said work within such time, or otherwise materially breaches any of its obligations under this Contract, the Contracting Officer may, by written notice ("Notice to Cure"), to the Design-Builder, direct it to cure the breach within ten (10) days or such additional time as the Contracting Officer authorizes.. If the Design-Builder fails to cure the breach in the time specified in the

Notice to Cure, the Contracting Officer may terminate this Contract, in whole or in designated part, for default, after providing notice ("Notice of Default") to the Design-Builder.

- B. Upon receipt of a "Notice of Default," the Design-Builder shall immediately cease performance of the work so terminated. In such event, the Contracting Officer may take over the work and prosecute the same to completion, by contract or otherwise, and may take possession of and utilize in completing the work such design product, materials, appliances, and other work product as may be on the site of the work or previously submitted to the Authority, all of which shall become the property of the Authority. Whether or not Contract is terminated, in whole or designated part, the Design-Builder and its sureties shall be liable for all damage to the Authority resulting from its refusal or failure to complete the work in the specified time.
- C. If liquidated damages are fixed and agreed to in this Contract, and if the Contracting Officer terminates this Contract, the resulting damage shall consist of liquidated damages assessed daily until such reasonable time that the final project is accepted by the Authority, together with any increased costs occasioned to the Authority.
- D. If liquidated damages are fixed and agreed to in this Contract, and if the Contracting Officer does not so terminate the Contract, the resulting damage from any delay shall consist of such liquidated damages assessed daily until the work is accepted.
- E. The Contract shall not be terminated and/or the Design-Builder shall not be charged with resulting damage under the following circumstances:
 - 1. If the delay in the completion of the Contract arises from unforeseeable causes beyond the control and without the fault or negligence of the Design-Builder, including, but not restricted to, acts of God, acts war or insurrection, fires, floods, strikes, freight embargoes, unusually severe weather, or other events or circumstances of like nature.
 - a. Unusually severe weather conditions:
 - 1) Pursuant to Paragraph E.1 above, the Authority will use the following table as the basis for determining allowable time extensions to the Contract for unusually severe weather conditions and the impact of such weather at the construction site.
 - 2) The column below labeled WORKING DAYS represents the average delays, that may be expected in each month named within the Washington Metropolitan Area, based on a five (5) day work week:

<u>Month</u>	<u>Working Days</u>
January	4
February	4
March	4
April	5
May	5
June	2
July	2
August	3
September	2
October	3
November	4
December	4

- 3) Time extensions for weather delays during a given month will be allowed only for actual working days in excess of the numbers listed above and only when those excess days of delay affect the current critical path(s) leading to specified Contract completion or milestone dates.
2. The Design-Builder, within ten (10) days from the beginning of any such delay, must notify the Contracting Officer of the causes for the delay, unless the Contracting Officer grants a further extension for the notice. Upon receipt of the notice, the Contracting Officer will ascertain the facts and the extent of the delay and may extend the time for completing the Contract when, in the Contracting Officer's judgment, the findings of fact justify such an extension. The Contracting Officer's findings of fact shall be final and conclusive on the parties, subject only to appeal as provided Section 00 73 00, DISPUTE RESOLUTION.
3. If, after notice of termination for default of the Contract under the provisions of this section, it is determined for any reason, that the Design-Builder was not in default or that the default was excusable, the termination shall be converted to a termination for convenience and the rights and obligations of the parties shall be determined in accordance with Section 00 72 08, TERMINATION FOR CONVENIENCE OF THE AUTHORITY.
4. Any dispute or disagreement regarding any issue arising under this section shall be subject to adjudication in accordance with the "Disputes" section of this Contract. In no event shall the Authority's issuance of a "Notice to Cure" pursuant to paragraph (A) be the basis of a dispute pursuant to the "Disputes" section or otherwise be subject to further review under this Contract or otherwise. The pendency of any dispute shall not constitute a basis for the delay or suspension of, or otherwise affect the Authority's right to proceed in accordance with this section, including without limitation, its right to complete the work or its right to insist that the Contractor complete any portion of the Contract that was not terminated.
5. The rights and remedies of the Authority provided in this Section are in addition to any other rights and remedies provided under this Contract, at law or in equity.

00 72 08 TERMINATION FOR THE CONVENIENCE OF THE AUTHORITY

- A. The Contracting Officer may terminate this Contract in whole or, in part, if he or she determines that a termination is in the Authority's interests. The Contracting Officer shall terminate, by delivery to the Design-Builder by certified mail, return receipt requested,, of a Notice of Termination specifying the nature, extent of the termination, and the date upon which such termination becomes effective.
- B. After receipt of a Notice of Termination, except as the Contracting Officer otherwise directs, the Design-Builder shall immediately:
 1. Discontinue all services and stop all work under the Contract on the date and to the extent specified in the Notice of Termination;
 2. Complete performance of work not terminated;
 3. Place no further orders or subcontracts for materials, services, or facilities, except as may be necessary to complete the remaining portion of the Contract; terminate all orders and subcontracts to the extent that they relate to the work terminated;;
 4. Assign to the Authority, to the extent directed by the Contracting Officer, all of the right(s), title, and interest(s) of the Design-Builder under the orders and subcontracts so terminated. The Contracting Officer shall have the right to settle or pay any termination costs or all claims arising out of the termination and shall have no further liability to the Design-Builder for the work that was the subject of such subcontracts.
 5. Settle all outstanding liabilities and all claims arising from termination of orders and subcontracts, with the approval of the Contracting Officer;;
 6. As the Contracting Officer directs, transfer title and deliver to the Authority::

- a. Parts, work in process, completed work, supplies, and other material procured as a part of, or acquired for the work terminated; on.
 - b. All data, completed or partially completed plans, design specifications and design drawings, reports, estimates, summaries, and other information and materials that would have been required to be furnished to the Authority if the Contract had been completed.
7. Take any action that may be necessary, or as the Contracting Officer directs, for the protection and preservation of property related to this Contract that is in the Design-Builder's possession or control, and in which the Authority has or may acquire an interest. Use its best efforts to sell, as the Contracting Officer authorizes, any property of the types referred to in Paragraph B.6 above. The Design-Builder:
 - a. Will not be required to extend credit to any purchaser, and
 - b. May acquire any such property under the conditions the Contracting Officer prescribes. The proceeds of any such transfer or disposition shall be applied to reduce any payments to be made to the Design-Builder under this Contract, shall be credited to the price or cost of the work or paid in any other manner as the Contracting Officer may direct.
- C. After receipt of a Notice of Termination, submit to the Contracting Officer through the Contracting Officer's Representative its termination settlement proposal (TSP) in the form that the Contracting Officer prescribes, detailing the costs to which it asserts entitlement pursuant to this section. The TSP shall be submitted promptly, but in no event later than one (1) year from the effective date of termination, unless one or more extensions in writing are granted by the Contracting Officer, upon request of the Design-Builder made in writing. However, if the Contracting Officer determines that the facts justify such action, the Contracting Officer may act upon any TSP at any time after such 1-year period or any extension thereof. Upon failure of the Design-Builder to submit its TSP within the time allowed, the Contracting Officer may determine, on the basis of information available to him or her, the amount, if any, due to the Design-Builder by reason of the termination and shall authorize payment in the amount so determined.
- D. Subject to the provisions of Paragraph C above, the Design-Builder and the Contracting Officer may agree upon the whole, or any part, of the amount or amounts to be paid to the Design-Builder for the total or partial termination, which amount may include a reasonable allowance for profit on work done. The agreed amount exclusive of settlement costs, shall not exceed the total Contract price as reduced by the amount of payments otherwise made and as further reduced by the Contract price of work not terminated. The Contracting Officer will not allow anticipated profit on services not performed by the Design-Builder.
- E. The Contract shall be amended accordingly, and the Design-Builder will be paid the agreed amount. Nothing in Paragraph F below, prescribing the amount to be paid in the event of a disagreement upon the whole or any part of the amount to be paid to the Design-Builder by reason of the termination, will be deemed to limit, restrict, or otherwise affect the amount that may be agreed upon pursuant to Paragraph D above.
- F. In the event of a disagreement, as provided in Paragraph D above, over amount to be paid to the Design-Builder, the Contracting Officer will pay the Design-Builder the amounts he or she determines as follows, but without duplication of any amounts agreed upon in accordance with Paragraph D:
 1. The costs incurred prior to the effective date of the Notice of Termination, in performance of the work terminated, and, without duplication of any items, agreed to above:
 - a. Termination costs under subcontracts or orders that are properly chargeable to the terminated portion of the Contract, if not excluded,
 - b. A sum, representing profit on Paragraph D above, that the Contracting Officer determines to be fair and reasonable, pursuant to section 49.202 of the Federal Acquisition Regulation in effect on the date of this Contract. If it appears that the Design-Builder would have sustained a loss on the entire Contract had it been completed, the Contracting

- Officer will allow no profit and will reduce the settlement to reflect the indicated rate of loss.
- c. The reasonable indirect costs of settlement of the work terminated, including:
- (i) Accounting, legal, clerical, and other expenses reasonably necessary for the preparation of TSP(s);
 - (ii) The termination and settlement of subcontracts (excluding the amounts of such settlements); and
 - (iii) Storage, transportation, and other costs incurred, reasonably necessary for the preservation, protection, or disposition of the termination inventory.
- G. Except for normal spoilage, and except to the extent that the Contracting Officer otherwise expressly assumed the risk of loss, there will be excluded from the amounts payable to the Design-Builder the fair value, as determined by the Contracting Officer, of property, which is destroyed, lost, stolen, or damaged so as to become undeliverable to the Authority, or a third party.
- H. The cost principles and procedures of FAR Part 31 in effect on the date of this Contract, shall govern all costs claimed, agreed to, or determined under this article, except that the Authority shall not be obligated to pay interest, however represented, on any claimed costs.
- I. The Design-Builder shall have the right of appeal, under Section 00 73 00, DISPUTE RESOLUTION, from the Contracting Officer's determination under Paragraphs C or E above. If the Design-Builder failed to Submit its TSP within the time provided in Paragraph C above or failed to request extension of such time, it shall waive its rights to appeal the Contracting Officer's determination.
- K. In arriving at the amount due the Design-Builder under this section, the following will be deducted:
- 1. All unliquidated advances or other payments to the Design-Builder, under the terminated portion of this Contract.
 - 2. The value, as the Contracting Officer determines, of any claim, which the Authority may have against the Design-Builder under with this Contract, including any third party claim if the Contracting Officer is not satisfied that sufficient insurance coverage is in place; and.
 - 3. The agreed price for, or the proceeds from sale of any materials, supplies, or other items that the Design-Builder procured or sold, pursuant to the provisions of this section, and not otherwise recovered by or credited to the Authority.
- L. If the Design-Builder asserts that any partial termination, has rendered enforcement of the remainder of the Contract at the remaining Contract price inequitable, the Design-Builder may file with the Contracting Officer's Representative, a request in writing for an equitable adjustment to the price for the continued portion of the Contract. Such proposal shall be submitted within ninety (90) days from the effective date of termination, unless the Contracting Officer extends it in writing, and shall be accompanied by appropriate supporting documentation.
- M. The Authority may, under such terms and conditions as it may prescribe, make partial payments and payments on account against costs incurred by the Design-Builder in connection with the terminated portion of this Contract whenever in the opinion of the Contracting Officer, the aggregate of such payments are within the total amount to which the Design-Builder will be entitled.. If such payments are in excess of the amount finally agreed to under this section, such excess shall be payable to the Authority, upon demand, for the period from the date that such excess payment is received by the Design-Builder to the date of repayment, together with interest computed at the rate of six percent (6%) per annum, No interest shall be charged on any such excess, if the payment is attributable to a reduction or other disposition of termination

inventory until ten (10) days thereafter, or such later date as the Contracting Officer determines by reason of the circumstances.

- N. The Design-Builder's responsibilities and obligations under this section shall remain in full force and effect notwithstanding the pendency of any dispute or other delay relating to determination of the appropriate price adjustment or any other issue arising from the termination for convenience.
- O. Unless otherwise provided for in this Contract, or by applicable statute, the Design-Builder, and all subcontractors whose work is encompassed in the termination settlement shall preserve, all of its books, records, documents, and other evidence bearing on the costs and expenses under this Contract for three (3) years after final settlement. The Design-Builder shall make these records and documents available to the Authority, its governing jurisdictions and any other Federal, state, or local entities providing funding for this Contract, and to the U.S. Comptroller General or the agents or representatives of any of them, at the Design-Builder's office, at all reasonable times, without any direct charge.

00 72 09 ASSIGNMENT

- A. The Design-Builder shall not transfer or assign any of its rights or obligations under this Contract, or any portion thereof to any other party, without the Contracting Officer's consent. The Contracting Officer may recognize a third party as successor in interest to the Contract where the third party's interest is incidental to the transfer of all the assets of the Design-Builder, i.e., sales of assets, transfer of assets pursuant to merger or consolidation, or incorporation of a proprietorship or partnership. Such recognition of the transfer shall be at the Contracting Officer's discretion after review of the facts and circumstances surrounding each request. The Contracting Officer shall not approve the assignment unless the surety, in writing, agrees to the assignment and accepts the assignee as the Design-Builder and principal on the payment and performance bonds.
- B. Claims for money due or to become due the Design-Builder from the Authority, this Contract may be assigned to a bank, trust company, or other financing institution, including any Federal lending agency... It is the Authority's intent to recognize assignments only to bona fide lending institutions; therefore, assignment to any private corporation, business, or individual, that does not qualify as such, is specifically prohibited and void ab initio.
- C. Any attempt to transfer by assignment not authorized by the Contracting Officer shall constitute a breach of this Contract, and the Contracting Officer may terminate the Contract for default, and the Design-Builder and its sureties shall be liable to the Authority for excess costs incurred by the Authority.

00 73 00 DISPUTE RESOLUTION

- A. Any dispute arising under or related to this Contract that are not disposed of by agreement, will be decided by the Contracting Officer, who will reduce his or her decision to writing and mail, by certified mail, return receipt requested, a copy thereof to the Design-Builder. The Contracting Officer's decision is final and conclusive unless, within thirty (30) calendar days from receipt the Design-Builder mails or otherwise furnishes to the Contracting Officer a written notice of appeal in accordance with Section 01330, SUBMITTAL PROCEDURES, addressed to the Authority's Board of Directors. Such notice shall indicate that an appeal is intended and shall reference the decision and Contract number. The decision of the Board of Directors or its duly authorized representative for the determination of such appeals shall be final and conclusive unless in proceedings initiated by either party for review of such decision in a court or board of competent jurisdiction, it determines that the decision was fraudulent, or capricious, or arbitrary, or so grossly erroneous as necessarily to imply bad faith, or is not supported by substantial evidence. In any appeal under this Section, the appellant will be afforded an opportunity to be heard and to offer evidence in support of its appeal. Pending final decision of a dispute hereunder, the Design-Builder shall proceed diligently with the performance of this Contract in accordance with the Contracting Officer's decision. The Armed Services Board of Contract Appeals ("ASBCA") is the authorized representative of the Board of Directors for final decisions on appeal..

- B. This section does not preclude consideration of questions of law in connection with decisions provided for in Paragraph A above. Nothing in this Contract, however, shall be construed as making final, the decisions of the Board of Directors or its representative on a questions of law.

00 73 01 USE AND POSSESSION PRIOR TO COMPLETION

- A. The Authority shall have the right to take possession of or use any completed or partially completed part of the work. Such possession or use shall not be deemed an acceptance of any work not completed in accordance with the Contract. While the Authority is in such possession, the Design-Builder, will be relieved of the responsibility for loss or damage to the work other than that resulting from the Design-Builder's fault or negligence or that of its Subcontractors or agents. If such possession or use by the Authority delays the Contract or causes additional expense to the Design-Builder, an equitable adjustment to the Contract price or the time of completion will be made and the Contract will be modified in writing, accordingly.

00 73 02 ACCEPTANCE AND INSPECTION OF WORK

- A. "Acceptance," as used in this section, means t the Contracting Officer's Representative's acts approving specific services in partial or complete performance of the Contract. As used in this section, "correction" means the elimination of a defect.
- B. Unless otherwise provided in this Contract, the COR's acceptance will be made as promptly as practicable after completion and inspection of all work required by this Contract. Acceptance shall be final and conclusive except for latent defects, fraud, willful misconduct or such gross mistakes as may amount to fraud, or as otherwise provided in this Contract. . All punch list items identified during final inspections and noted at the time of acceptance shall be corrected by the Design-Builder as soon as is practicable as specified in Section 01775, CLOSEOUT.
- C. The Contracting Officer Representative will give written notices of defects or nonconformances to the Design-Builder if and when discovered, but no later than acceptance except for latent defects, fraud, willful misconduct or such gross mistakes as may amount to fraud which may be discovered following such acceptance. This notice will state either:
 - 1. That the Design-Builder shall correct or re-perform defective or nonconforming services; or,
 - 2. That the Authority does not require correction or re-performance. The Design-Builder shall be liable to the Authority for all costs incurred of any kind caused by or resulting from the Design-Builder's defective workmanship or noncompliance with the Contract, the Design Specifications and Design Drawings.
- D. If the Design-Builder or the Authority deems it necessary , to make an examination of work already completed, by removing or tearing it out before final acceptance, the Design-Builder shall, on request, promptly furnish all necessary facilities, labor, and material to do so. If such work is found to be defective or nonconforming in any material respect, the Design-Builder shall pay for all of the expenses of such examination and of satisfactory reconstruction and pay all delay damages. If, however, such work is found to meet Contract requirements ,the "Issued for Construction" Specifications and "Issued for Construction" Drawings, an equitable adjustment will be made to the Contract price to compensate the Design-Builder for the additional services involved in such examination and reconstruction. If completion of the work has been delayed thereby, the Contracting Officer may grant the Design-Builder a suitable extension of time.
- E. All work, which includes but is not restricted to, materials, workmanship, and fabrication of components, shall be subject to the Authority's inspection and testing, at all reasonable times prior to acceptance as specified in Section 01470, QUALITY MANAGEMENT SYSTEM, and Section 01 82 00, DEMONSTRATION AND TRAINING. Any such inspection and testing is for the sole benefit of the Authority and shall not relieve the Design-Builder of the responsibility for providing quality control measures to ensure that the work strictly complies with the Contract, the "Issued for Construction" Specifications and the "Issued for Construction" Drawings. No inspection or testing by the Authority shall be construed as acceptance. Inspection or testing shall not relieve the Design-Builder of

responsibility for damage to or loss of the material prior to acceptance, or in any way affect the continuing rights of the Authority after acceptance of the completed work.

- F. The Design-Builder shall furnish promptly, without additional charge, all services, work, labor, materials, tools, equipment, and facilities reasonably needed for performing such safe and convenient inspections and tests as may be required. All inspections and tests will be performed in such manner as not to unnecessarily delay the Contract. . The Authority shall receive adequate advance notice submitted in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, to conduct inspections and witness all tests as part of its overall quality oversight of the project as specified in this Contract. If the Authority does not witness tests, due to the Design-Builder's failure to provide timely notice, such tests shall have no effect. Special, full scale and performance tests shall be performed as described in the Contract, the Design Specifications and Design Drawings.
- G. If the Design-Builder is required to correct or re-perform any services, they shall be done without additional cost or fee to the Authority, and they shall be subject to this section to the same extent as work initially performed. If the Design-Builder fails or refuses to correct or revise errors or deficiencies in its performance within thirty (30) days of the Authority's request, the Authority may, by contract or otherwise, correct or replace the services with similar ones and charge the Design-Builder with the cost incurred or make an equitable adjustment to the Contract price.
- H. Disagreement regarding the responsibility for costs for corrective actions, either incurred by the Design-Builder or by the Authority, , shall constitute a dispute and shall be subject to the provisions of Section 00730, DISPUTE RESOLUTION.
- I. The rights and remedies of the Authority provided in this Section are in addition to any other rights or remedies provided under this Contract, at law or in equity.
- J. The Design-Builder shall give the Contracting Officer's Representative at least fourteen (14) days advance notice of the date that the work, or separate portion thereof, will be fully completed and ready for final inspection, testing, and acceptance in accordance with this Contract.

00 73 03 AUTHORITY-FURNISHED PROPERTY

- A. The Authority will make available to the Design-Builder, for use only in connection with this Contract, the property, if any, described in the Section 00 83 03, AUTHORITY-FURNISHED PROPERTY, , at the times and locations stated therein. If the Authority-furnished property, suitable for its intended use, is not made available to the Design-Builder in a timely fashion, the Contracting Officer will, upon timely written request from the Design-Builder , equitably adjust any affected provision of this Contract pursuant to any procedures of Section 00 74 08, CHANGES.
- B. Title to Authority-furnished property shall remain with the Authority. The Design-Builder shall maintain adequate property control records of Authority-furnished property in accordance with sound industrial practice.
- C. Unless otherwise provided in this Contract, the Design-Builder, upon acceptance of Authority-furnished property, assumes the risk of and shall be responsible for loss, theft or damage thereto except for reasonable wear and tear and except to the extent that such property is consumed in the performance of this Contract.
- D. The Design-Builder shall, upon completion of this Contract, prepare for shipment, deliver FOB origin, or dispose of all Authority-furnished property not consumed in the performance of this Contract or not theretofore delivered to the Authority as directed. The net proceeds of such disposal will be credited to the Design-Builder's price or paid in such other manner the Contracting Officer directs.

00 73 04 MATERIAL, WORKMANSHIP, AND EQUIPMENT

- A. All equipment, materials, and articles incorporated in the project covered by this Contract shall be new and of the most suitable grade for the purpose intended. Notwithstanding the Authority's review and approval of any substitution, nothing herein relieves the Design-Builder of its obligations to satisfy its requirements under the Contract.

- B. Reference to any equipment, materials, or articles to be incorporated in the project and any patented processes, by trade name, make, or catalog number in the Contract "Issued for Construction" Specifications and the "Issued for Construction" Drawings shall be regarded as establishing a standard of quality and shall not be construed as limiting competition. The Design-Builder may, at its option, use any equipment, material, article, or process that in the Authority's judgment, is equal to that named. When required by this Contract or when called for by the Authority, the Design-Builder shall furnish to the Authority for approval in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, the name of the manufacturer, the model number, and other identifying data, samples and information regarding performance, capacity, nature, and rating of machinery and other equipment, that the Design-Builder contemplates incorporating in the work.. Machinery, equipment, material, and articles installed or used without required approval shall be at the risk of subsequent rejection.
- C. The Design-Builder shall provide construction equipment in first class working order and safe condition, of sufficient quantities and sizes to complete the work as specified n the Contract, the "Issued for Construction" Specifications and "Issued for Construction" Drawings within the Project Schedule, and shall provide adequate maintenance of this equipment throughout the duration of the project.
- D. Items of equipment that, at any time, prove ineffectual or hazardous to personnel or property, shall be promptly brought to acceptable condition or shall be removed from the site, as directed by the Authority or by any jurisdictional agency.

00 73 05 HAZARDOUS MATERIALS

- A. The Authority will be responsible for the presence of and any associated consequences of asbestos, PCBs, petroleum, and other hazardous and radioactive materials (Hazardous Materials) on the project if such presence is unknown, unexpected, or not identified in information provided by the Authority, or not otherwise known to the Design-Builder prior to the preparation of its proposal. The Design-Builder shall, upon encountering or recognizing such Hazardous Materials, immediately stop work in the affected area and report the condition to the Contracting Officer's Representative, in writing. The Design-Builder shall submit a hazardous materials report in accordance with Section 01330, SUBMITTAL PROCEDURES. The Authority shall have no responsibility or liability for any hazardous materials that are brought to the site t or handled by the Design-Builder or any Subcontractor.

00 73 06 PROTECTION OF EXISTING VEGETATION, STRUCTURES, UTILITIES, AND IMPROVEMENTS

- A. The Design-Builder shall preserve and protect all existing vegetation such as trees, shrubs, and grass on or adjacent to the work site , that are not to be removed and that do not unreasonably interfere with the work. Care shall be taken in removing trees authorized for removal to avoid damage to vegetation that will remain in place. The Design-Builder shall be obligated to replace or restore all existing vegetation that is destroyed, removed, or damaged in the performance of the work to the condition that existed before work commenced.
- B. The Design-Builder shall protect from damage all adjacent property including, but not limited to, land, existing structures, improvements, and utilities at or near the site of the work. The Design-Builder shall repair or restore any damage to such facilities that results from failure to comply with Contract requirements or the failure to exercise reasonable care in the performance of the work. If the Design-Builder fails or refuses to repair any such damage promptly, the Contracting Officer's Representative may have the necessary work performed and charge the costs thereof to the Design-Builder.

00 73 07 OPERATIONS AND STORAGE AREAS

- A. All of the Design-Builder's operations, including storage , shall be confined to areas that the Contracting Officer's Representative approves. Temporary buildings such as storage sheds, shops, and offices may be erected by the Design-Builder only with the Contracting Officer's approval and shall be built without expense to the Authority. Such temporary buildings and utilities shall remain the Design-Builder's property and shall be removed by the Design-Builder at its expense upon the completion of the work. With the written consent of the Contracting Officer , such buildings and utilities

may be abandoned and need not be removed. Temporary construction facilities are more fully described in Section 01 52 00, TEMPORARY CONSTRUCTION FACILITIES.

- B. The Design-Builder shall, under regulations prescribed by the Contracting Officer, use only established roadways or construct and use such temporary roadways as may be authorized by the Contracting Officer. Where materials are transported in the prosecution of the Work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by any Federal, State, or local law or regulation. When it is necessary to cross curbs or sidewalks, protection against damage shall be provided by the Design-Builder, and damaged roads, curbs, or sidewalks shall be repaired by or at the expense of the Design-Builder.

00 73 08 ACCIDENT PREVENTION

- A. To protect the life and health of employees and other persons, to prevent damage to property, materials, supplies, and equipment, and to avoid work interruptions in the performance of this Contract, the Design-Builder shall comply with all pertinent provisions of the Authority's safety requirements as specified in Section 01 11 04, SAFETY/ENVIRONMENTAL REQUIREMENTS, and shall also take or cause to be taken such additional measures as the Contracting Officer's Representative may determine to be reasonably necessary for that purpose.
- B. All work under this Contract shall be performed in a skillful and workmanlike manner. The Contracting Officer's Representative may, in writing, require the Design-Builder to remove from the project any employee the Contracting Officer's Representative deems to be contrary to the best interests of the Authority.
- C. The Design-Builder shall maintain an accurate record of and shall report to the Contracting Officer's Representative in the manner and on the forms he or she prescribes, exposure data and reports of all accidents resulting in death, traumatic injury, occupational disease, and damage to property, materials, supplies, and equipment incidental to work performed under this Contract, immediately after of such incident.
- D. The Contracting Officer's Representative will notify the Design-Builder if there is any noncompliance with the foregoing provisions and the action(s) to be taken. The Design-Builder shall, after receipt of such notice, immediately take corrective action. Such notice, when delivered to the Design-Builder or its representative at the work site, shall be deemed sufficient for this purpose. If the Design-Builder fails or refuses to promptly comply, the Contracting Officer's Representative may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to any such stop work order shall be made the subject of a claim for extension of time or for the Design-Builder's excess costs or damages..
- E. The Design-Builder shall ensure compliance with this section by subcontractors.
- F. Prior to commencement of the Work, the Design-Builder shall:
 - 1. Submit, in writing in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, an accident prevention plan;
 - 2. Meet, with the Authority to discuss and develop an agreement regarding the administration of the overall safety program.

00 73 09 FIRE PROTECTION EQUIPMENT AND LIFE SAFETY AGREEMENT

- A. The Design-Builder shall submit, in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, a plan for a fire protection systems and equipment as specified in Section 01 11 04, SAFETY/ENVIRONMENTAL REQUIREMENTS, for use during the term of this Contract.

0 74 00 PROTECTION OF PERSONS AND PROPERTY

- A. The Design-Builder shall be responsible for ensuring compliance with the most stringent provisions of the applicable occupational safety and health statutes and regulations of the District of Columbia,

State of Maryland, Commonwealth of Virginia, or political subdivision where the work is being performed, as well as the U.S. Department of Labor's Occupational Safety and Health Act (OSHA) regulations.. The Design-Builder shall comply with the approved Organizational Health and Safety Program as specified in Section 01 11 04, SAFETY/ENVIRONMENTAL REQUIREMENTS, that will be submitted by the Design-Builder prior to commencement of work in accordance with Section 01330, SUBMITTAL PROCEDURES. The Design-Builder shall ensure that all methods of performing the work do not involve danger to the personnel employed thereon, the public, or private property, whether or not these methods are cited or indicated in the Contract.. If a Federal, State or local agency charges the Design-Builder with any violations of health or safety laws or regulations in the course of the work, a copy of each charge shall be immediately forwarded to the Contracting Officer's Representative. The Design-Builder shall promptly notify the Authority of all damage to property and of injuries sustained by any persons, of which the Design-Builder becomes aware, including but not limited to, employees of the Design-Builder, in any manner relating directly or indirectly to the work or otherwise to this Contract.

00 74 01 CONSIDERATION AND BASIS OF PAYMENT

- A. In consideration of its performance under this Contract, the Design-Builder will be paid the sums set forth in this Contract, which shall constitute complete payment for all work required to be performed under this Contract and for all expenditures, that may be made and expenses incurred. The basis of payment will be the Contract price, as shown on Section 00 52 01, DESIGN-BUILD CONTRACT FORM, and which shall constitute complete compensation for performance of all work required by the Contract.
- B. The approved monthly progress report and updated ninety (90)day schedule as specified in Section 01 32 02, CONTRACT PROGRESS REPORTING, and the Approved Quality Manager's Quality Compliance Certification shall be the basis for progress payments to the Design-Builder.
- C. When satisfactory progress has not been achieved by the Design-Builder during any period for which a progress payment is to be made, a percentage of the progress payment may be retained. Retainage should not be used as a substitute for good contract management, and the Contracting Officer should not withhold funds without cause. Determinations to retain and the specific amount to be withheld shall be made by the Contracting Officer on a case-by-case basis. Such decisions will be based on the Contracting Officer's assessment of past performance and the likelihood that such performance will continue. The amount of retainage withheld shall not exceed ten percent (10%) of the approved, estimated amount in accordance with the terms of this Contract and may be adjusted as the Contract approaches completion to recognize better than expected performance, the ability to rely on alternative safeguards, and other factors. Upon completion of all Contract requirements, retained amounts shall be paid promptly.
- D. The basis of payment will be the total base price as negotiated and accepted. The basis of payment will include any options exercised and any modifications to the Contract in addition to the total base price, which shall constitute complete compensation for performance of all work required by the Contract.

00 74 02 CONTRACT PRICES AND PRICE PROPOSAL SCHEDULE

- A. Payment for the various proposal items listed in the Price Proposal Schedule shall constitute full compensation for furnishing all , labor, equipment, appliances, and materials and for performing all operations required to complete the Work in conformity with the Contract, the "Issued for Construction" Specifications and "Issued for Construction" Drawings developed by the Design-Builder. All costs for work not specifically mentioned in the Price Proposal Schedule shall be included in the Contract Prices for the items listed.

00 74 03 VARIATION IN ESTIMATED QUANTITIES

- A. Where the quantity of a pay item in this Contract is an estimated quantity provided by the Authority, and where the actual quantity of such pay item varies more than 15 percent above or below the estimated quantity stated in this Contract, an equitable adjustment in the Contract Price shall be made

upon demand of either party. The equitable adjustment shall be based upon any increase or decrease in costs due solely to the variation above 115 percent or below 85 percent of the estimated quantity. If the quantity variation is such as to cause an increase in the time necessary for completion, the Contracting Officer Representative will, upon receipt of a written request submitted in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, for an extension of time within 10 Days from the beginning of such delay, or within such further period of time, which may be granted by the Contracting Officer Representative prior to the date of Final Payment of the Contract, ascertain the facts and make such adjustment for extending the Project Schedule as in the Contracting Officer Representative's judgment the findings justify.

00 74 04 METHOD OF PAYMENT

- A. The Authority will make progress payments monthly as the Work proceeds on estimates approved by the Contracting Officer Representative for design related work and by estimates reviewed and approved by the Contracting Officer Representative for construction-related work. At least 5 Days before submission of any Application for Payment, a Preliminary Monthly Progress and Quality Status Report Review meeting will be held to review for acceptability of the schedules and the Quality System. The Design-Builder shall have an additional 5 Days to make corrections and adjustments and to complete and resubmit the schedules. A Formal Progress and Quality Status Report Review meeting will be held to approve the schedules. No progress payment will be made to Design-Builder until the schedules are provided and accepted by the Contracting Officer Representative, whose acceptance will not be unreasonably withheld. The progress schedule shall be acceptable to Authority as providing an orderly progression of the Work to completion within any specified Milestones and the Project Schedule, but acceptance of the progress schedule shall neither impose on Authority responsibility for the sequencing, scheduling, or work progress nor interfere with or relieve the Design-Builder from Design-Builder's full responsibility for the Work. The format and structure of the progress schedule shall be as set forth in Section 01 32 02, CONTRACT PROGRESS REPORTING. The Authority's acceptance shall not be deemed to confirm that the schedule is a reasonable plan for performing the Work.
- B. The Design-Builder's progress payment requests will be reviewed based on the scheduled and actual progress of the Work as reflected on the design schedule, cost-loaded progress schedule or bar graph as applicable, and monthly updates. The Design-Builder shall not be entitled to progress payments, and the Authority shall have no obligation to review or approve progress payment requests if the Design-Builder has failed to submit or update the schedules, if the applicable schedule or update submitted by the Design-Builder fails to accurately reflect the actual progress of the Work, or if the Contracting Officer Representative declines to approve the submitted schedules for any of the reasons stated in this Contract. A decision not to approve a request for progress payments based upon the Design-Builder's failure to comply with the schedule and update submission requirements as committed under this Contract shall be at the sole and absolute discretion of the Contracting Officer Representative.
- C. Furnish a breakdown of the total Contract Price showing the amount included therein for each principal category of the Work, in such detail as requested, to provide a basis for determining progress payments. In the preparation of estimates, the Contracting Officer Representative may authorize material delivered to the Site and preparatory work completed to be taken into consideration. Material delivered to the Design-Builder at locations other than the Site may also be taken into consideration if the Design-Builder furnishes satisfactory evidence that the Design-Builder has acquired title to such material and that it will be utilized on the Work covered by this Contract.
- D. If the Contract Price is more than \$50,000, material delivered that will be incorporated into the Project will be taken into consideration in computing progress payments, provided the material is delivered on the Site, or is delivered to the Design-Builder and properly stored in a warehouse, storage yard, or similar suitable place within 25 miles of the Site or such reasonable distance in excess of 25 miles as may be approved by the Contracting Officer Representative, provided, however, that the Design-Builder has the proper storage facilities, security, and insurance for the stored material as Approved by the Contracting Officer Representative. Before each such payment is made for delivered material on the Site, furnish to the Contracting Officer Representative such evidence as may be required as proof of the ownership, quantity, and value of such materials. Before each such payment is made for

delivered materials off the Site, furnish the Contracting Officer Representative evidence of ownership and properly executed bills of sale to the Authority for the delivered material upon which payment is being made.

- E. In determining progress accomplished, the Authority will allow as an element of work accomplished, i.e., progress toward completion, only 50 percent of the invoiced cost of materials or equipment delivered to the Site, or suitable location as described in Paragraph D above, but not incorporated in the construction up to the time the materials or equipment are actually incorporated in the Work.
- F. In making such progress payments, 5 percent of the estimated amount of work completed will be retained until final completion and Acceptance of the Contract Work. Also, whenever the Work is substantially complete, and the Design-Builder is in compliance with all provisions of the Contract, if the Contracting Officer Representative considers the amount retained to be in excess of the amount adequate for the protection of the Authority, the Contracting Officer Representative may use discretion in releasing to the Design-Builder all or a portion of such excess amount.
- G. Where the time originally specified for completion of this Contract exceeds 1 year, the Contracting Officer Representative, at any time after 50 percent of the Work has been completed, if the Contracting Officer Representative finds that satisfactory progress (satisfactory progress includes prosecution of physical work, adherence to DBE if applicable, quality assurance, and all other provisions of the Contract) is being made, may reduce the total amount retained from progress payments to the minimum level necessary to protect the interest of the Authority.
- H. All material and work covered by progress payments made shall thereupon become the sole property of the Authority but this provision shall not be construed as relieving the Design-Builder from the sole responsibility for all material and work upon which payments have been made or the restoration of any damaged work, or as waiving the right of the Authority to require the fulfillment of all of the terms of the Contract.
- I. See Section 01 77 05, CLOSEOUT, for Final Inspection requirements.
- J. Upon completion and Acceptance of all work, the amount due the Design-Builder under this Contract will be paid upon the presentation of a properly executed voucher as specified in Section 01 77 05, CLOSEOUT, and after the Design-Builder shall have furnished the Authority with a release of all Claims against the Authority arising by virtue of this Contract other than Claims in stated amounts as may be specifically excepted by the Design-Builder from the operation of the release. If the Design-Builder's claim to amounts payable under the Contract has been assigned, a release may also be required of the assignee.
- K. The Authority may, at its sole discretion, withhold payment from the Design-Builder at the appropriate percentage for work, or portions thereof, that it deems to be defective or in nonconformance with the requirements of the RFP Documents and the Issued for Construction Specifications and Issued for Construction Drawings.
- L. Satisfactory records for design, inspection, testing, or other quality elements required under the approved Design-Build Quality System; operation and maintenance manuals; As-Built Drawings and As-Built Specifications; electronic media; as-built Project Schedule; spare parts list, delivery information and distribution of spare parts; configuration management system; training manual, lesson plans, and student's training manual and electronic media of such, as applicable; survey record log; correspondence file; releases; vouchers; request for Final Payment; certifications, affidavits and warranties and guarantees; and must be submitted in order to receive payment for the completed Work. Final Payment will be made in accordance with this Section.

00 74 05 PROGRESS PAYMENTS FOR LUMP SUM ITEMS

- A. If requested, the Design-Builder shall furnish to the Contracting Officer Representative in a breakdown of the total Contract Price for every lump sum item on the Price Proposal Schedule, showing the amount included therein for each principal category of the Work, in such detail as to provide a basis for determining progress payments. The breakdown shall be supported by such data to substantiate its correctness as the Contracting Officer Representative may require.

00 74 06 GARNISHMENT OF PAYMENTS

- A. Payment under this Contract shall be subject to garnishment and attachment orders issued pursuant to the laws of Maryland, Virginia, and the District of Columbia, and to levies issued under the laws of the United States.

00 74 07 SUBCONTRACT PAYMENTS

- A. Establish procedures to ensure timely payment of amounts due pursuant to the terms of the Subcontracts. Pay each Subcontractor for satisfactory performance of its contract, no later than 10 Days from the date of the Design-Builder's receipt of payment from the Authority for work by that Subcontractor. Release, within 10 Days of satisfactory completion of all work required by the Subcontractor, any retention withheld from the Subcontractor.
- B. Certify on each payment request submitted to the Authority that payment has been or will be made to all Subcontractors in accordance with Paragraph A above. Notify the Contracting Officer Representative with each payment request, of any situation in which scheduled Subcontractor payments have not been made.
- C. If a Subcontractor alleges that the Design-Builder has failed to comply with this Section, the Design-Builder agrees to support any Authority investigation, and, if deemed appropriate by the Authority, to consent to remedial measures to ensure Subcontractor payment that is due.
- D. The Design-Builder agrees that the Authority may provide appropriate information to interested Subcontractors who want to determine the status of Authority payments to the Design-Builder.
- E. Nothing in this Section is intended to create a contractual obligation between the Authority and any Subcontractor or to alter or affect traditional concepts of privity of contract between all parties.

00 74 08 CHANGES

- A. The Contracting Officer Representative (or Contracting Officer, depending on the level of authority required) may, at any time, and without notice to the sureties, by written order designated or indicated to be a Modification, make any change in the Work within the general scope of the Contract including, but not limited to, changes:
 - 1. In the Scope of the Work or Contract Documents;
 - 2. In the RFP Documents, the Issued for Construction Specifications, and the Issued for Construction Drawings;
 - 3. In the method or manner of performance of the Work;
 - 4. In the Authority-furnished facilities, equipment, materials, services, or Site; or
 - 5. Directing acceleration in the performance of work.
- B. Any other written order or an oral order, which terms as used in this Paragraph B, shall include direction, instruction, interpretation, or determination from the Contracting Officer Representative or Contracting Officer, which causes any such change, shall be treated as a Modification under this Section, provided that the Design-Builder gives the Contracting Officer Representative written notice in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, stating the date, circumstances, and source of the order and that the Design-Builder regards the order as a Modification.
- C. Except as herein provided, no order, statement, or conduct of the Contracting Officer Representative or Contracting Officer shall be treated as a change under this Section or entitle the Design-Builder to an equitable adjustment hereunder.
- D. If any change under this Section causes an increase or decrease in the Design-Builder's cost of, or the time required for, the performance of any part of the Work under this Contract, whether or not changed

by any order, an equitable adjustment will be made and the Contract modified in writing accordingly: Provided, however, that no Claim for any change under Paragraph B above will be allowed for any costs incurred more than 20 Days before the Design-Builder gives written notice as therein required. This 20-Day limitation will be strictly applied regardless of whether the Authority is prejudiced by any lack of notice.

- E. If the Design-Builder intends to request an equitable adjustment under this Section, it must, within 30 Days after receipt of a written Modification under Paragraph A above or furnishing of a written notice under Paragraph B above, submit to the Contracting Officer Representative in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, a written proposal in accordance with this CHANGES Section, unless this period is extended by the Contracting Officer Representative. The proposal hereunder may be included in the notice under Paragraph B above.
- F. No Claim by the Design-Builder for an equitable adjustment hereunder will be allowed if asserted after Final Payment under this Contract.
- G. For additional Modification procedures see Section 01 25 00, CONTRACT MODIFICATION PROCEDURES.

00 74 09 PRICING OF ADJUSTMENTS

- A. When costs are a factor in any determination of a Contract Price adjustment pursuant to Section 00 74 08, CHANGES, or any other Section of this Contract, such costs shall be in accordance with the contract cost principles and procedures in Subpart 31.1 of the Federal Acquisition Regulations (48 CFR 31.1). Where general and administrative expense is recoverable as part of any pricing adjustment under this Contract, the adjustment shall be based on the relationship between the entity's total general and administrative expenses allowable under FAR cost principles for all construction-type operations during the fiscal or calendar year covering the actual performance period of the work included in this pricing adjustment, and the entity's total cost input (excluding General and Administrative costs) for construction-type operations during the same period, expressed as a percentage, applied to the direct and overhead Contract costs included in the pricing adjustment; i.e., general and administration expenses will be paid on a percentage of cost basis, not on a daily rate type basis.
- B. Notwithstanding any interpretation of the aforementioned contract cost principles and procedures to the contrary, the Authority shall not be liable for interest, however represented, on or as a part of any Claim, request, proposal, or adjustment (including equitable adjustments) whether said Claim, request, proposal or adjustment (including equitable adjustments) arises under the Contract or otherwise.
- C. As part of its proposal for any Contract modification requiring a price adjustment in excess of \$100,000, the Contractor shall submit to the Contracting Officer, cost or pricing data under the conditions described in this paragraph and certify that, to the best of its knowledge and belief, the cost or pricing data submitted is accurate, complete and current as of the date submitted. At the Contracting Officer's discretion, the Contractor, may be required to submit cost or pricing data for price adjustments less than \$100,000.
- D. The Contractor shall ensure that this article is included in all subcontracts at any tier, if the value of the subcontracted work exceeds \$100,000.

00 75 00 ACCOUNTING AND RECORD KEEPING

- A. Applicability. This Section shall become effective for and shall apply to any adjustment in the price of this Contract initiated by the Design-Builder or the Authority. However, where the original amount of this Contract is less than \$1,000,000, Paragraph C of this Section does not apply unless the adjustment is expected to exceed \$50,000.
- B. Forward Priced Adjustments. Unless expressly waived in writing in advance by the Contracting Officer, the Design-Builder shall furnish to the Contracting Officer Representative in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, a cost proposal in advance of performance of any work for which a price adjustment is requested under this Contract. The proposal format shall be as

detailed in Section 00 74 08, CHANGES. The Design-Builder shall generate such records as are necessary to substantiate all elements of the pricing proposal. Such records supporting the costs of each pricing adjustment request shall be specifically segregated and identified in the Design-Builder's accounting system as being applicable to the pricing adjustment request.

C. Post-Pricing Adjustments.

1. In addition to the records required to be originated under Paragraph B above, in the event pricing of an adjustment under this Contract is not agreed upon between the Design-Builder and the Contracting Officer Representative prior to the commencement of work for which the pricing adjustment is requested, the Design-Builder and any Subcontractor engaged in work for which the pricing adjustment is requested, shall maintain accounts and original cost records specifically segregated and identified by job order or other appropriate accounting procedures approved by the Contracting Officer Representative of all incurred separated costs related to the work for which the pricing adjustment is requested. Proposed cost records and accounting procedures shall be submitted to the Contracting Officer Representative in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, for approval. The Design-Builder shall maintain accounts and records, which segregate and account for the costs of all work associated with that part of the Project for which the pricing adjustment is requested and shall allocate among:
 - a. Work required under the base Contract or under any Option if applicable;
 - b. Work requested to be reimbursed under the pricing adjustment; and
 - c. work claimed or determined to be related to other actual or proposed pricing adjustment, including but not limited to, changes orders, differing site conditions, and the like. The accounts and records so established shall accumulate such costs under logical costs groups, such as material, labor, equipment, subcontracts, field overhead and the like. The Contractor shall record these costs on a form approved by the Contracting Officer.
2. In addition to the accounting system established to segregate and account for Contract Price adjustments, which shall accumulate such costs by work activity under logical cost groups, such as material, labor, equipment, Subcontracts, field overhead, and the like, the Design-Builder shall maintain field records associated with these costs on a form approved by the Contracting Officer Representative. Subject to agreement between the Design-Builder and the Contracting Officer Representative, or upon direction of the Contracting Officer Representative for work under Section 00 74 08, CHANGES, the Design-Builder shall use Authority Forms (Daily Report - Labor, Materials, and Equipment), to be supplied by the Authority at the request of the Design-Builder and submitted in accordance with Section 01 33 00, SUBMITTAL PROCEDURES. The terms of Section 00748, CHANGES, shall apply regardless of the form used. The use of Authority Forms to segregate Modification costs does not, in and of itself, invoke the provisions of Section 00 74 08, CHANGES.

D. Availability. The accounts, records, and costs information required to be originated under Paragraphs B and C above together with all other accounts, records, and costs information related to this Contract, shall be maintained and made available by the Design-Builder or Subcontractor(s):

1. At the office of the Design-Builder or Subcontractor(s) at all reasonable times for inspection, audit, reproduction, or such other purposes as may be required by the Contracting Officer Representative, or pursuant to any other Sections of this Contract;
2. Until the expiration of three years from the date of payment of the final \$100 (Final Payment) under this Contract or such lesser time as is specified in Contractor Records Retention, Subpart 4.7 of the Federal Acquisition Regulations (48 C.F.R. 4.7) and for such longer period, if any, as is required by applicable statute, or by any other Sections of this Contract, or by Paragraphs a and b below:
 - a. If the Contract is completely or partially terminated, for a period of 3 years from the date of Final Payment; and

- b. If a pricing adjustment is involved in any appeal under Section 00 72 09, DISPUTE RESOLUTION, or in any litigation related to this Contract, for a period of 1 year following the final disposition of the appeal or litigation.
- E. When asserting a Claim under the various Sections of this Contract, the Design-Builder shall grant the Authority access to review and ascertain the validity of the accounting records being maintained for segregation of costs, including base cost records, and to audit such costs as are deemed appropriate by the Contracting Officer Representative. No payment will be made to the Design-Builder on its Claim until such records are made available and access is permitted.
- F. Limitation on Pricing Adjustments.
 1. In the event the Design-Builder or any Subcontractor fails to originate or to maintain, or to make available any accounts or records as required under this or any other Section of the Contract, any pricing adjustment or portion thereof previously granted by the Contracting Officer Representative for which records are not available, shall be rescinded and re-computed, or if a pricing adjustment has not yet been granted, shall be computed, in an amount not to exceed the direct costs for which accounts or records are not available, plus a single markup for indirect expenses not to exceed ten percent (10%) of the direct costs so determined by the Contracting Officer Representative. The adjustment will be established by the Contracting Officer Representative based upon, at its election, one of the following:
 - a. An audit of any existing books and records of the Design-Builder or Subcontractor; or
 - b. An Authority estimate adopted by the Contracting Officer; or
 - c. A combination of Paragraphs F.1.a and A.a.i.21.b above.
 2. The Design-Builder and Subcontractors will not be allowed any profit for the work for which the Design-Builder or Subcontractor fails to originate, maintain, or to make available any accounts or records as required under this Contract.
- G. Flow-down clause. The Design-Builder shall insert a clause containing all the provisions of this Section in all Subcontracts issued under this Contract, modified as necessary, for proper identification of the contracting parties, the Contracting Officer and the Contracting Officer Representative under this Contract.

00 75 01 AUDIT - PRICE ADJUSTMENTS

- A. General: The Contracting Officer and his or her representatives, including representatives of the Authority's governing jurisdictions, any federal, state, or local entity providing funding for this Contract and the Comptroller General of the United States, shall have access, audit, and inspection rights as described in the applicable Paragraphs B, C, and **Error! Reference source not found.** below.
- B. Examination of costs: If this is a cost-reimbursement type, incentive, time and materials, labor-hour or price re-determinable contract, or any combination thereof, the Design-Builder shall maintain, and the Authority shall have the right to examine books, records, documents, and other evidence and accounting procedures and practices, sufficient to reflect properly all direct and indirect costs of whatever nature claimed to have been incurred for the performance of this Contract. Such right of examination shall include inspection at all reasonable times of the Design-Builder's plant, or such parts thereof, as may be engaged in the performance of this Contract.
- C. Cost or pricing data: If the Design-Builder submitted cost or pricing data in connection with the pricing of this Contract or any change or modification thereto submitted in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, unless such pricing was based on adequate price competition, established catalog, market prices of commercial items sold in substantial quantities to the general public, prices of commercial items sold in substantial quantities to the general public, or prices set by law or regulation, the Authority shall have the right to examine all books, records, documents, and other data of the Design-Builder related to the negotiation, pricing, or performance or such Contract change or modification, for the purpose of evaluating the accuracy, completeness and currency of the

cost or pricing data submitted. The right of examination shall extend to all documents necessary to permit adequate evaluation of the cost or pricing data submitted along with the computations and projections used therein.

- D. The accounts, records and cost information required to be originated under this Contract, together with all other accounts, records and cost information related to this Contract, shall be maintained and made available by the Contractor and subcontractor(s):
 - 1. At their offices at all reasonable times, for inspection, audit, reproduction or such other purposes as may be required by the Contracting Officer, by anyone he or she authorizes or pursuant to any other provision of this Contract; and
 - 2. Except to the extent otherwise expressly set forth in this Contract, until three (3) years from the date of final payment under this Contract. If this Contract is completely or partially terminated, such records shall be maintained for a period of three (3) years from either the date of any resulting final settlement or the date of final payment, whichever is later. If a pricing adjustment results in any dispute or litigation related to this Contract, such records shall be maintained for a period equal to the later of three (3) years from the date of final payment or one (1) year following the final disposition of the dispute or litigation.
- E. The Design-Builder shall insert a clause containing all the provisions of this Section, including this Paragraph **Error! Reference source not found.** in all Subcontracts hereunder except altered as necessary for proper identification of the contracting parties and the Contracting Officer Representative under this Contract.

00 75 02 CERTIFICATE OF CURRENT COST OR PRICING DATA

- A. The Design-Builder shall provide a Certificate of Current Cost or Pricing Data to the Authority in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, on a form suitable to the Contracting Officer as required in Subpart 15.403 of the Federal Acquisition Regulations (48 CFR 15.403) in support of any negotiated contract expected to exceed \$100,000 or any modification to a formally advertised or negotiated contract on which the aggregate of the increases and decreases in cost are expected to exceed \$100,000. The Contracting Officer Representative at its discretion may request cost or pricing data for modifications on which costs are less than \$100,000 and an attendant certificate of current cost or pricing data. Cost or Pricing data submittal procedures are specified in Section 00 20 01, GENERAL INSTRUCTIONS, and Section 00 74 08, CHANGES.

00 75 03 PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA - PRICE ADJUSTMENTS

- A. This Section shall become operative only with respect to Modifications of this Contract, which involve aggregate increases, decreases, or both in cost plus applicable profits in excess of \$100,000 unless the modification is priced on the basis of adequate competition, established catalog or market prices of commercial items sold in substantial quantities to the public, or prices set by law or
- B. -Builder furnished cost or pricing data in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, which was not complete, accurate, and current as certified in the Design-Builder's Certificate of Current Cost or Pricing Data;
 - 1. A Subcontractor, pursuant to the Section 00754, SUBCONTRACTOR COST OR PRICING DATA, or any Subcontract provision therein required, furnished cost or pricing data in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, which was not complete, accurate, and current as certified in the Subcontractor's Certificate of Current Cost or Pricing Data;
 - 2. A Subcontractor or prospective Subcontractor furnished cost or pricing data in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, which was required to be complete, accurate, and current and to be submitted to support a Subcontract cost estimate furnished by the Design-Builder in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, but which was not complete, accurate, and current as of the date certified in the Design-Builder's Certificate of Current Cost or Pricing Data; or

3. The Design-Builder or a Subcontractor or prospective Subcontractor furnished any data, not within Paragraphs A, B.1, or B.2 above in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, which was not accurate, as submitted; then the price shall be reduced accordingly and the Contract shall be modified in writing as may be necessary to reflect such reduction. However, any reduction in the Contract Price due to defective Subcontract data of a prospective Subcontractor, when the Subcontract was not subsequently awarded to such Subcontractor, will be limited to the amount, plus applicable overhead and profit markup, by which the actual Subcontract, or actual cost to the Design-Builder if there was not a Subcontract, was less than the prospective Subcontract cost estimate submitted by the Design-Builder in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, provided the actual Subcontract price was not affected by defective cost or pricing data. (Note: Since the Contract is subject to reduction under this Section by reason of defective cost or pricing data submitted in connection with certain Subcontracts, it is expected that the Design-Builder may wish to include an article in each such Subcontract requiring the Subcontractor to appropriately indemnify the Design-Builder. However, the inclusion of such an article and the terms thereof are matters of negotiation and agreement between the Design-Builder and the Subcontractor, provided that they are consistent with disputes provisions in Subcontracts. It is also expected that any Subcontractor subject to such indemnification will generally require substantially similar indemnification for defective cost or pricing data required to be submitted by its lower tier Subcontractors.)

00 75 04 SUBCONTRACTOR COST OR PRICING DATA

- A. The Design-Builder shall require Subcontractors hereunder to submit cost or pricing data in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, prior to award of any negotiated lump sum or cost-reimbursement type, incentive, or price re-determinable Subcontract over \$100,000. The Design-Builder shall require Subcontractors to certify that to the best of their knowledge and belief, the cost and pricing data submitted under this Paragraph is accurate, complete, and current as of the date of execution, which date shall be as close as possible to the date of agreement on the negotiated price of the Subcontract. The Design-Builder shall insert the substance of this Section in each of its negotiated lump sum or cost reimbursement type, price re-determinable, or incentive Subcontracts over \$100,000 hereunder. The Design-Builder also shall insert the substance of this Section in each Subcontract with respect to any change or other modification made pursuant to one or more Sections of this Contract, which involves a price adjustment greater than \$100,000. The Design-Builder shall conduct a cost analysis of all negotiated Subcontracts.
- B. The requirements that follow shall become operative only with respect to any change or other modification made pursuant to one or more Sections of this Contract, which involves a price adjustment in excess of \$100,000. The requirements of this Section shall be limited to such price adjustments:
 1. The Design-Builder shall require Subcontractors hereunder to submit cost or pricing data in accordance with Section 01 33 00, SUBMITTAL PROCEDURES:
 - a. Prior to award of any cost-reimbursement type, incentive, or price re-determinable Subcontract;
 - b. Prior to the award of any Subcontract the price of which is expected to exceed \$100,000; or,
 - c. Prior to the pricing of any Subcontract change or other modification for which the price adjustment is expected to exceed \$100,000; except where the price is based on adequate price competition, established catalog or market prices of commercial items sold in substantial quantities to the general public or prices set by law or regulation.
 2. The Design-Builder shall require Subcontractors to certify that to the best of their knowledge and belief the cost and pricing data submitted under this Paragraph B is accurate, complete and current as of the date of execution, which date shall be as close as possible to the date of agreement on the negotiated price of the Contract Modification.

- C. The Design-Builder shall insert the substance of this Section in each Subcontract hereunder, which exceeds \$100,000.

00 75 05 FINAL PAYMENT

- A. The Authority will make Final Payment to the Design-Builder following Acceptance of Work, including receipt of releases from owners of property affected by the Design-Builder's performance under this Contract, and submittal of a final Affidavit of Amounts Paid to all businesses participating under the Contract. Final Payment shall include the entire sum found to be due hereunder after deducting therefrom such amounts as the terms of this Contract permit. Prior estimates and payments, including those relating to extra work or work omitted, shall be subject to correction by the Final Payment. Final Payment will be made only for materials actually incorporated in the Work; and, all materials remaining for which progress payments have been made shall revert to the Design-Builder, unless otherwise agreed, and progress payments made for these items shall be deducted from the Final Payment for the Work.
- B. By accepting Final Payment, the Design-Builder will be deemed thereby to have released the Authority from all Claims of the Design-Builder and all liability to the Design-Builder for things done or furnished in connection with the Work and for every act and neglect of the Authority and others relating to or arising out of the Work.

00 75 06 ACCESS AND EXAMINATION OF RECORDS

- A. The Design-Builder agrees to provide the Authority, the FTA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Design-Builder, which are directly pertinent to this Contract for the purposes of making audits, examinations, excerpts, and transcriptions. The Design-Builder also agrees, pursuant to 49 CFR. 633.17 to provide the FTA Administrator or its authorized representatives including any PMO Contractor access to Design-Builder's records and construction sites pertaining to a major capital project, defined at 49 U. S. C. 5302(a)1, which is receiving federal financial assistance through the programs described at 49 U. S. C. 5307, 5309, or 5311.
- B. The Design-Builder agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.
- C. Design Builder agrees to maintain all books, records, accounts and reports required under this Contract for a period of not less than three years after the date of termination or expiration of this Contract, except in the event of litigation or settlement of Claims arising from the performance of this Contract, in which case the Design-Builder agrees to maintain same until the Authority, the FTA Administrator, the Comptroller General, or any of their duly authorized representatives have disposed of all such litigation, appeals, Claims, or exceptions related thereto. Reference 49 CFR 18.39(i)(11).
- D. The Design-Builder agrees that the Contracting Officer, and the Comptroller General of the United States and the United States Secretary of Transportation if applicable, or their duly authorized representatives, shall, until the expiration of three years after Final Settlement under this Contract, have access to and the right to examine any directly pertinent books, documents, papers, and records of the Design-Builder involving transactions related to this Contract, for the purpose of making audit, examination, excerpts, and transcription.
- E. The Design-Builder further agrees to include in all its Subcontracts hereunder, a provision to the effect that the Subcontractor agrees that the Contracting Officer, and the Comptroller General of the United States and the United States Secretary of Transportation if applicable, or their duly authorized representatives, shall until the expiration of 3 years after Final Settlement under this Contract, have access to and the right to examine any directly pertinent books, documents, papers, and records of the Subcontractor involving transactions related to the Subcontract, for the purpose of making audit, examination, excerpts, and transcription. The term "Subcontract," as used in this Section, excludes:
1. Purchase Orders Not Exceeding \$2,500 and,

2. Subcontracts or purchase orders for public utility services at rates established from standard costs applicable to the public.

00 75 07 WARRANTY/GUARANTEE OF CONSTRUCTION

- A. Unless otherwise specifically provided for in the Contract, the Design-Builder, notwithstanding any final inspection, acceptance or payment, guarantees that all work performed and materials and equipment furnished under this Contract are in accordance with the Contract requirements. The Design-Builder also guarantees that when installed all materials and equipment were free from defects and will remain so for a period of at least two years from the date of Acceptance by the Authority.
- B. If defects of any kind should develop during the period such guarantees are in force, the Contracting Officer will immediately notify the Design-Builder in writing of such defects. The Authority thereupon shall have the right, by a written notice to that effect, to require the Design-Builder to repair or replace all inferior or defective work, material, or equipment or permit it to remain in place and assess the Design-Builder the costs it (the Design-Builder) would have incurred had the Design-Builder been required to effect repair or replacement.
- C. Corrections or replacement of parts, materials, equipment, supplies or construction made pursuant to the provisions of this Section shall also be subject to the provisions of the Contract including this clause to the same extent as parts, material, equipment, supplies or construction originally installed. The warranty, with respect to such new or corrected parts, materials, equipment, supplies or construction, shall be equal in duration as that set forth in Paragraph E.00A above and shall run from the date that such parts, materials, equipment, supplies, or construction are replaced or corrected and accepted by the Authority.
- D. The Design-Builder guarantees to reimburse the Authority for, or to repair or replace, damages to the Site, buildings, or contents thereof that are caused by inferior or defective workmanship, or the use of inferior or defective materials or equipment in the performance of this Contract. The Contracting Officer will immediately notify the Design-Builder in writing when such damage occurs. The Authority shall have the right to require the Design-Builder to repair or replace such damaged areas or equipment, or elect to permit such damage to remain as is and assess the Design-Builder the costs it would have incurred had it been required to effect repair or replacement.
- E. Should the Design-Builder fail to proceed promptly, after notification by the Contracting Officer, to repair or replace inferior or defective work, material, or equipment, or damage to the Site, buildings, or contents, thereof, caused by inferior or defective work, or the use of inferior or defective materials, or equipment, the Authority may have such work, material, equipment, or damage repaired or replaced and charge all costs incident thereto to the Design-Builder.
- F. Special guarantees that may be required under the Contract shall be subject to the elections set forth above unless otherwise provided in such special guarantees.
- G. Should the Design-Builder fail to prosecute the Work or fail to proceed promptly to provide guarantee period services after notification by the Contracting Officer, the Authority may, subject to Section 00 72 07, TERMINATION FOR DEFAULT, DAMAGES FOR DELAY AND TIME EXTENSIONS, contained in this Contract, and after allowing the Design-Builder 10 Days to correct and comply with the Contract, terminate the right to proceed with the Work (or the separable part of the Work) that has been delayed or unsatisfactorily performed. In this event, the Authority may take over the Work and complete it by contract or otherwise, and may take possession of and use any materials, appliance, and plant on the Work Site necessary for completing the Work. The Design-Builder and its sureties shall be liable for damages to the Authority resulting from the Design-Builder's refusal or failure to complete the Work within this specified time, whether or not the Design-Builder's right to proceed with the work is terminated. This liability includes increased costs incurred by the Authority in completing the Work.
- H. The decision of the Contracting Officer as to liability of the Design-Builder under this Section is subject to the appeal procedure provided for in Section 00 73 00, DISPUTE RESOLUTION, of this Contract.
- I. All Subcontractor's, manufacturers', and Suppliers' warranties and guarantees, expressed or implied, respecting any part of the Work and any material used therein shall be deemed obtained in

accordance with Section 01 77 05, CLOSEOUT, and shall be enforced by the Design-Builder for the benefit of the Authority without the necessity of separate transfer or assignment thereof, provided that, if directed by the Authority, the Design-Builder shall require such Subcontractor's, manufacturers and Suppliers to execute such warranties and guarantees in writing to the Authority in accordance with Section 01 77 05, CLOSEOUT. In connection therewith, the Design-Builder further agrees to perform the Work in such a manner or consistent with and so as to preserve all such warranties and guarantees.

- J. Certain WMATA Standard Specifications Sections and General Requirements provide for a warranty longer than the general warranty provided in this Contract, or commence from dates other than Final Completion and Acceptance of the Work. Where such warranties are specified as both in addition to the general warranty and in total years, the total years shall govern, and the warranty period shall commence from Final Completion and Acceptance of the Work.

00 75 08 CORRECTION OF DEFICIENCIES

- A. This Section shall apply only to those deficiencies discovered by either the Authority or the Design-Builder within two years after Acceptance. Materials or equipment will be regarded as having a deficiency if a type of material or equipment in like service accumulates a failure rate greater than five percent within a period of two years following Acceptance by the Authority. Systems or subsystems will be regarded as having a deficiency if they exhibit conditions or characteristics, which are not in compliance with the Design-Builder's Issued for Construction Specifications and Issued for Construction Drawings, and intent of this Contract anytime during a period extending for two years following their Acceptance by the Authority.
- B. Notice of deficiency to Design-Builder: If the Authority determines that a deficiency exists in any of the materials, equipment, systems, or subsystems provided the Authority under this Contract, it will promptly notify the Design-Builder of the deficiency, in writing, within 30 Days.
- C. Recommendation for correction: Upon timely notification of the existence of such a deficiency, or if the Design-Builder independently discovers a deficiency in accepted materials, equipment, systems, or subsystems, the Design-Builder shall promptly submit to the Authority its recommendation for corrective actions, together with supporting information in sufficient detail for the Authority to determine what corrective action, if any, shall be undertaken in accordance with Section 01 77 05, CLOSEOUT. The recommendation shall be submitted to the Authority within 15 working days of discovery or receipt of notice of the deficiency.
- D. Direction to Design-Builder concerning correction of deficiencies: Within 30 Days after receipt of the Design-Builder's recommendations for corrective action and adequate supporting information, the Contracting Officer, at its sole discretion, will give the Design-Builder written notice not to correct any deficiency, or to correct or partially correct any deficiency within a reasonable time and at a specified location.
- E. Schedule of deficiency corrections: The Design-Builder shall prepare Schedule of Deficiency Corrections and deliver it to the Authority for approval in accordance with Section 01 77 05, CLOSEOUT, within 15 working days of discovery of deficiency by the Design-Builder or receipt of notice of discovery of a deficiency by the Authority.
- F. Correction of deficiencies by Design-Builder: The Design-Builder shall promptly comply with all timely written directions by the Contracting Officer to correct or partially correct a deficiency, at no increase in the Contract Price. The Design-Builder shall also prepare and furnish to the Authority in accordance with Section 01 77 05, CLOSEOUT, data and reports applicable to corrections required under this Section (including revision and updating of all other affected data called for under this Contract) at no increase in the Contract Price.
- G. Modification of Contract with respect to uncorrected deficiencies: In the event of timely notice of a decision not to correct or only to partially correct a deficiency, the Design-Builder shall submit to the Authority within 15 working days, a technical and cost proposal to amend the Contract in accordance with Section 01 77 05, CLOSEOUT, to permit acceptance of the affected materials, equipment,

systems, or subsystems in accordance with the revised requirements, and an equitable reduction in Contract Price shall promptly be negotiated by the parties and stated in a Modification to this Contract.

- H. Failure to correct: If the Design-Builder fails or refuses to present a detailed recommendation for corrective action and to prepare and furnish data and reports as required in Paragraph G above, then the Contracting Officer will give the Design-Builder written notice specifying the failure or refusal and setting a period after receipt of the notice within which it must be corrected. If the failure or refusal is not corrected within the specified period, the Contracting Officer may, by contract or otherwise, as required:
1. Obtain detailed recommendations for corrective action;
 2. Either:
 - a. Correct the materials, equipment, systems or subsystems, or
 - b. Replace the materials, equipment, systems or subsystems; and if the Design-Builder fails to furnish timely disposition instructions, the Contracting Officer may dispose of non-conforming materials, equipment, systems or subsystems for the Design-Builder's account in a reasonable manner, in which case the Authority is entitled to reimbursement from the Design-Builder or from the proceeds for the reasonable expense of care and disposition, as well as for excess costs incurred or to be incurred;
 3. and obtain applicable data and reports.
 4. Charge to the Design-Builder the cost occasioned to the Authority thereby.
- I. Correction of deficient replacements and re-performances: Materials or equipment corrected or furnished in replacement and systems or subsystems revised pursuant to this Section shall also be subject to all the provisions of the Contract to the same extent as materials, equipment, systems, or subsystems initially accepted.
- J. The correction of materials or equipment exhibiting a failure rate greater than five percent means taking of any and all actions necessary to correct the deficiencies, including removal and replacement of all pieces of material or equipment in like service in a manner satisfactory to the Contracting Officer Representative. The correction of systems or subsystems exhibiting one or more deficiencies means taking any and all actions necessary to eliminate any and all deficiencies in a manner satisfactory to the Authority.
1. Disassembly/reassembly expense: The Design-Builder shall be liable for reasonable cost of disassembly/reassembly of larger items necessary to remove the materials or equipment to be inspected and/or returned for correction or replacement.
 2. Transportation charges:
 - a. When the Authority returns supplies to the Design-Builder for correction or replacement pursuant to this Section, the Design-Builder shall be liable for transportation charges up to an amount equal to the cost of transportation by the usual commercial method of shipment from the designated destination point under this Contract to the Design-Builder's plant, in addition to any charges provided for in Paragraph J.b below. The Design-Builder shall also bear the responsibility for the supplies while in transit.
 - b. When compliance with the terms of this Section by the Design-Builder involves shipment of corrected or replacement supplies from the Design-Builder to the Authority, the Design-Builder shall be liable for transportation charges up to an amount equal to the cost of transportation by the usual commercial method of shipment from the Design-Builder's plant to the designated destination point under this Contract, in addition to any charges provided for Paragraph J.a above. The Design-Builder shall also bear the responsibility for the supplies while in transit.

- K. No extension in time for performance; no increase in Contract Price: In no event shall the Authority be responsible for extension or delays in the scheduled deliveries or periods of performance under this Contract as a result of the Design-Builder's obligations to correct deficiencies, nor shall there be any adjustment of the delivery schedule or Contract Performance Time as a result of such correction of deficiencies, except as may be agreed to by the Authority in a supplemental agreement with adequate consideration.
- L. The Design-Builder shall not be responsible under this Section for the correction of deficiencies in Authority-furnished property, except for deficiencies in installation, unless the Design-Builder performs or is obligated to perform any modifications or other work on such property. In that event, the Design-Builder shall be responsible for correction of deficiencies to the extent of such modifications or other work.
- M. The Design-Builder shall not be responsible under this Section for the correction of deficiencies caused by the Authority.

00 75 09 COVENANT AGAINST CONTINGENT FEES

- A. The Design-Builder warrants that no person or selling agency has been employed or retained to solicit or secure this Contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies utilized by the Design-Builder for the purpose of securing business. For breach or violation of this warranty, the Contracting Officer shall have the right to annul this Contract without liability or in his or her discretion to deduct from the Contract Price or consideration, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee.
- B. If fraud is suspected, the Authority's only remedy prior to final adjudication by a court of competent jurisdiction is to report the matter to WMATA's Office of Inspector General (OIG), the U.S. Department of Transportation's Office of Inspector General (DOT-OIG), the Offices of Inspectors General of any agency providing funding under this Contract and/or appropriate federal, state and/or local law enforcement authorities.

00 76 00 OFFICIALS NOT TO BENEFIT

- A. No member of Congress or resident commissioner shall be admitted to any share or part of this Contract, or to any benefit that may arise therefrom; but this Paragraph shall not be construed to extend to this Contract if made with a corporation for its general benefit.
- B. No member, officer, or employee of the Authority or of a local public body during tenure with the Authority or with another local public body and one year thereafter shall have any interest, direct or indirect, in this Contract or the proceeds thereof.

00 76 01 GRATUITIES

- A. In connection with performance of work required under this Contract, or any changes or Modifications relative thereto, the giving of or offering to give gratuities (in the form of entertainment, gifts, or otherwise) by the Design-Builder, or any agent, representative, or other person deemed to be acting on behalf of the Design-Builder, or any Supplier or Subcontractor furnishing material to or performing work under this Contract, or any agent, representative or other person deemed to be acting on behalf of such Supplier or Subcontractor, to any Director, Officer, or employee of the Authority; or to any Director, Officer, employee, or agent of any of the Authority's agents, consultants, representatives, or other persons deemed to be acting for or on behalf of the Authority, with a view toward securing a contract or securing favorable treatment with respect to the awarding or amending, or the making of any determinations with respect to the performing of such contract is expressly forbidden. The terms of this Section 00 76 01, GRATUITIES, shall be strictly construed and enforced in the event of violations hereto.

00 76 02 CONFLICT OF INTEREST

- A. An organizational conflict of interest (OCI) exists when the nature of the work to be performed under a proposed contract or a subcontract may, without some restriction on future activities result in an unfair competitive advantage to the Contractor or subcontractor; because of (1) unequal access to information, (2) biased ground rules or (3) impaired objectivity. An unequal access to information OCI may exist if in performing a Contract, a Contractor obtains access to non-public information that provides a competitive advantage to it in a later competition. A biased ground rules OCI may exist if the Contractor has a role in setting rules for a source selection in which it will compete. An impaired objectivity OCI may exist if, in performing a Contract, a Contractor is called upon to evaluate an offer from or performance by itself or an affiliated entity.
- B. In the event that the Contractor believes that it or any of its potential subcontractors may have an OCI, it shall notify the Contracting Officer, in writing, within five (5) working days after it becomes aware of the potential or actual OCI. The written notification shall identify the nature and circumstances of the perceived conflict and propose appropriate measures to eliminate or mitigate the OCI. The Contracting Officer will review the circumstances and the proposed mitigation plan and notify the Contractor stating whether: (1) no mitigation is required; (2) the conflict cannot be mitigated; or (3) the conflict can be mitigated and he or she accepts the proposed measures, or recommends additional measures.
- C. The Contractor's failure to identify such perceived conflicts may result in the Contract being rescinded or terminated.
- D. Should the Contractor identify or become aware of a conflict during the term of this Contract, including any extension thereof that it could not reasonably anticipate prior to award, it shall notify the Contracting Officer in accordance with paragraph (b), or request an exception to the restriction with supporting rationale. The Contracting Officer shall consider the Contractor's proposed measures to mitigate or eliminate the conflict, or the request for an exception.
- E. If the proposed measures are not determined to be feasible or are otherwise not acceptable to the Contracting Officer, he or she may terminate the Contract. If the Contracting Officer does not grant a request for an exception, and the Contract is not terminated, the Contractor shall be notified in writing and be given ten (10) days from the date of the written notification to take all necessary actions to comply with this clause.
- F. If the proposed measures are determined to be acceptable to the Contracting Officer, he or she may grant a specific exception to this restriction, when in the Contracting Officer's judgment, the exception will not create a conflict between the Contractor's duties and obligations under this Contract and the duties and obligations imposed on the Contractor under another contractual or other relationship.
- G. If the Contractor fails to comply with the terms of this clause, and no fraud is suspected, the Contracting Officer, may withhold payments due under this Contract until such time as the Contractor is in compliance or, should the non-compliance remain uncorrected at the expiration of ten (10) days from the Contracting Officer's written notice as provided in paragraph (b), terminate the contract for default pursuant to this Contract.
- H. If fraud is suspected, the Authority's only remedy prior to a final determination by a court of competent jurisdiction is to report the matter to WMATA's Office of Inspector General (OIG), the U.S. Department of Transportation's Office of Inspector General (DOT-OIG), the Offices of Inspectors General of any state or Federal agency providing funding under this Contract and/or appropriate Federal, state and/or local law enforcement authorities.
- I. The Contractor, in performing this Contract, shall avoid any conduct that might result in or give the appearance of creating for Board members or employees of the Authority in their relationship with the Contractor, any conflicts of interest or favoritism and/or the appearance thereof and shall avoid any conduct that might result in a Board member, or employee failing to adhere to any Code of Ethics or standards of conduct adopted by the Authority's Board of Directors.

- J. The Contracting Officer's determination under this clause shall be final and shall be considered a question of fact within the meaning of the "Disputes" article of this Contract.

00 76 03 EMPLOYMENT RESTRICTION WARRANTY

- A. The Contractor warrants that it will not offer employment to, solicit or discuss prospective employment with, or otherwise engage in substantive employment related discussions or communications with, any present or former Board member of the Authority who has been involved, directly or indirectly, in any matter of financial interest to the Contractor until at least two (2) years after the Board member has ceased involvement in the matter. The post-employment restriction on former Authority employees is one (1) year from the date of their last employment with WMATA. The Contractor shall not knowingly engage in communications of the nature described above with any immediate family member or member of the household of any Authority employee or Board member during the period when such employee or Board member is involved in any matter of financial interest to the Contractor.
- B. If a former Board member or employee of the Authority is eventually hired, the Contractor shall ensure that the former Board member or employee is not involved in negotiating or otherwise dealing with the Authority on any particular matter over which he or she had responsibility during his or her tenure.
- C. Should the Contractor fail to comply with the provisions hereof, and no fraud is suspected, the Contracting Officer shall have the right to withhold payment under this Contract in an amount not to exceed two percent (2%) of the total Contract amount as liquidated damages to the Authority, such withholding to be in addition to any other withholding or retainage under this Contract. Any dispute shall be settled in accordance with the "Disputes" clause of this Contract.
- D. If fraud is suspected, the Authority's only remedy prior to a final decision by a court of competent jurisdiction is to report the matter to WMATA's Office of Inspector General (OIG), the U.S. Department of Transportation's Office of Inspector General (DOT-OIG), the Offices of Inspectors General of any state or Federal agency providing funding under this Contract and/or appropriate Federal, state and/or local law enforcement authorities.

00 76 04 CIVIL RIGHTS

- A. *Nondiscrimination Assurance.* In accordance with Title VI of the Civil Rights Act, as amended, 42 U.S.C. §2000 (d), section 303 of the Age Discrimination Act of 1975, as amended, 42 U.S.C. §6102, section 202 of the American with Disabilities Act of 1990, 42 U.S.C. §12132, D.C. law and Federal transit law at 49 U.S.C. §5332, the Contractor, sub-recipient, or subcontractor agrees that it will not discriminate against any employee or applicant for employment because of race, color, creed, religion, national origin, sex, age, sexual preference, gender identity and/or disability. In addition, the Contractor, sub-recipient, or subcontractor agrees to comply with applicable Federal implementing regulations and other regulations that FTA may issue.
1. The Design-Builder, sub-recipient, or Subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Contract. The Design-Builder shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the Design-Builder to carry out these requirements is a material breach of this Contract, which may result in the termination of this Contract or such other remedy as the recipient deems appropriate.
- B. *Equal Employment Opportunity:* The following equal employment opportunity requirements apply to this Contract.
- C. *Race, Color, Creed, National Origin, Sex.* In accordance with Title VII of the Civil Rights Act, as amended, 42 U.S.C. §2000(e), and Federal transit laws at 49 U.S.C. §5332, the Contractor agrees to comply with all applicable equal opportunity requirements of the U.S. Department of Labor (U.S. DOL) including, but not limited to "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor, " 41 C.F.R. Part 60 *et. seq.*, [implementing Executive Order No. 11246, "Equal Employment Opportunity," as amended by Executive Order No. 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," 42 U.S.C. § 2000(e) note], and

with any applicable Federal statutes, executive orders, regulations, and Federal policies that may in the future affect construction activities undertaken in the course of this Contract. The Contractor agrees to take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, creed, national origin, sex or age. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. In addition, the Contractor agrees to comply with any implementing requirements that FTA may issue.

1. **Age.** In accordance with Section 4 of the Age Discrimination in Employment Act of 1967, as amended, 29 U.S.C. § 623 and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees to refrain from discrimination against present and prospective employees for reason of age. In addition, the Contractor agrees to comply with any implementing requirements that FTA may issue.
 2. **Disabilities.** In accordance with section 102 of the Americans with Disabilities Act, as amended, 42 U.S.C. § 12112, the Contractor agrees that it will comply with the requirements of U.S. Equal Employment Opportunity Commission, "Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act," 29 C.F.R. Part 1630, pertaining to employment of persons with disabilities. In addition, the Contractor agrees to comply with any implementing requirements that FTA may issue.
- D. **Special DOL EEO Clause for Construction Projects:** The equal opportunity clause published at 41 CFR 60-1.4(a) of this chapter is required to be included in, and is part of, all nonexempt Federal contracts and subcontracts, including construction contracts and subcontracts. The equal opportunity clause published at 41 CFR 60-1.4(b) is required to be included in, and is a part of, all nonexempt federally assisted construction contracts and subcontracts. In addition to the clauses described above, all Federal contracting officers, all applicants and all nonconstruction contractors, as applicable, shall include the specifications set forth in this section in all Federal and federally assisted construction contracts in excess of \$10,000 to be performed in geographical areas designated by the Director pursuant to §60-4.6 of this part and in construction subcontracts in excess of \$10,000 necessary in whole or in part to the performance of nonconstruction Federal contracts and subcontracts covered under the Executive order.

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)

1. As used in these specifications:

- a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
- b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
- c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
- d. "Minority" includes:
 - (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
 - (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and

(iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7 a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered Construction contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the FEDERAL REGISTER in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

- b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
- c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.
- d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
- e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.
- f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
- g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with onsite supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
- h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.
- i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
- j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.
- k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR part 60-3.

l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are non-segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, sexual orientation, gender identity, or national origin.

11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment

opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

- A. The Contractor also agrees to include these requirements in each Subcontract, financed in whole or in part, with federal assistance provided by the FTA, modified only, if necessary, to identify the affected parties.
- B. Failure by the Contractor, sub-recipient, or subcontractor to carry out these requirements is a material breach of this Contract, that may result in the termination or such other remedy as the Authority deems appropriate.

00 76 05 DISADVANTAGED BUSINESS ENTERPRISE

- A. In connection with the performance of this Contract, the Design-Builder agrees to cooperate with the Authority in meeting its commitments and goals with regard to the maximum utilization of Disadvantaged Business Enterprises (DBE) and further agrees to exert good faith efforts to satisfy the requirements of Section 00 45 03, DBE DATA, by subcontracting portions of the Work to disadvantaged firms, by entering into joint ventures with disadvantaged firms, or both.
- B. The DBE policy of the Authority underwent a complete revision October 1, 1999 to meet revised Federal requirements. The DBE provisions of this RFP are subject to revision by Amendment.
- C. For federally funded contracts that exceed \$150,000 and to which the Disadvantaged Business Enterprise (DBE) Requirements apply, the failure to perform in accordance with these requirements may result in a partial or full suspension of payment, including progress payments, if applicable.
- D. If the Contractor is found to be in noncompliance with the DBE requirements, the progress of the work shall also be deemed to be unsatisfactory, and an amount equal to the DBE participation in the Contract shall be retained from payment (or progress payments, if any) made to the Contractor.
- E. If the Contract value is over \$150,000, the prime contractor will be responsible for submitting a monthly report of the status of its DBE subcontractors to the Contracting Officer.
- F. If the Contractor fails to submit the required monthly DBE reports, the Contracting Officer may suspend payments (or progress payments), until such time as the monthly reports are submitted and accepted by the Authority.
- G. The goal for this Contract is as specified in Section 00 86 05, DISADVANTAGED BUSINESS ENTERPRISE.

00 76 06 UTILIZATION OF SMALL BUSINESS CONCERNS

- A. It is the policy of the Authority that a fair proportion of the purchases and contracts for supplies and services for the Authority be placed with small business concerns.
- B. The Design-Builder agrees to accomplish the maximum amount of subcontracting to small business concerns that the Design-Builder finds to be consistent with the efficient performance of this Contract.

00 76 07 DAVIS-BACON AND COPELAND ANTI-KICKBACK ACTS

A. Minimum Wages:

1. All laborers and mechanics employed or working upon the Site of the Work (or under the United States Housing Act of 1937 or under the Housing-Act of 1949 in the construction or development of the project), shall be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act, 29 C.F.R. Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at the time of payment computed at rates not less than those contained in the Wage Determination of the Secretary of Labor, which is attached hereto and made a part hereof as specified in APPENDIX D to Section 00800, regardless of any contractual relationship which may be alleged to exist between the Design-Builder and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b) (2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 C.F.R. §5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs that cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided at 29 C.F.R. §5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 C.F.R. §5.5(a)(1)(ii) And the Davis-Bacon poster (WH-1321) shall be posted at all times by the Design-Builder and its Subcontractor at the Site of the Work in a prominent and accessible place where it can be easily seen by the workers.
 - a. The Contracting Officer will require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the Contract shall be classified in conformance with the wage determination. The Authority will approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:
 - 1) Except with respect to helpers as defined in 29 C.F.R. 5.2(n)(4), the work to be performed by the classification requested is not performed by a classification in the wage determination; and
 - 2) The classification is utilized in the area by the construction industry, and
 - 3) The proposed wage rate, including bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
 - b. If the Design-Builder and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the Contracting Officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken will be sent by the Contracting Officer Representative to the Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 Days of receipt and

so advise the Contracting Officer or will notify the Authority within the 30-Day period that additional time is necessary.

- c. In the event the Design-Builder, the laborers, or mechanics to be employed in the classification or their representatives, and the Contracting Officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the Contracting Officer will refer the questions, including the views of all interested parties and the recommendation of the Contracting Officer to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination with 30 Days of receipt and so advise the Contracting Officer or will notify the Contracting Officer within the 30-Day period that additional time is necessary.
 - d. The wage rate (including fringe benefits where appropriate) determined pursuant to Paragraphs 001.b and 001.c above, shall be paid to all workers including helpers performing work in the classification under this Contract from the first day on which work is performed in the classification.
 2. Whenever the minimum wage rate prescribed in the Contract for a class of laborers or mechanics includes a fringe benefit, which is not expressed as an hourly rate, the Design-Builder shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.
 3. If the Design-Builder does not make payments to a trustee or other third person, the Design-Builder may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided, that the Secretary of Labor has found, upon the written request of the Design-Builder submitted through the Contracting Officer Representative in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, that the applicable standards of the Davis-Bacon act have been met. The Secretary of Labor may require the Design-Builder to set aside in a separate account assets for the meeting of obligations under the plan or program.
- B. Withholding: The Authority will, upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the Design-Builder, under this agreement or any other Authority contract with the same recipient, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Design-Builder or any Subcontractor the full amount of wages required by the Contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the Site of the Work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), all or part of the wages required by the Contract, the Authority may, after written notice to the Design-Builder, sponsor, applicant, or owner take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee or funds until such violations have ceased.
- C. Payrolls and Basic Records
1. Payrolls and basic records relating thereto shall be maintained by the Design-Builder during the course of the Work and preserved for a period of three years thereafter for all laborers and mechanics working at the Site of the Work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the Project). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section 1(b)(2)(b) of the Davis-Bacon act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 C.F.R. § 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(b) of the Davis-Bacon Act, the Design-Builder shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially

responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records, which show the costs anticipated or the actual costs incurred in providing such benefits. Design-Builders employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

2. The Design-Builder shall submit weekly in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, for each week in which any Contract work is performed, a copy of all payrolls to the Authority. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 C.F.R. §5.5(a)(3)(i). This information may be submitted in any form desired. Optional form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal Stock no. 029-005-00014-1), U.S. Government Printing Office, Washington, D.C. 20402. The Design-Builder is responsible for the submission of copies of payrolls by all Subcontractors in accordance with Section 01 33 00, SUBMITTAL PROCEDURES.
3. Each payroll submitted shall be accompanied by a "Statement of Compliance" signed by the Design-Builder or Subcontractor or his or her agent who pays or supervises the payment of the persons employed under the Contract and submit in accordance with Section 01 33 00, SUBMITTAL PROCEDURES and shall certify the following:
 - a. That the payroll for the payroll period contains the information required to be maintained under 29 C.F.R. §5.5(a)(3)(i), and that such information is correct and complete;
 - b. That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the Contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth at 29 C.F.R. Part 3;
 - c. That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the Contract.
4. The weekly submission in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, of a properly executed certification set forth on the reverse side of optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by 29 C.F.R. §5.5(a)(3)(ii)(B).
5. The falsification of any of the above certifications may subject the Design-Builder or Subcontractor to civil or criminal prosecution under 18 U.S.C. §1001 and 31 U.S.C. §3729.
6. The Design-Builder or Subcontractor shall make the records required under 29 C.F.R. §5.5(a)(3)(i) available for inspection, copying, or transcription by authorized representatives of the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the Design-Builder or Subcontractor fails to submit the required records in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, or make them available, the Authority may, after written notice to the Design-Builder, sponsor, applicant, or owner take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or make such records available may be grounds for debarment action pursuant to 29 C.F.R. §5.12.

D. Apprentices and Trainees

1. Apprentices: Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship, Training and Employer Labor Services, or with a State apprenticeship agency recognized by the Office, or if a person is employed in his or her first 90 Days of probationary employment as an apprentice in such an apprenticeship program, who is not

individually registered in the program, but who has been certified by the Office of Apprenticeship, Training and Employer Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the Design-Builder as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage on the wage, determination for the classification of work actually performed. In addition, any apprentice performing work on the job Site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a Design-Builder is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Design-Builder's or Subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits shall be paid in accordance with that determination. In the event the Office of Apprenticeship, Training and Employer Labor Services, or a state apprenticeship agency recognized by the Office, withdraws approval of an apprenticeship program, the Design-Builder will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

2. Trainees: Except as provided in 29 C.F.R. §5.16, trainees shall not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the Site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination that provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate, who is not registered and participating in a training plan approved by the employment and training administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the employment and training administration withdraws approval of a training program, the Design-Builder will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
3. Equal employment opportunity. The utilization of apprentices, trainees, and journeymen under 29 C.F.R. Part 5 shall be in conformity with the equal employment opportunity requirements of Executive Order No. 11246, as amended 29 C.F.R. Part 30.
4. Helpers: Helpers will be permitted to work on a project if the helper classification is specified on an applicable wage determination or is approved pursuant to the conformance procedure set forth in 29 C.F.R. §5.5(a)(1)(ii). The allowable ratio of helpers to journeyman employed by the Design-Builder or Subcontractor on the job site shall not be greater than two helpers for every three journeymen (in other words, not more than 40 percent of the total number of journeymen and helpers in each Design-Builder's or in each Subcontractor's own work force employed on the job

site.) Any worker listed on a payroll at a helper wage rate, who is not a helper as defined in 29 C.F.R. §5.2(n)(4), shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any helper performing work on the job site in excess of the ratio permitted shall be paid not less than the applicable journeyman's (or laborer's, where appropriate) wage rate on the wage determination for the work actually performed.

- E. Compliance with Copeland Act requirements: The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract. In addition, the Contractor agrees to comply with section 1 of the Copeland "Anti-Kickback Act," 18 U.S.C. § 874 that prohibits anyone from inducing, by any means, any person employed on construction, prosecution, completion or repair of a federally assisted building or work, to give up any part of his or her compensation to which he or she is entitled. Contractor further agrees to comply with section 2 of the Act, 40 U.S.C. §3145, as amended, and implementing DOL regulations, "Contractors and Subcontractors on Public Buildings or Public Works Financed in Whole or in Part, by Loans or Grants from the United States." Contractor agrees to comply with 29 C.F.R. Part 3 which imposes record keeping requirements for all such contracts in excess of \$2,000.
- F. Subcontracts: The Contractor shall insert the clause in section E above (Compliance with Copeland Act requirements) in all subcontracts, and require that subcontractors insert the clause in any and all of their subcontracts, at any tier. In addition, the contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the Federal Transit Administration may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.
- G. Contract Termination: Debarment. A breach of the Contract clauses in 29 C.F.R. §5.5 may be grounds for termination of the Contract, and for debarment as a Design-Builder or a Subcontractor as provided in 29 C.F.R. §5.12.
- H. Compliance with Davis-Bacon and Related Act Requirements. All rulings and interpretations of the Davis-Bacon and related Acts contained in 29 C.F.R. Parts 1, 3, and 5 are incorporated herein by reference.
- I. Disputes Concerning Labor Standards: Disputes arising out of the Labor Standards provisions of this Contract shall not be subject to Section 00 73 00, DISPUTE RESOLUTION, of this Contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 C.F.R. Parts 5, 6, and 7. Disputes within the meaning of this Section include disputes between the Design-Builder (or any of its Subcontractors) and the Contracting Agency, the U.S. Department of Labor, or the employees or their representatives.
- J. Certification of Eligibility:
 - 1. By entering into this agreement or a third party contract financed under this agreement the Design-Builder certifies that neither it (nor he nor she) nor any person or firm that has an interest in the Design-Builder's firm is a person or firm ineligible to be awarded government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 C.F.R. §5.12(a)(1).
 - 2. No part of this Contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 C.F.R. §5.12(a)(1).
 - 3. The penalty for making false statement is prescribed in the U.S. Criminal code, 18 U.S.C.1001.

00 76 08 WALSH-HEALEY PUBLIC CONTRACTS ACT

- A. If this Contract is for the manufacture or furnishing of materials, supplies, articles, or equipment in an amount, which exceeds or may exceed \$10,000 and is subject to the Walsh-Healey Public Contracts Act, as amended (41 U.S.C. 35-45), the following terms and conditions apply:
1. All stipulations required by the Act and regulations issued by the Secretary of Labor (41 CFR Chapter 50) are incorporated by reference. These stipulations are subject to all applicable rulings and interpretations of the Secretary of Labor that are now, or may be hereafter, be in effect.
 2. All employees whose work relates to this Contract shall be paid not less than the minimum wage prescribed by regulations issued by the Secretary of Labor (41 CFR 50-202.2). Learners, student learners, apprentices, and handicapped worker may be employed at less than the prescribed minimum wage (see 41 CFR 50-202.3) to the same extent that such employment is permitted under Section 14 of the Fair Labor Standards Act (41 U.S.C. 40).

00 76 09 NOTICE TO THE AUTHORITY OF LABOR DISPUTES

- A. Whenever the Design-Builder has knowledge that an actual or potential labor dispute is delaying or threatens to delay the timely performance of this Contract, the Design-Builder shall immediately give notice thereof in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, including all relevant information with respect thereto, to the Contracting Officer Representative.
- B. The Design-Builder agrees to insert the substance of this Section 00 76 09, NOTICE TO THE AUTHORITY OF LABOR DISPUTES, in all Subcontracts hereunder as to which a labor dispute may delay the timely performance of this Contract; except that each such Subcontract shall provide that in the event its timely performance is delayed or threatened by delay by any actual or potential labor dispute, the Subcontractor shall immediately notify its next higher tier Subcontractor, or the Design-Builder, as the case may be, of all relevant information with respect to such dispute.

00 77 00 CONVICT LABOR

- A. The Contractor shall not employ, in the performance of this Contract, any person undergoing a sentence of imprisonment imposed by any court of the Federal Government, a state, the District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam or the U.S. Virgin Islands.
1. The Contractor is not prohibited from employing persons:
 1. On parole or probation to work at paid employment during the term of their sentence;
 2. Who have been pardoned or who have served their terms; or
 3. Confined for violation of the laws of the Federal Government, the states, the District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, or the U.S. Virgin Islands who are authorized to work at paid employment in the community under the laws of such jurisdiction, if:
 - 1) The worker is paid or is in an approved work or training program on a voluntary basis.
 - 2) Representatives of the local union's central bodies or similar labor union organizations have been consulted;
 - a) Such paid employment will not result in the displacement of employed workers, or be applied in skills, crafts, or trades where there is a surplus of available gainful labor in the locality, or impair existing contracts or services;

- b) The rates of pay and other conditions of employment will not be less than those paid or provided for work of a similar nature in the locality where the work is being performed; and
- c) The Attorney General of the United States has certified that the work-release laws or regulations of the jurisdiction involved are in conformity with the requirements of Executive Order 11755, as amended by Executive Orders 12608 and 12943.

00 77 01 FEDERAL, STATE, AND LOCAL TAXES

- A. The Contract Price includes all applicable Federal, State, and local taxes and duties.
- B. Nevertheless, with respect to any Federal excise tax or duty on the transactions or property covered by this Contract, if a statute, court decision, written ruling, or regulation takes effect after the Contract date and results in the following:
 - 1. The Design-Builder being required to pay or bear the burden of any such Federal excise tax or duty or increase in the rate thereof, which would not otherwise have been payable on such transactions or property, the Contract Price shall be increased by the amount of such tax or duty or rate increase, provided the Design-Builder warrants in writing in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, that no amount for such newly imposed Federal excise tax or duty or rate increase was included in the Contract Price as a contingency reserve or otherwise; or
 - 2. The Design-Builder not being required to pay or bear the burden of, or in its obtaining a refund or drawback of, any such Federal excise tax or duty which would otherwise have been payable on such transactions or property or which was the basis of an increase in the Contract price, the Contract Price shall be decreased by the amount of the relief, refund, or drawback, or that amount of the relief, refund, or drawback, or that amount that shall be paid to the Authority, as directed by the Contracting Officer Representative. The Contract Price shall be similarly decreased if the Design-Builder, through its fault or negligence or its failure to follow instructions of the Contracting Officer Representative, is required to pay or bear the burden of, or does not obtain a refund or drawback or, any such Federal excise tax or duty.
- C. Paragraph B above shall not be applicable to Social Security taxes or to any other employment tax.
- D. No adjustment of less than \$250 shall be made in the Contract Price pursuant to Paragraph B above.
- E. As used in Paragraph B above, the term "Contract date" means the date set for Proposal opening, except if this is a negotiated Contract, the date that the Design-Builder submits its Best and Final Offer. As to additional supplies or services procured by modification to this Contract, the term Contract date means the date of such Modification.
- F. Unless there does not exist any reasonable basis to sustain an exemption, the Contracting Officer Representative, upon the request of the Design-Builder in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, shall, without further liability, furnish evidence appropriate to establish exemption from any Federal, State, or local tax; provided that, evidence appropriate to establish exemption from and Federal excise tax or duty, which may give rise to either increase or decrease in the Contract Price will be furnished only at the discretion of the Contracting Officer Representative.
- G. The Design-Builder shall promptly notify the Contracting Officer Representative in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, of matters, which will result in either an increase or decrease in the Contract Price, and shall take action with respect thereto as directed by the Contracting Officer Representative. The Authority shall be entitled to a reduction in the Contract price reflecting such amount and a refund of monies paid related to such taxes, plus applicable interest.

00 77 02 ADDITIONAL BOND SECURITY

- A. For information on Additional Bond Security, see Section 00 61 03, PERFORMANCE AND PAYMENT BONDS (Additional Bond Security).

00 77 03 PATENT AND COPYRIGHT INDEMNITY

- A. In addition to any other indemnification provided in this Contract, the Design-Builder shall indemnify the Authority and its Board members, agents and employees against liability, including costs, for infringement of any United States patent (except a patent issued upon an application that is now or may hereafter be withheld from issue pursuant to a Secrecy Order under 35 U.S.C. §181) arising out of the manufacture or delivery of supplies, the performance of services, or the construction, alteration, modification, or repair of real property under this Contract. If the Contractor is not the original equipment manufacturer (OEM) for a manufactured product, it will ensure that the patent holder provides indemnity to WMATA under this clause. This indemnity shall not apply unless the Contractor is informed as soon as practicable by the Authority of the suit or action alleging such infringement, and is given such opportunity as is afforded by applicable laws, rules, or regulations to participate in the defense thereof; and further, such indemnity shall not apply to:
1. An infringement resulting from compliance with specific written instructions of the Contracting Officer directing a change in the supplies to be delivered or in the materials or equipment to be used, or directing a manner or performance of the Contract not normally used by the Contractor.
 2. An infringement resulting from addition to, or change in, such supplies or components furnished or construction work performed that was made subsequent to delivery or performance by the Contractor; or
 3. A claimed infringement that is unreasonably settled without the consent of the Contractor, unless required by final decree of a court of competent jurisdiction.

00 77 04 NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT

- A. The Design-Builder shall report to the Contracting Officer Representative in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, promptly and in reasonable written detail, each notice or claim of patent or copyright infringement based on the performance of this Contract of which the Design-Builder has knowledge.
- B. In the event of any action, Claim, or suit against the Authority on account of any alleged patent or copyright infringement arising out of or related to the performance of this Contract or out of the use of any supplies furnished or work or services performed hereunder, the Design-Builder shall furnish to the Authority in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, when requested by the Contracting Officer Representative, all evidence and information in possession of the Design-Builder pertaining to such action, suit, or Claim. Such evidence and information shall be furnished at the expense of the Authority except where the Design-Builder has agreed to defend, indemnify, or hold harmless the Authority. This Section shall be included in all Subcontracts.
- C. The Design-Builder shall include the substance of this clause, including this paragraph, in all subcontracts that are expected to exceed the simplified acquisition threshold.

00 77 05 NOT USED

00 77 06 RIGHTS IN TECHNICAL DATA – UNLIMITED

- A. All, designs, Design Drawings, Design Specifications, Samples, processes (including Computer Software), laboratory testing analyses and reports, notes, As-Built Drawings produced during and after completion of construction and other work produced in the performance of this Contract, or in the contemplation or implementation thereof shall be and remain the sole property of the Authority and may be used on any other work without additional cost to the Authority. Any re-use of design services shall be at the Authority's sole risk and with respect thereto, the Design-Builder agrees not to assert any rights or to establish any claim under the design patent or copyright laws and not to publish or reproduce such matter in whole or in part or in any manner or form, or authorize others so to do, without the written consent of the Authority until such time as the Authority may have released such matter to the public. Further, with respect to any design or process, which the Authority desires to

protect by applying for and prosecuting a design patent application, or otherwise, the Design-Builder agrees to furnish the Authority such duly executed instruments and other papers (prepared by the Authority) as are deemed necessary to vest in the Authority the rights granted it pursuant to this Section. The Design-Builder, for a period of 3 years after completion of the Project or task, agrees to furnish and to provide access to the originals or copies of all such materials on the request of the Authority..

- B. Where any item is purchased as a separate line item in this Contract, that purchase includes all integral parts of that item, including any computer software, source code, algorithms, processes, formulae, and flow charts. The Authority has full rights to use, duplicate or disclose any or all parts of the item, including computer software, in whole or in part, in any manner and for any purpose whatsoever, and to permit others to do so. Should disclosure of the computer software be required only under this paragraph, then the Contracting Officer may waive the provisions of this paragraph if he or she certifies in writing that the item is commercially available from multiple sources and will be fully compatible with existing Authority property.
- C. The Authority or its designated representative shall have the right to use, duplicate or disclose technical data, including computer software, in whole or in part, in any manner and for any purpose whatsoever, and to have or permit others to do so that is contained in or derived from:
 - 1. Any manuals, instructional materials prepared for installation, operation, maintenance or training purposes;
 - 2. Technical data pertaining to end items, components or processes that were prepared for the purpose of identifying sources, sizes, configurations, mating and attachment characteristics, functional characteristics and performance requirements ("form, fit and function" data such as , specification control drawings, catalog sheets, and outline drawings Except for the computer software, it means data identifying sources, functional characteristics, and performance requirements, but specifically excludes the source code, algorithms, processes, formulae, and flow charts of the software.);
 - 3. Other technical data that the Contractor or subcontractor , normally furnishes without restriction; ;
 - 4. Other specifically described technical data that the parties have agreed will be furnished without restriction;
 - 5. All computer software regardless of whether it is technical data as defined in this article, including the source code, algorithms, processes, formulae, and flow charts, that the Contractor developed or materially modified for the Authority or for which the Authority is required by Federal law or regulation to provide a royalty-free, irrevocable and nonexclusive license to the Federal government.
- D. The Authority shall have the right to use, duplicate, or disclose technical data other than as defined in paragraph (a), in whole or in part. Such technical data shall not, without the written permission of the party furnishing such technical data, be:
 - 1. Released or disclosed, in whole or in part, outside of the Authority,
 - 2. Used, in whole or in part, by the Authority for manufacturing, or
 - 3. Used by a party other than the Authority except for: (i) emergency repair or overhaul, (ii) where the item or process concerned is not otherwise reasonably available to the Authority to enable timely performance of this work, or (iii) administration of this Contract or the inspection of any products produced under it, where the third party has a written contract with the Authority to perform these efforts. In all cases described in this subsection, the release or disclosure outside of the Authority shall be subject to a nondisclosure agreement.

- E. Technical data provided in accordance with paragraph (c) shall be identified with a legend that suitably recites this limitation. This article shall not impair the Authority's right to use similar or identical data acquired from other sources.
- F. Where any item is purchased as a separate line item in this Contract, that purchase includes all integral parts of that item, including any computer software, source code, algorithms, processes, formulae, and flow charts. The Authority has full rights to use, duplicate or disclose any or all parts of the item, including computer software, in whole or in part, in any manner and for any purpose whatsoever, and to permit others to do so. Should disclosure of the computer software be required only under this paragraph, then the Contracting Officer may waive the provisions of this paragraph if he or she certifies in writing that the item is commercially available from multiple sources and will be fully compatible with existing Authority property.
- G. Material covered by copyright:
 - 1. The Design-Builder agrees to and does hereby grant to the Authority, and to its Board members, officers, agents, and employees acting within the scope of their official duties, a royalty-free, nonexclusive, and irrevocable license throughout the world for Authority purposes to publish, translate, reproduce, deliver, perform, dispose of, and to authorize others so to do, all Technical Data and computer software now or hereafter covered by copyright.
 - 2. No such copyrighted matter shall be included in Technical Data or computer software furnished hereunder without the written permission of the copyright owner for the Authority to use such copyrighted matter in the manner above described.
 - 3. The Design-Builder shall report to the Authority promptly, and in reasonable written detail, each notice or claim of copyright infringement received by the Design-Builder with respect to any Technical Data delivered hereunder.
- H. Relation to patents: Nothing contained in this Section shall imply a license to the Authority under any patent, or be construed as affecting the scope of any license or other right otherwise granted to the Authority under any patent.
- I. Any dispute under this Section shall be subject to Section 00 73 00, DISPUTE RESOLUTION.
- J. Notwithstanding any other payment provision in this Contract, the Contracting Officer may retain from payment up to ten percent (10%) of the Contract price until final delivery and acceptance of the technical data defined in this Section and as required to be furnished by the RFP Documents.

00 77 07 TECHNICAL DATA - WITHHOLDING OF PAYMENT

- A. If technical data, specified to be delivered under this Contract, is not delivered within the time specified by this Contract or is deficient upon delivery (including having restrictive markings not specifically authorized by this Contract), the Authority may until such data is accepted by the Authority, withhold payment to the Design-Builder of ten percent (10%) of the total Contract Price or amount unless a lesser withholding is specified in the Contract. Payments will not be withheld nor any other action taken pursuant to this Paragraph when the Design-Builder's failure to make timely delivery or to deliver such data without deficiencies arises out of or is beyond the control and without the fault or negligence of the Design-Builder.
- B. After payments total ninety percent (90%) of the total Contract Price or amount and if all technical data specified to be delivered under this Contract has not been accepted, the Authority may withhold from further payment, in addition to other withholdings specified elsewhere, such sum as it considers appropriate, not exceeding ten percent (10%) of the total Contract Price or amount unless a lesser withholding limit is specified in the Contract.
- C. The withholding of any amount or subsequent payment to the Design-Builder shall not be construed as a waiver of any rights accruing to the Authority under this Contract.

00 77 08 INDEMNIFICATION AND INSURANCE REQUIREMENTS

A. Indemnification:

1. Design-Builder shall indemnify, defend, and hold harmless the Authority, its directors, officers, employees, and agents from all liabilities, obligations, damages, penalties, claims, costs, charges and expenses (including reasonable attorney's fees), of whatsoever kind and nature for injury, including personal injury or death of any person or persons, and for loss or damage to any property, including the property of the Design-Builder and the Authority, occurring in connection with, or in any way arising out of the use, occupancy and performance of the Work and any acts in connection with activities to be performed under this Contract, unless the loss or damage is due to the sole negligence of the Authority. Nothing in the preceding sentence shall be deemed to relieve Design-Builder from ultimate liability for any obligation of Design-Builder under this Contract.
2. Design-Builder shall indemnify, defend, and hold harmless the Authority, its directors, officers, employees, and agents against any and all claims, liabilities, losses, demands, damages, penalties, costs, charges, remedial costs, environmental claims, fees or other expenses including attorney's fees related to, arising from, or attributable to any effluent or other hazardous waste, residue, contaminated soil, or other similar material discharged from, removed from, or introduced on, about, or under the job Site; provided, however, that the foregoing indemnity does not apply to loss or damage due to preexisting conditions, whether known or unknown.
3. If any action or proceeding relating to the indemnification required is brought against the Authority, then upon written notice from the Authority to the Design-Builder, the Design-Builder shall, at the Design-Builder's expense, resist or defend such action or proceeding by counsel approved by the Authority in writing, such approval not to be unreasonably withheld, but no approval of counsel shall be required where the cause of action is resisted or defended by counsel of any insurance carrier obligated to resist or defend the same. The Authority reserves the right to use its own counsel under this indemnity at Design-Builder's sole cost and expense.
4. Design-Builder understands and agrees that it is Design-Builder's responsibility to provide indemnification to the Authority pursuant to this Section. The provision of insurance, while anticipated to provide a funding source for this indemnification, is in addition to any indemnification requirements and the failure of Design-Builder's insurance to fully fund any indemnification shall not relieve the Design-Builder of any obligation assumed under this indemnification..

B. The Design-Builder shall provide the Authority with evidence of its Design-Builder's insurance coverage for the exposures listed.

1. The Design-Builder shall have its insurance agent or broker forward to the Authority's Contracting Officer an insurance certificate or certificates evidencing the required insurance, and the Additional Insured endorsement adding Authority as Additional Insured covering Design-Builder's ongoing and completed operations. Insurance companies providing the coverage must have an A.M. Best rating of at least "A-/VII." Authority's Contracting Officer shall be provided 30 days written notice if any required insurance is canceled, materially changed, or non-renewed. The Design-Builder shall furnish the Contracting Officer (prior to NTP) or the Contracting Officer Representative (after NTP) with a certified copy of each insurance policy upon request.
2. The initial and subsequent certificates of insurance shall include a description of the Contract Work and the assigned Contract number. Prior to beginning any Project Work, the insurance requirements as outlined by Authority's Office of Insurance must be approved in writing.
3. Procure all insurance from insurance companies licensed and authorized to conduct business in the District of Columbia, State of Maryland, and Commonwealth of Virginia. Authority

approval or disapproval of insurance furnished by the Design-Builder shall not release the Design-Builder of full responsibility for liability for damage and accidents.

4. If at any time the above required insurance policies should be canceled or materially modified so that the insurance is not in full force and effect as required herein, the Authority reserves the right to terminate this Contract between Authority and Design-Builder.
5. Furnish the required certificates of insurance and Additional Insured endorsement as specified herein within 10 Days after the date of receipt of Award. If the required certificates of insurance and Additional Insured endorsement as specified herein are not furnished within 10 Days after the date of receipt of Award, the Authority may elect to issue NTP to the Design-Builder but the Design-Builder will not be permitted to enter upon the Site to perform the Work until all required insurance certificates or evidence of self-insurance have been received.
6. The Design-Builder will not be paid for providing insurance for this Project as prescribed in this Contract, but the insurance cost thereof shall be included in the prices for the various items as set forth in the Price Proposal.

C. Required Insurance:

1. Commercial General Liability Insurance with limits of \$2,000,000 per occurrence/aggregate, written on an occurrence form. If the required limits can only be met when applying an umbrella/excess liability policy, the umbrella/excess liability policy must follow form of the underlying policy and be extended to "drop down" to become primary in the event the primary limits are reduced or aggregate limits are exhausted. Commercial General Liability Insurance shall include:
2. The Contractual Liability Exclusion (applicable to work to be performed within 50 feet of railroad property) must be removed.
3. The coverage under such an insurance policy or policies shall be maintained throughout the contract period and for 3 years following acceptance of the work if the CGL insurance is written on a claims made form.
4. WMATA shall be named an Additional Insured with respect to this agreement on all certificates of insurance (COI), and the Additional Insured endorsement shall include completed operations and be submitted to the Authority.
5. Terrorism coverage: XCU coverage (explosion, collapse, and underground hazards) shall be included if the Work involves excavation or blasting.
6. Workers' Compensation Insurance meeting the statutory requirements of the jurisdiction where the work will be performed, including Employer's Liability coverage with limits of \$1,000,000 each accident or disease.
7. Business Automobile Liability Insurance with minimum combined single limits of \$2,000,000 per occurrence covering contractor against claims for bodily injury and property damage arising out of the ownership, maintenance or use of any owned, hired, or non-owned motor vehicle. The Authority shall be added as an additional insured on the policy.
8. Railroad Protective Liability Insurance (RPP) issued to the Authority as the Named Insured with minimum limits of \$2,000,000 per occurrence/\$6,000,000 aggregate and covering the liability of the Authority arising from all Contracting Parties' work to be performed within fifty (50) feet (on, above, adjacent to or underneath) of the Authority's railroad tracks or within Authority rail stations for any personal injuries or deaths or any damage to the property, equipment and facilities caused by the activities of any Contractor or Subcontractor resulting from performance of the Work.
9. Authority Blanket RPP Program Option for Contracts under \$5,000,000: The Authority will offer to waive the requirement for the Contractor to procure RPP if 1) the work can be covered

under the Authority's blanket RRP program, and 2) the Contractor prepays the premium which shall be determined by the rate schedule promulgated by the insurer in effect as of the effective date of this Contract. Contractor shall be advised of and pay the applicable premium, or procure a standalone RRP policy on the Authority's behalf. Contracts over \$5,000,000 may be covered under the Blanket Program, but must first be reviewed by the underwriter.

D. Terrorism coverage

1. Said policy shall remain in force until the construction is completed and Accepted. The policy shall name Authority as an Additional Named Insured and Loss Payee as its interest may appear. The endorsement adding the Authority should state that the First Named Insured is solely responsible for premium payment.

00 77 09 LIQUIDATED DAMAGES

- A. The Design-Builder understands that if it fails to complete portions or all of the Work as described in Section 00724, PROJECT SCHEDULE, the Authority will suffer damages, which have been estimated and are specified in Section 00878, LIQUIDATED DAMAGES.
- B. The Design-Builder agrees that if it does not complete the Work within the specified Contract Performance Time, then the Design-Builder shall pay to the Authority as liquidated damages, pursuant to Section 00 72 07, TERMINATION FOR DEFAULT, DAMAGES FOR DELAY, AND TIME EXTENSIONS, the sums per Day as separate damages for each specified completion requirement. Milestones are as defined in Section 00 72 04, PROJECT SCHEDULE.

00 78 00 COMPLIANCE WITH COPELAND ACT REQUIREMENTS

- A. The Contractor agrees to comply with section 1 of the Copeland "Anti-Kickback Act," 18 U.S.C. § 874 that prohibits anyone from inducing, by any means, any person employed on construction, prosecution, completion or repair of a federally assisted building or work, to give up any part of his or her compensation to which he or she is entitled. Contractor further agrees to comply with section 2 of the Act, 40 U.S.C. § 3145, as amended, and implementing DOL regulations, "Contractors and Subcontractors on Public Buildings or Public Works Financed in Whole or in Part, by Loans or Grants from the United States." Contractor agrees to comply with 29 C.F.R. Part 3 which imposes record keeping requirements for all such contracts in excess of \$2,000.
- B. Contractor shall insert clause I.20.1 in all subcontracts, and require that subcontractors insert this clause in any and all of their subcontracts, at any tier.

00 78 00 CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

- A. This Contract, to the extent that it is of a character specified in the Contract Work Hours and Safety Standards Act (40 U.S.C. §§ 327-333), is subject to the following provisions and to all other applicable provisions and exceptions of such Act and the regulations of the Secretary of Labor thereunder:
 1. Pursuant to Section 102 (Overtime):
 - a. Overtime requirements: Neither the Contractor nor any Subcontractor contracting for any part of the Contract Work, which may require or involve the employment of laborers, mechanics, apprentices, trainees, watchmen, and guards shall require or permit any laborer, mechanic apprentice, trainee, watchman, or guard in any work week in which he or she is employed on such work to work in excess of 40 hours in such work week on work subject to the provisions of the Contract Work Hours and Safety Standards Act, unless such laborer, mechanic, apprentice, trainee, watchman, or guard receives compensation at a rate not less than 1-1/2 times his or her basic rate of pay for all such hours worked in excess of 40 hours in such work week.
 - b. Violation, liability for unpaid wages, and liquidated damages. In the event of any violation of the provisions of Paragraph A above, the Contractor and any Subcontractor responsible therefor shall be liable to any affected employee for unpaid wages. In addition, such

Contractor and Subcontractor shall be liable to the Authority for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer, mechanic, apprentice, trainee, watchman, or guard employed in violation of the provisions of Paragraph A.1.a in the sum of 10 dollars for each Day on which such employee was required or permitted to be employed on such work in excess of his or her standard work week of 40 hours without payment of the overtime wages required by Paragraph AA.1.a.

- c. Withholding for unpaid wages and liquidated damages: The Contracting Officer may withhold from the Contractor, from any moneys payable on account of work performed by the Contractor or Subcontractor, such sums as the Contracting Officer determines to be necessary to satisfy any liabilities of such Contractor or Subcontractor for unpaid wages and liquidated damages as provided in the provisions of Paragraph A1.b **Error! Reference source not found.**
- d. Subcontracts: The Contractor shall insert the clauses set forth in the section in all Subcontracts and shall require their inclusion in all Subcontracts of any tier. The Contractor shall be responsible for compliance by any and all subcontractors at every tier.
- e. Records: The Contractor shall maintain payroll records containing the information specified in 29 CFR § 516.2(a). Such records shall be preserved for 3 years from completion of this Contract.

2. Pursuant to Section 107 (OSHA):

- a. The Contractor agrees to comply with section 107 of the Contract Work Hours and Safety Standards Act, 40 U.S.C. section 333, and applicable DOL regulations, " Safety and Health Regulations for Construction " 29 C.F.R. Part 1926. Among other things, the Contractor agrees that it will not require any laborer or mechanic to work in unsanitary, hazardous, or dangerous surroundings or working conditions.
- b. Subcontracts: The Contractor also agrees to include the requirements of this section in each subcontract. The term "subcontract" under this section is considered to refer to a person who agrees to perform any part of the labor or material requirements of a contract for construction, alteration or repair. A person who undertakes to perform a portion of a contract involving the furnishing of supplies or materials will be considered a "subcontractor" under this section if the work in question involves the performance of construction work and is to be performed: (1) directly on or near the construction site, or (2) by the employer for the specific project on a customized basis. Thus, a supplier of materials which will become an integral part of the construction is a "subcontractor" if the supplier fabricates or assembles the goods or materials in question specifically for the construction project and the work involved may be said to be construction activity. If the goods or materials in question are ordinarily sold to other customers from regular inventory, the supplier is not a "subcontractor." The requirements of this section do not apply to contracts or subcontracts for the purchase of supplies or materials or articles normally available on the open market.

00 78 01 EQUITABLE ADJUSTMENT FOR MINOR CONTRACT MODIFICATIONS

- A. Where the Contracting Officer and Design-Builder agree to a net additional or deductive amount of direct costs for a Modification to this Contract made pursuant to articles of this Contract titled CHANGES, DIFFERING SITE CONDITIONS, or VALUE ENGINEERING INCENTIVE, which amount does not exceed \$100,000 and further agree to an adjustment in Contract Performance Time resulting from said Modification which increases or decreases the completion date 10 Days or less, the equitable adjustment in Contract Price shall consist of the following:

- 1. Direct costs as agreed to by the Contracting Officer and Design-Builder.
- 2. Job Office Overhead costs, the sum of which shall be limited to a maximum of 10 percent of direct labor costs, including fringe benefits, but excluding FICA, FUTA, and State Unemployment Insurance (SUI); 10 percent of direct material costs; 5 percent of direct equipment costs (small tools, defined as equipment less than \$1,000 in acquisition costs, are

included and computed at 5 percent of direct base labor wages.); 5 percent of Subcontract costs.

3. Home Office General and Administrative (G&A) costs, the sum of which shall be limited to a maximum of 3 percent of the direct costs plus job office overhead costs computed as above.
4. Profit will be determined in accordance with the guidelines specified in the Section 00748, CHANGES.

B. In using the above rates, the following shall apply:

1. Payroll Tax (FICA, FUTA, and SUI) amounts are added immediately after direct and indirect costs are totaled.
2. Subcontractors' indirect costs and profit shall be computed in the same manner as above.
3. Indirect costs shall not be duplicated in direct costs.
4. When the change in Contract Performance Time is increased, the change in Contract Price for direct and indirect costs computed by application of the above rates includes costs of impact and extended performance due to the time extension and no further consideration of costs arising from the specific Modification and cited Pending Change Orders (PCOs) will be given.
5. Bond will be allowed at actual cost without markup.

00 78 02 DRUG AND ALCOHOL TESTING (FOR SAFETY SENSITIVE FUNCTIONS ONLY) – FTA and WMATA

- A. Contractors who perform safety sensitive functions shall be subject to compliance with a drug and alcohol testing program according to federal guidelines published in FTA regulations and WMATA Drug and Alcohol Program Policy. The Contractor agrees to establish and implement a drug and alcohol testing program that complies with 49 C.F.R. Parts 40 and 655 and WMATA Drug and Alcohol Program Policy 7.7.3/5, produce any documentation necessary to establish its compliance with these regulations, and policy and permit any authorized representative of the U.S. Department of Transportation or its operating administrations, applicable state oversight agency, or the Authority to inspect the facilities and records associated with the implementation of the drug and alcohol testing program as required under 49 C.F.R. Part 655 and WMATA policy and review the testing process. The Contractor further agrees as follows:
- B. To certify its compliance with 49 C.F.R. Parts 40 and 655 and to submit an annual Management Information System (MIS) report, as required by federal regulations, to WMATA's Medical Compliance Monitor (MCM) and the Contracting Officer before February 15th of each year. To certify compliance, the Contractor shall use the "Alcohol and Controlled Substances Testing" certification contained in the "Annual List of Certifications and Assurances for Federal Transit Administration Grants and Cooperative Agreements," that is published annually in the Federal Register.
- C. To submit to the MCM and the Contracting Officer before February 15th of each year, a copy of the Policy Statement developed to implement its drug and alcohol testing program.
- D. To provide to the MCM and the Contracting Officer before February 15th of each year the following:
 1. Employee and supervisor training documentation;
 2. The name and location of the collection site(s), laboratory(ies), Medical Review Officer(s), Breath Alcohol Technician(s), Collector(s), and Substance Abuse Professional(s); and a description of their random selection drug and alcohol testing process.

The Contractor further agrees to submit quarterly reports summarizing program compliance and test results to the MCM by the 15th of the month following the end of each quarter.

00 78 03 NO FEDERAL GOVERNMENT OBLIGATIONS TO THIRD-PARTIES BY USE OF A DISCLAIMER

- A. The Authority and the Design-Builder acknowledge and agree that, notwithstanding any concurrence by the Federal Government in or approval of the solicitation or award of this Contract, absent the express written consent by the Federal Government, the Federal Government is not a party to this Contract and shall not be subject to any obligations or liabilities to the Authority, Contractor, or any other party (whether or not a party to that contract) pertaining to any matter resulting from the underlying contract.
- B. The Design-Builder agrees to include this clause in each Subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clause shall not be modified, except to identify the Subcontractor who will be subject to its provisions.

00 78 04 PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS AND RELATED ACTS

- A. The Design-Builder acknowledges that the provisions of the Program Fraud Civil Remedies Act of 1986, as amended, 31 U. S. C. 3801 et seq. and U. S. DOT regulations, "Program Fraud Civil Remedies," 49 C.F. R. Part 31, apply to its actions pertaining to this Project. Upon execution of the underlying contract, the Design-Builder certifies and affirms the truthfulness and accuracy of any statement it has made, it makes, it may make, or causes to be made, pertaining to the underlying contract or the FTA assisted project for which this Contract Work is being performed. In addition to other penalties that may be applicable, the Design-Builder further acknowledges that if it makes or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification, the Federal Government reserves the right to impose the penalties of the Program Fraud Civil Remedies Act of 1986 on the Contractor to the extent the Federal Government deems appropriate.
- B. The Design-Builder also acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government under a contract connected with a project that is financed in whole or in part with Federal assistance originally awarded by FTA under the authority of 49 U. S. C. 5307, the Government reserves the right to impose the penalties of 18 U. S. C. 1001 and 49 U. S. C. 5307 (n)(1) on the Design-Builder, to the extent the Federal Government deems appropriate.
- C. The Design-Builder agrees to include this clause in each Subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clause shall not be modified, except to identify the Subcontractor who will be subject to the provisions.

00 78 05 FEDERAL CHANGES

- A. The Design-Builder shall at all times comply with all applicable FTA regulations, policies, procedures, and directives, including without limitation those listed directly or by reference in the Agreement (Form FTA Master Agreement (MA) (22) dated October 1, 2015) between the Authority and FTA, as they may be amended or promulgated from time to time during the term of this Contract. Design-Builder's failure to so comply shall constitute a material breach of this Contract.
- B. The Design-Builder agrees to include this clause in each Subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clause shall not be modified, except to identify the Subcontractor who will be subject to its provisions.

00 78 06 INCORPORATION OF FTA TERMS

- A. The preceding provisions include, in part, certain Standard Terms and Conditions required by the U.S. Department of Transportation (DOT), whether or not expressly set forth in the preceding contract provisions. All contractual provisions required by DOT, as set forth in FTA Circular 4220.1F or any revisions thereto, are hereby incorporated by reference. Anything to the contrary herein notwithstanding, all DOT or FTA mandated terms shall be deemed to control in the event of a conflict with other provisions contained in this Agreement. The Design-Builder shall not perform any act, fail to perform any act, or refuse to comply with any Authority requests, which would cause the Authority to be in violation of the FTA terms and conditions.

- B. The Design-Builder agrees to include this clause in each Subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clause shall not be modified, except to identify the Subcontractor who will be subject to the provisions.

00 78 07 ENERGY CONSERVATION

- A. The Design-Builder agrees to comply with mandatory standards and policies relating to the energy efficiency, which are contained in the applicable state energy conservation plan issued in compliance with the Energy Policy and Conservation Act.
- B. The Design-Builder agrees to include the requirements of this clause in all Subcontracts under this Contract.

00 78 08 GOVERNMENT-WIDE DEBARMENT AND SUSPENSION

- A. The Contractor is bound by its certification contained in its offer to the Authority that the Contractor and none of its principals or affiliates are excluded or disqualified from federal contracting and/or as defined at 49 C.F.R. 29.940 and 29.945. The certification is a material representation of fact, relied upon by the Authority in entering into this Contract. If it is later determined that the Contractor knowingly rendered an erroneous certification, in addition to remedies available to the Authority, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment. The Contractor agrees to comply with the requirements of 2 C.F.R, part 180, subpart C as adopted and supplemented by U.S. DOT regulations at 2 C.F.R, part 1200 "Nonprocurement Suspension and Debarment," including any amendments thereto, Executive Orders Nos. 12549 and 12689 "Debarment and Suspension" 31 U.S.C. § 6101 note, and other applicable federal laws, regulations or guidance regarding participation with debarred or suspended contractors throughout the term of this Contract.
- B. The Contractor agrees to include this clause in all Subcontracts at all tiers under this Contract requiring lower tier contractors to comply with federal suspension and debarment requirements, and review the System for Award Management (SAM) at www.sam.gov in order to comply with U.S. DOT regulations at 2 C.F.R, part 1200 prior to awarding any subcontract under this Contract.

00 78 09 Survival

- A. Any provision expressly set forth as surviving the expiration or termination of this Contract shall be deemed to survive any such expiration or termination.

00 79 00 CHOICE OF LAW, CONSENT TO JURISDICTION AND VENUE_

- A. This Contract shall be deemed to be executed in the District of Columbia, regardless of the domicile of the Contractor and shall be governed by and construed in accordance with the laws of the District of Columbia except to the extent, if any, superseded by Federal law.
- B. The parties agree that any and all claims asserted by or against the Authority arising hereunder or related hereto shall be heard and determined either in the courts of the United States located in the District of Columbia, the State of Maryland or the Commonwealth of Virginia or in the courts of the District of Columbia, State of Maryland or Commonwealth of Virginia that maintain jurisdiction over such claims and where venue properly resides.

00 79 01 Whistleblower Protection – Federal

- A. The Contractor and its subcontractors shall encourage their employees and independent contractors to report information without fear of actual or threatened discrimination, retaliation or reprisal that they in good faith reasonably believe is evidence of gross mismanagement; gross misuse or waste of public resources or funds; fraud; violation of law; abuse of authority in connection with the conduct of WMATA operations or contracts; or a substantial and specific danger to health, security or safety. The Contractor and its subcontractors shall notify their employees that they may make reports under this clause to:

1. MATA's Office of Inspector General (OIG), in person, in writing, through the OIG Hotline (888-234-2374) or email wmata-oig-hotline@verizon.net or by any other reasonable means;
 2. WMATA's Metro Transit Police Department (MTPD), in person, by telephone (202-962-2121) or by any other reasonable means, or to the OIG, if the information constitutes a potential violation of criminal law;
 3. WMATA's Chief Safety Officer, in person, in writing, through the SAFE Hotline (202-249-7233) or email safety@wmata.com, or by any other reasonable means; or
 4. Any other official, office or agency within WMATA or outside WMATA that the employee or independent contractor reasonably believes has the authority to act on the matter.
- B. The Contractor, its employees, independent contractors and subcontractors shall cooperate with any inquiry or review by an authorized official of WMATA, or by the federal government or any other governmental entity with jurisdiction over WMATA, regarding a matter that would constitute a report under paragraph (a) or a violation of this or any whistleblower provision of this Contract, and with any enforcement or judicial proceeding arising from such inquiry or review.
- C. The Contractor and its subcontractors shall not interfere with or deny the right of any employee or independent contractor of either the Contractor or any of its subcontractors to make a report under clause I.86.1. The Contractor and its subcontractors shall not recommend, take or threaten to take any action having a negative or adverse impact on any employee or independent contractor of either the Contractor or any of its subcontractors because he or she:
1. made or is perceived to have made a report under clause I.86.1;
 2. sought a remedy under applicable law after making a report under clause I.86.1.
 3. participated in or cooperated with an inquiry or review by an authorized official of WMATA, or by the federal government or any other governmental entity with jurisdiction over WMATA, regarding a matter that would constitute a report under clause I.86.1 or a violation of this or any whistleblower provision of this Contract, or with an enforcement or judicial proceeding arising from such inquiry or review;
 4. refused to obey an order that would violate law; or
 5. refused to work or authorize work when a hazardous safety or security condition presents an imminent danger of death or serious injury, there was no reasonable alternative to refusal, there was not sufficient time to eliminate the danger in absence of refusal and the individual, where possible, notified the Contractor or subcontractor of the condition and of his or her intent not to perform or authorize work.
- D. The Contractor shall include, or shall cause to be included, the substance of this clause, including this clause I.86.4, in its subcontracts at all tiers.
- E. The Contractor and its subcontractors shall comply with the National Transit Systems Security Act (NTSSA) 6 U.S.C. §1142, which prohibits discharging, demoting, suspending, reprimanding or in any other way discriminating against an employee as a reprisal for the employee lawfully and in good faith:
1. reporting a hazardous safety or security condition;
 2. refusing to work when a hazardous safety or security condition presents an imminent danger of death or serious injury, there is no reasonable alternative to refusal, there is not sufficient time to eliminate the danger in absence of refusal and the individual, where possible, has notified the Contractor or subcontractor of the condition and of his or her intent to not perform work;

3. refusing to authorize the use of any safety or security related equipment, track or structures, if the individual is responsible for their inspection or repair and reasonably believes they are in a hazardous safety or security condition, there is no reasonable alternative to refusal, there is not sufficient time to eliminate the danger in absence of refusal and the individual, where possible, has notified the Contractor or subcontractor of the condition and of his or her intent not to authorize use of hazardous equipment or infrastructure unless corrected;
4. providing information for or directly assisting in an investigation of conduct that the individual reasonably believes to be in violation of federal law regarding safety, security or fraud, waste or abuse of funds intended for safety or security;
5. refusing to violate or assist in violation of federal public transportation safety or security law;
6. cooperating with a safety or security investigation by the U.S. Secretary of Transportation, U.S. Secretary of Homeland Security or the National Transportation Safety Board;
7. furnishing information to law enforcement agencies relating to an accident or incident resulting in damage to property, injury or death; or
8. filing a complaint under the NTSSA (6 U.S.C. §1142), or testifying regarding such complaint.

F. The Contractor shall notify the Authority of any instance of reports or refusal under this clause.

G. The enforcement, filing and investigation of complaints, and remedies under this clause shall be governed by the NTSSA (6 U.S.C. §1142), applicable federal regulations and federal law.

H. This clause shall be interpreted in accordance with the NTSSA (6 U.S.C. §1142). If any provision is found to be in conflict with the NTSSA, the NTSSA shall govern.

I. The Contractor shall include, or shall cause to be included, this clause, including this sub-clause, in its subcontracts at all tiers.

00 79 02 Workplace Violence – Zero Tolerance

- A. Pursuant to Metro Policy/Instruction 7.8.3, all Metro Contractors must: (1) establish zero tolerance for acts of workplace violence for their employees and those of subcontractors at any tier, and (2) not retaliate against any of their employees or independent contractors for cooperating with investigations.

00 79 03 ADDITIONAL FEDERAL REGULATIONS AND CLAUSES

A. Lobbying

1. The Design-Builder is bound by its certification contained in its Offer to the Authority regarding the use of federal or non-federal funds to influence, or attempt to influence any Federal officer or employee regarding the award, execution, continuation, or any similar action of any Federal grant or other activities as defined in 31 U.S.C. 1352, 49 CFR Part 19, or 49 C.F.R. Part 20. The Design-Builder agrees to comply with this requirement throughout the term of the Contract.
2. The Design-Builder agrees that it will comply with 31 U.S.C. § 1352, as amended, U.S. DOT regulations "New Restrictions on Lobbying" 49 C.F.R, Part 20, to the extent consistent with 31 U.S.C. § 1352, as amended and other applicable federal laws, regulations and guidance prohibiting the use of federal funds for any activity concerning legislation or appropriations designed to influence the U.S. Congress or a state legislature unless an exception exists in current federal law.
3. The Design-Builder agrees to include these requirements in all Subcontracts at all tiers under this Contract

B. Clean Air

1. The Design-Builder agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act, as amended, 42 U. S. C. §§ 7401 et seq. The Design-Builder agrees to report each violation to the Authority and understands and agrees that the Authority will, in turn, report each violation as required to FTA and the appropriate EPA Regional Office.
2. The Design-Builder will comply with U.S. EPA Regulations "Control of Air Pollution from Mobile Sources," 40 C.F.R. Part 85; "Control of Emissions from New and In-Use Highway Vehicles and Engines," 40 C.F.R. Part 86; "Fuel Economy and Greenhouse Gas Exhaust Emissions of Motor Vehicles," 40 C.F.R. Part 600, as well as any applicable State Implementation Plans (SIP), and EPA regulations "Conformity to State or Federal Implementation Plans of Transportation Plans, Programs and Projects Developed, Funded or Approved Under Title 23 U.S.C. or Federal Transit Laws" 40 C.F.R. Part 93, along with other applicable federal regulations.
3. The Design-Builder also agrees to include these requirements in each Subcontract exceeding \$100,000 financed in whole or in part with Federal assistance provided by FTA.

C. Clean Water

1. The Design-Builder agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U. S. C. 1251 et seq. The Design-Builder agrees to report each violation to the Authority and understands and agrees that the Authority will, in turn, report each violation as required to assure notification to FTA and the appropriate EPA Regional Office.
2. The Design-Builder will protect underground sources of drinking water in compliance with the Safe Drinking Water Act of 1974, as amended, 42 U.S.C. §§300 (f)-(j).
3. The Design-Builder will comply with the notice of violating facility provisions in section 508 of the Clean Water Act, as amended, 33 U.S.C. § 1368.
4. The Design-Builder will facilitate compliance with Executive Order 11738, "Providing for Administration of the Clean Air Act and the Federal Water Pollution Control Act with Respect to Federal Contracts, Grants or Loans," 42 U.S.C. §7606 note.
5. The Design-Builder also agrees to include these requirements in each Subcontract exceeding \$100,000 financed in whole or in part with Federal assistance provided by FTA.

D. Cargo Preference Requirements

1. The Design-Builder agrees to the following:
 - a. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping equipment, materials, or commodities pursuant to this Contract to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.
 - b. To furnish within 20 working days following the date of loading for shipments originating within the United States, or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, "on-board" commercial ocean bill-of-lading in English for each shipment of cargo described in Paragraph a above to WMATA (through the Contractor in the case of a Subcontractor's bills-of-lading) and to the Office of Cargo Preference, Maritime Administration (MAR-590), 400 Seventh Street SW, Washington, DC 20590.
 - c. To include these requirements in all Subcontracts issued pursuant to this Contract when the Subcontract may involve the transport of equipment, material, or commodities by ocean liner.

E. Fly America

1. The Design-Builder agrees to comply with 49 U. S. C. 40118 (the "Fly America" Act) in accordance with the General Services Administration's regulations at 41 CFR Part 301-10, which provide that recipients and sub-recipients of Federal funds and their contractors are required to use U. S. Flag carriers for U. S. Government-financed international air travel and transportation of their personal effects or property, to the extent such service is available, unless travel by foreign air carrier is a matter of necessity, as defined by the Fly America Act. The Design-Builder shall submit, if a foreign air carrier was used, an appropriate certification or memorandum adequately explaining why service by a U. S. flag air carrier was not available or why it was necessary to use a foreign air carrier and shall, in any event, provide a certificate of compliance with the Fly America requirements.
2. The Design-Builder agrees to include the requirements of this Paragraph in all Subcontracts that may involve international air transportation.

F. Buy America

1. The Design-Builder agrees to comply with 49 U.S.C. 5323(j) and 49 C.F.R. Part 661, which provide that Federal funds may not be obligated unless steel, iron, and manufactured products used in FTA-funded projects are produced in the United States, unless a waiver has been granted by FTA or the product is subject to a general waiver. General waivers are listed in 49 C.F.R. §661.7, Separate requirements for rolling stock are set out at 49 U.S.C. 5323(j)(2)(C) and 49 C.F.R. 661.11. Rolling stock must be assembled in the United States and have a 60 percent domestic content.
2. The Design-Builder is responsible for flowing down these requirements to subcontractors at every tier. The dollar threshold only applies to the prime contract. All subcontracts thereunder are subject the Buy America Act Requirements.

G. Contracts Involving Federal Privacy Act Requirements

1. The following requirements apply to the Design-Builder and its employees that administer any system of records on behalf of the Federal Government under any contract:
 - a. The Design-Builder agrees to comply with, and assures the compliance of its employees with, the information restrictions and other applicable requirements of the Privacy Act of 1974, 5 U.S.C. § 552a. Among other things, the Design-Builder agrees to obtain the express consent of the Federal Government before the Design-Builder or its employees operate a system of records on behalf of the Federal Government. The Design-Builder understands that the requirements of the Privacy Act, including the civil and criminal penalties for violation of that Act, apply to those individuals involved, and that failure to comply with the terms of the Privacy Act may result in termination of the underlying contract.
 - b. The Design-Builder also agrees to include these requirements in each Subcontract to administer any system of records on behalf of the Federal Government financed in whole or in part with Federal assistance provided by FTA.

H. Recovered Material

1. The Design-Builder agrees to comply with all the requirements of Section 6002 of the Resource Conservation and Recovery Act (RCRA) as amended (42 U. S. C. 6962), including but not limited to the regulatory provisions of 40 CFR Part 247, and Executive Order 12873, as they apply to the procurement of the items designated in Subpart B of 40 CFR Part 247.
2. The Contractor also agrees to include these requirements in each Subcontract financed in whole or in part with Federal assistance provided by FTA.

I. Seismic Safety (CONSTRUCTION TO NEW OR EXISTING BUILDINGS)

1. The Design-Builder agrees that any new building or addition to an existing building will be designed and constructed in accordance with the standards for Seismic Safety required in Department of Transportation Seismic Safety Regulations 49 CFR Part 41 and will certify to compliance to the extent required by the regulation. The Design-Builder also agrees to ensure that all work performed under this Contract including work performed by a Subcontractor is in compliance with the standards required by the Seismic Safety Regulations and the certification of compliance issued on the Project.

J. Seat Belt Use Policy

1. The Design-Builder agrees to comply with terms of Executive Order No. 13043 "Increasing Seat Belt Use in the United States" and is encouraged to include those requirements in each Subcontract awarded for work relating to this Contract.

K. Americans with Disabilities Act Accessibility – FTA

1. Facilities to be used in public transportation service must comply with 42 U.S.C. § 12101 *et seq.*; DOT regulations, "Transportation Services for Individuals with Disabilities (ADA)," 49 C.F.R. Part 37; and Joint ATBCB/DOT regulations, "Americans with Disabilities (ADA) Accessibility Specifications for Transportation Vehicles," 36 C.F.R. Part 1192 and 49 C.F.R. Part 38.

L. Mandatory Disclosure

1. The Design-Builder shall timely disclose, in writing, to WMATA's Office of the Inspector General (OIG), with a copy to the Contracting Officer, whenever, in connection with the award, performance, or closeout of this Contract or any subcontract hereunder, the Design-Builder has credible evidence that a principal, employee, agent, or subcontractor of the Contractor has committed—
 - a. A violation of federal criminal law involving fraud, conflict of interest, bribery, or gratuity violations found in Title 18 of the United States Code; or
2. A violation of the civil False Claims Act (31 U.S.C. §§ 3729-3733).
 - a. WMATA, to the extent permitted by law and regulation, will safeguard and treat information obtained pursuant to the Design-Builder disclosure as confidential where the information has been marked "confidential" or "proprietary" by the company. To the extent permitted by the law and regulation, such information will not be released by WMATA to the public pursuant to a Public Access to Records (PARP) request. WMATA may transfer documents provided by the Contractor to any department or agency within the state, federal or local government, if the information relates to matters within the organization's jurisdiction.
 - b. If the violation relates to an order against a government-wide acquisition contract, a multi-agency contract, a multiple-award schedule contract such as the Federal Supply Schedule, or any other procurement instrument intended for use by multiple agencies, the Contractor shall notify the OIG of the ordering agency and the OIG of the agency responsible for the basic contract.

M. National Intelligent Transportation Systems Architecture And Standards – FTA

1. The Design-Builder agrees to conform to the National Intelligent Transportation Systems (ITS) Architecture requirements of 23 U.S.C. § 517(d), as amended by MAP-21, unless it obtains an exemption from those requirements;
2. Follow:
 - a. FTA Notice, "FTA National ITS Architecture Policy on Transit Projects," 66 Fed. Reg. 1455, January 8, 2001, and

- b. All other applicable Federal guidance, and
- 3. Flow this provision down to all applicable subcontracts.

N. Veterans Preference

- 1. As provided by 49 U.S.C. §5325(k), to the extent practicable, The Design-Builder will:
 - a. Give a hiring preference to veterans, as defined in 5 U.S.C. §2108, who have the skills and abilities required to perform construction work required under a third party contract in connection with a capital project supported with federal assistance appropriated or made available for 49 U.S.C. chapter 53, and
 - b. Will not require an employer to give a preference to any veteran over an equally qualified applicant who is a member of any racial or ethnic minority, female, and individual with a disability, or former employee.

O. NOTIFICATION OF FEDERAL PARTICIPATION

This Project is being funded in whole or part with Federal Funds.

END OF SECTION

SECTION 00 80 00
SUPPLEMENTARY CONDITIONS (RFP)

This Section includes Modifications to the Section 00 70 00, GENERAL CONDITIONS, for requirements unique to a specific project and is hereby incorporated into the General Conditions by reference. This Section 00 80 00, SUPPLEMENTARY CONDITIONS, which specifies modifications to the General Conditions, shall be read in conjunction with Section 00 70 00, GENERAL CONDITIONS, and which will be cited in Section 00 70 00, GENERAL CONDITIONS, using the same last two digits of the Section number; i.e., a modification to Section 00 72 05, COMMENCING THE WORK, is indicated as Section 00 82 05, COMMENCING THE WORK.

00 81 00 WORK BY DESIGN-BUILDER

Modify Section 00 71 00, WORK BY DESIGN-BUILDER, to delete Paragraph A. and substitute the following Paragraph:

- A. The Design-Builder shall perform, with its own organization, work equivalent to at least 25% of the value for the construction work.
- B. Self-Perform: A contractor who, by using their own employees, materials and/or equipment, is directly responsible for the completion of project components.
- C. Self-Performed work includes costs for:
 - 1. Mobilization and utilization of Design Builder owned or rented plant and equipment to be operated by the design Builder's own employees and labor associated with the aforementioned equipment
 - 2. Design Builder's own labor to fabricate or to install materials into the finished construction
 - 3. Performance by the Design Builder's own employees of design work, land surveys and other engineering or technical specialist services required by the contract
 - 4. Supplies to directly support the aforementioned work to be accomplished by the Design Builder's own employees
 - 5. Design Builders own project overhead costs
- D. Self-Performed work does not include costs for:
 - 1. Design Builder markups for profit, general and administrative overhead, bonds or other indirect costs on self-perform or subcontracted work and are to be excluded from the total cost of contract for calculations purposes.
 - 2. Rental or purchase of plant or equipment for operation or installation by subcontractors
 - 3. Cost of materials to be incorporated into the work and supplies to support other than construction by the Design Builder's own employees
- E. The Percent of Self-Performed work is calculated by dividing the above defined cost of Self-performed work by the final cost of the contract and multiplying by 100%.

00 82 04 PROJECT SCHEDULE

Modify Section 00 72 04, PERIOD OF PERFORMANCE AND/OR PROJECT SCHEDULE, to delete Paragraphs A, B, and C, and substitute the following Paragraph and subparagraphs, and Paragraph D:

The Design-Builder shall perform, complete, and advance all Work under this Contract in accordance with the schedule set out:

Interim & Final Work Completion:

- a. Milestone 1: **Construction Access and Trailers:** Complete required demolition of Old Town Greens Park and construction access preparation including construction fencing and gates, erection of Design Builder and WMATA Construction Trailers (Field Office) and parking lot, construction access pedestrian bridge, and all temporary utilities that will be required for the Construction Trailers and construction access throughout the duration of the contract. **NTP+275 cds**
- b. Milestone 2: **Approvals and Permits:** Complete design and permitting required to obtain City of Alexandria Site Plan approvals and associated permits, including the issuance of Certificate of Appropriateness and Building Permits - Complete all jurisdictional approval processes including but not limited to the receipt of Final Site Plan Approval from the City of Alexandria, and Board of Architectural Review approvals, as well as all appropriate approvals and permits from the City of Alexandria, National Park Service, and the Corp of Engineers required to construct the Potomac Yard Metrorail Station, Potomac Greens Park, and Potomac Yard Park. **NTP+300 cds**
- c. Milestone 3: **Complete IT Rooms and Systems Facilities:**– Complete construction of all required communications and IT rooms. The rooms shall be complete and securable, with HVAC, plywood backboard installation on walls, and static resistant flooring, fiber and copper backbone installation and testing and make ready for WMATA installation of IT equipment. All wiring, cables and/or fiber optic lines and appurtenances shall be installed, tested, and commissioned, **NTP+ 970 cds**

Note: WMATA IT Complete Communications, and IT Room Equipment Installation **NTP Milestone 3 + 60 cds**
- d. Milestone 4: **Complete Station Structure and Track Work:** Completion of the Station Structure, mezzanines, platforms, and roofs, track work, Automatic Train Control, and Traction Power required for abandonment of existing tracks. Complete initial Safety Certification items. Completion of the AC Room building and equipment, Tie Breaker, Train Control rooms and equipment. Commencement of train service through the Station for the remaining duration of contract. Decommission existing tracks and systems as required to commence construction of the Pedestrian bridges. **NTP+ 1030 cds**
- e. Milestone 5: **Final Station Completion-** Complete Station, Pedestrian Bridges, Entry Pavilions, and all ancillary facilities and equipment, and Potomac Yard Park. Conduct final Inspection, complete remaining Safety Certification Items. Complete all building systems and equipment commissioning , testing (Pre-functional & Functional Tests) and systems integration, as well as LEED Commissioning. Complete all required O&M training including videotaping and documentation. Complete submission of all deliverables including final as-builts, warranty documents, lien releases, spare parts etc., Facility ready for WMATA Beneficial Occupancy and Revenue Service. **NTP+ 1150 cds.**
- f. Milestone 6: **Wetland Restoration and Potomac Greens Park:** Complete the design, permitting and all work necessary for the restoration of the Wetland and the completion of Potomac Greens Park. **NTP+ 1350 cds**

See Section 00 77 09, LIQUIDATED DAMAGES, for Liquidated Damages associated with the Milestone(s) listed above.

The Authority may modify the Contract, pursuant to Section 00 74 08, CHANGES, to extend the project schedule as often and in time periods as deemed necessary until completion of the Work under this Contract.

Early Completion: If the Design-Builder submits, in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, a schedule or expresses an intention to complete the Work earlier than any required Milestone, interim or final completion date, the Authority shall not be liable for any costs incurred because of delay or hindrance should the Design-Builder be unable to complete the Work before such Milestone, interim or Final Completion date. The duties, obligations, and warranties of the Authority to the Design-Builder shall be consistent with and applicable only to the completion of the Work and completion dates set forth in this Contract.

Project Schedule: The Project Schedule for this contract shall remain in effect, along with all legal rights and responsibilities enumerated in this contract, until all work has been substantially completed and accepted. Any work completion dates or durations specifically enumerated in this contract are for the purpose of establishing a project schedule, determining critical path activities, and assessing liquidated damages.

00 83 00 DISPUTES RESOLUTION BOARD (DRB) – NOT USED FOR THIS CONTRACT

00 83 03 AUTHORITY-FURNISHED PROPERTY

Modify Section 00 73 03, AUTHORITY-FURNISHED PROPERTY, to delete Paragraphs A through D and substitute the following Paragraph:

- A. The Authority will not furnish property, real or otherwise, through the terms of this Contract. The Design-Builder is required to purchase or lease any property needed for, but not limited to, lay down, storage, or employee parking in its obligations to comply with the Project requirements.

00 84 01 CONSIDERATION AND BASIS OF PAYMENT

Modify Section 00 74 01, CONSIDERATION AND BASIS OF PAYMENT, in its entirety, and substitute the following:

- A. In consideration of its undertaking under this Contract, the Design-Builder will be paid the sums set forth in this Contract, which shall constitute complete payment for all work and services required to be performed under this Contract and for all expenditures, which may be made and expenses incurred. The basis of payment will be the Contract Price, as shown on Section 00 51 00, DESIGN-BUILD CONTRACT FORM, and which shall constitute complete compensation for performance of all work required by the Contract.
- B. Standby cost for delayed or cancelled Site access: In the event the Design-Builder is delayed in the performance of the Work due to Authority delayed or cancelled Site access, the following basis of payment shall apply:
 - 1. The "Hours of Work" is the period during which the Design-Builder has use of the work area. The "Hours of Work" will exclude the periods required by the Authority to safely secure the work area before the start of the "Hours of Work" and to restore the work area to an operational state after completion of the "Hours of Work".
 - 2. Delay will be measured relative to "Hours of Work" only. The "Hours of Work" shall be determined based upon weekly coordination between the Contracting Officer Representative (COR) and the Design-Builder.
 - 3. Delays caused by actions of the Authority may occur at the start of the "Hours of Work", during the "Hours of Work", or at the end of the "Hours of Work".
 - a. A delay at the start of the "Hours of Work" occurs when the Authority does not grant access to the work area by the scheduled start time. A delay at the start of the "Hours of Work" will

- be measured from the scheduled start of the "Hours of Work" until the time the Design-Builder is granted access to the work area.
- b. A delay during the "Hours of Work" occurs when the Authority requests the Design-Builder to vacate the work area and the Design-Builder is later allowed to return to the work area. A delay during the "Hours of Work" will begin when the Design-Builder is directed to stop work to vacate the work area and will end when the Design-Builder returns to the work area and resumes work.
 - c. A delay at the end of the "Hours of Work" occurs when the Authority requests the Design-Builder to vacate the work area early. A delay at the end of the "Hours of Work" will be measured from the time the Design-Builder is directed to vacate the work area until the scheduled end of the "Hours of Work".
4. The Design-Builder will be compensated for the direct labor costs incurred for the aggregate of delays that exceed 30 minutes relative to the "Hours of Work". For payment purposes, delays will be rounded to the nearest 30 minutes provided the Design-Builder remains mobilized until granted access or until the Design-Builder elects to cancel the work, or the Contracting Officer Representative cancels access for the period. However if the Design-Builder elects to cancel work due to a lack of time remaining in the "Hours of Work" period to complete the planned work element, as verified by the Period of Delay form, the Design Builder will be compensated for the aggregate of delays that exceed 30 minutes rounded to the nearest 30 minutes from the time access was cancelled to the scheduled end of the "Hours of Work" period.
 5. When access to the work area is cancelled by the Contracting Officer Representative with less notice than noted below, the Authority will pay standby cost of not more than the scheduled "Hours of Work" period or 4 hours, whichever is less. However, if Design-Builder is able to reassign the work crew to other work, regardless of the time of the notice given by the Contracting Officer Representative, no payment will be made.
 - a. Weeknights: Five hours before the planned start time of the scheduled "Hours of Work."
 - b. Weekends: Twenty-four hours before the planned start time of the scheduled "Hours of Work."
 6. No payment will be made in those cases where:
 - a. A delay at the start of the "Hours of Work" is less than 1 hour and the Authority grants access but the Design-Builder elects to cancel work, except that payment for delay cost will be made in accordance with Paragraph B.4 above if the scheduled "Hours of Work" period is 3 hours or less.
 - b. A delay at the start of the "Hours of Work" is less than 1 hour and the Authority grants access and the Design-Builder proceeds working and then elects to cease working and leaves the worksite prior to the scheduled end of the "Hours of Work".
 7. Prior to the completion of each shift, the Design-Builder and the Contracting Officer Representative or designee shall sign a Period of Delay form, which shall document the work start and completion times, the duration of the delay, the reason for the delay, the reason for the Design-Builder leaving the Site prior to the scheduled end of the "Hours of Work" period, and the names of the crew members present, including foremen, but excluding salaried supervision. The Design-Builder shall not be entitled to compensation for equipment, overhead, profit or extended overhead costs under this Section; however, this Section does not prohibit the Design-Builder from seeking an equitable adjustment for equipment costs under other sections of the Contract and access delays may provide a basis to grant a non-compensable extension to the Contract Performance Time. Certified payrolls shall establish the hourly rates of the crewmembers. All requests for payment for delay costs shall be submitted to the Contracting Officer Representative with the next progress payment or within 30 Days, whichever is longer. The Design-Builder waives any right to delay costs where the delays are

not documented prior to the completion of the shift and the request for payment is not submitted to the Contracting Officer Representative with the next progress payment or within 30 Days, whichever is longer.

8. If the Design-Builder is not ready to start work at the start of the "Hours of Work" or does not return the work area to the Authority on time at the end of the "Hours of Work," the Design-Builder shall compensate the Authority for the Authority staff and other Authority direct costs for supporting the non-revenue or Revenue Service Adjustment event.

Notification of Cancellation	Occurrence	Requirement	Terms of Payment
Week Night	COR cancels full shift	The COR notifies Design-Builder 5 hours or more before the planned start	No delay payment due
Week Night	COR cancels full shift	The COR notifies Design-Builder less than 5 hours before the planned start	Pay 4 hours ¹
Weekend Single Track/Shutdown	COR cancels full shift or the full weekend of work	The COR notifies Design-Builder 24 hours or more before the planned start	No delay payment due
Weekend Single Track/Shutdown	COR cancels full shift or the full weekend of work	The COR notifies Design-Builder less than 24 hours before the planned start	Pay 4 hours ¹

¹No payment will be made if the Design-Builder is able to reassign the work crew to other work.

Hours of Work	Actual Hours Worked	Design-Builder	Terms of Payment
Weeknight Early Out Hours of Work: 2200 to 0400 (Weeknight Nonrevenue Similar)	Delayed Start 2215 to 0400 Delay less than 30 minutes	Design-Builder is on Site ready to work Works until the end of the Hours of Work	No delay payment due. (Same for a mid shift or end delay less than 30 minutes)
Weeknight Early Out Hours of Work: 2200 to 0400 (Weeknight Nonrevenue Similar)	Delayed Start 2235 to 0400 Delay 35 minutes	Design-Builder is on Site ready to work Works until the end of the Hours of Work	Pay 30 minutes delay (Same for a mid shift or end delay)
Weeknight Early Out Hours of Work: 2200 to 0400 (Weeknight Nonrevenue Similar)	Delayed Start 2235 to 0430 Delay 35 minutes	Design-Builder is on Site ready to work Able to work beyond the end of the Hours of Work	Pay 30 minutes delay (Same for a mid shift delay)
Hours of Work	Actual Hours Worked	Design-Builder	Terms of Payment
Weeknight Early Out Hours of Work: 2200 to 0400 (Weeknight Nonrevenue Similar)	Start Delayed 35 minutes to 2235	Design-Builder is on Site ready to work Design-Builder elects not to go to work	Under 1 hour delay; no Payment due
Weeknight Non-Revenue Hours of Work: 0100 to 0400 (Weeknight Nonrevenue Similar)	Start Delayed 35 minutes to 0135	Design-Builder is on Site ready to work Design-Builder elects not to go to work since remaining time does not allow completion of work element	Pay 2 hours and 30 minutes delay

<u>Hours of Work</u>	<u>Actual Hours Worked</u>	<u>Design-Builder</u>	<u>Terms of Payment</u>
Weeknight Early Out Hours of Work: 2200 to 0400 (Weeknight Nonrevenue Similar)	Start Delayed 65 minutes to 2305	Design-Builder is on Site ready to work Design-Builder elects not to go to work	Over 1 hour delay; pay 5 hours and 30 minutes delay
Weeknight Early Out Hours of Work: 2200 to 0400 (Weeknight Nonrevenue Similar)	Start delay / End delay 2225 to 0345 Start delay 25 minutes End delay 15 minutes Total delay 40 minutes	Design-Builder is on Site ready to work Works during time permitted	Pay 30 minutes delay
Weeknight Early Out Hours of Work: 2200 to 0400 (Weeknight Nonrevenue Similar)	Delay during "Hours of Work" 2330 to 0035 Start delay 0 minutes End delay 0 minutes Total delay 65 minutes	Design-Builder is on Site ready to work Works during time permitted	Over 1 hour delay; pay 60 minutes delay
Weekend Hours of Work: Fri 2200 to Mon 0400	Delay during "Hours of Work" Sat 0200 to Mon 0300 Start delay 4.25 hours End delay 1.25 hours Total delay 5.5 hours	Design-Builder is on Site ready to work Works during time permitted	Pay 5 hours and 30 minutes delay
Weeknight Early Out Hours of Work: 2200 to 0400	Start delayed to 0200 hours then COR cancels access	Design-Builder is on site ready to work	Pay 5 hours and 30 minutes delay
Weeknight Nonrevenue Hours of Work: 0100 to 0400	Start delayed to 0245, then COR cancels access	Design-Builder is on Site ready to work	Pay 2 hours and 30 minutes delay
Weekend Hours of Work: Friday 2200 to Monday 0400	Delay Friday 2200 to Saturday 0630. First shift cancelled at 0230. Work begins at 0630.	Design-Builder 1st shift is on Site ready to work until shift cancelled at 0230	Pay 8 hours delay

00 84 04 METHOD OF PAYMENT

Modify Section 00 74 04, METHOD OF PAYMENT, to add Paragraphs M and N:

- M. As a condition of Final Payment, in addition to the retainage specified in this Section, \$250,000 will be withheld until approved As-built Project Schedule is delivered to the Contracting Officer Representative and is determined to be complete and accurate.
- N. As a condition of Final Payment, in addition to the retainage specified in this Section, \$50,000 will be withheld until Operation and Maintenance Training is complete and accepted.

00 86 05 DISADVANTAGED BUSINESS ENTERPRISE

Modify Section 00 76 05, DISADVANTAGED BUSINESS ENTERPRISE, to delete Paragraph B and substitute the following:

- B. The goal of DBE participation established for this Contract is 18% percent of the Contract Price.

00 86 07 LABOR PROVISIONS - DAVIS-BACON AND COPELAND ANTI-KICKBACK ACTS

Modify Section 00 76 07, LABOR PROVISIONS, to add Appendix D, Wage Determination Rates.

00 87 08 INDEMNIFICATION AND INSURANCE REQUIREMENTS

Modify Section 00 77 08, INDEMNIFICATION AND INSURANCE REQUIREMENTS, to modify Article C. to the following:

C. General Insurance Requirements

1. Contractor shall procure, at its sole cost and expense the insurance outlined in this Section as follows:
 - a. Contractor is required to maintain the insurance coverage(s) outlined in this Section for a period of time commencing the sooner of the execution of this contract, or the start of Work, without interruption. The coverages shall be maintained in force and effect for 3 years after final completion and acceptance of the Work, with the exception of Professional Liability.
 - b. The insurance coverage and limits of insurance outlined in this contract are minimum coverage and limits. Contractor is encouraged, at its sole cost and expense, to purchase any additional insurance coverages and or limits of insurance that Contractor deems prudent and necessary to manage risk in the completion of this contract.
 - c. Upon written request from WMATA, contractor shall provide copies of any and all policy(s), including all endorsement(s), within 5 business days of such request.
 - d. Insurance companies must have a minimum A. M. Best rating of A- VIII.
 - e. Unless otherwise noted, "Claims Made" insurance policies are not acceptable.
 - f. Any insurance policy utilizing a Self-Insured Retention (SIR) requires approval from WMATA.

2. Workers' Compensation and Employer's Liability

Required Minimum Limits of Coverage - See Division 00 87 07 for Minimum Limits of Coverage

Required Minimum Coverage(s):

- a. Workers' Compensation Statutory Coverage must be provided on an "All States" basis.
- b. Contractor and Sub-Contractors of any tier performing work within 500 feet of navigable water must have their Workers' Compensation Policy endorsed to provide coverage for both Jones Act Liability and Longshore and Harbor Workers' Compensation Act Liability.

3. Commercial General Liability

Required Minimum Limits of Coverage - See Division 00 87 07 for Minimum Limits of Coverage

Required Minimum Coverage(s):

- a. Commercial General Liability (CGL) coverage form shall be ISO Occurrence Form CG0001 (12/04) or its equivalent. Equivalency determination shall be made in WMATA's sole and unreviewable discretion.
- b. Required minimum limits of coverage may be achieved through a combination of the aforementioned CGL coverage form and umbrella excess liability coverage form(s), provided that the umbrella excess liability coverage form(s) provide the same or broader coverage than the prescribed CGL coverage form.
- c. Policy shall be endorsed with Additional Insured Endorsement(s) in compliance with Section I below. Commercial General Liability and Umbrella Excess Liability forms must provide defense coverage for additional insureds.

- d. Policy shall be endorsed with a Waiver of Subrogation Endorsement(s) in compliance with Section J below.
- e. The definition of "Insured Contract" shall be modified to provide coverage for contractual liability for contracts for construction or demolition operations that are within 50 feet of a railroad, and sidetrack agreements.
- f. Defense Costs (Allocated Loss Adjustment Expense) must be included and in excess of the policy limits for all primary and Umbrella Excess Policies.
- g. Policy shall be endorsed with ISO endorsement CG 25 03 03 97; "Designated Construction Project(s) General Aggregate Limit", and designate "Any and all construction projects" as the designated Construction project.
- h. Policy shall be endorsed with ISO endorsement CG 25 04 03 97; "Designated Location General Aggregate Limit", and designate "Any and all locations" as the designated location.
- i. The Additional Insured Endorsement shall include Products and Completed Operations Coverage with no limitation on when claims can be made. The coverage provided by the additional insured endorsement shall be at least as broad as the Insurance Service Office, Inc.'s Additional Insured Form CG 20 10 11 85 or CG 20 26 11 85 as determined by WMATA.

4. Railroad Protective Liability Insurance (RRP)

For work within 50 feet of WMATA railroad tracks or work within WMATA rail stations, Railroad Protective Liability Insurance is required with the following minimum limits of coverage:

Required Minimum Limits of Coverage - See Division 00 87 07 for Minimum Limits of Coverage

Required Minimum Coverage(s):

- a. Railroad Protective Liability (RRP) policy on a policy form that is acceptable to WMATA, issued by an insurance company that is acceptable to WMATA.
- b. WMATA shall be the Named Insured.
- c. Cost of RRP shall be the sole responsibility of Contractor.
- d. The "Wet Ink" original RRP policy shall be sent to WMATA at following address:
Washington Metropolitan Area Transit Authority
Office of Insurance, Room 8F
600 Fifth Street, NW
Washington, DC 20001.

5. WMATA Blanket RRP Program Option

WMATA may offer to waive the requirement for the Contractor to procure RRP if 1) the work qualifies for coverage under WMATA's blanket RRP program, and 2) the Contractor prepays the RRP waiver fee which shall be determined by the rate schedule promulgated by the insurer in effect as of the effective date of this Contract. Contractor shall be advised of, and pay the applicable waiver fee, or procure a standalone RRP policy on WMATA's behalf if Contractor decides against the WMATA Blanket RRP Program option.

6. Business Auto Liability

Required Minimum Limits of Coverage - See Division 00 87 07 for Minimum Limits of Coverage

Required Minimum Coverage(s):

- a. Business Auto Liability shall be written on ISO Business Auto Coverage Form CA 00 01 03 06, or its equivalent. Equivalency determination shall be made in WMATA's sole and unreviewable discretion.
- b. Policy shall be endorsed with Additional Insured Endorsement(s) in compliance with Section I below.
- c. Policy shall be endorsed with a Waiver of Subrogation Endorsement(s) in compliance with Section J below.
- d. Business Auto Liability minimum Combined Single Limit requirements may be obtained through the combination of a Primary Business Auto Liability policy and an Umbrella Excess Liability policy provided that the Umbrella Excess Liability policy complies with items a. through c. above.
- e. MCS-90 Endorsement for work involving the transportation or disposal of any hazardous material or waste off of the jobsite. If the MCS-90 Endorsement is required, minimum auto liability limits of \$5,000,000 per occurrence are also required.
- f. Non-Owned Disposal Site (NODS) Endorsement providing coverage for the Contractor's legal liability arising out of pollution conditions at the designated non-owned disposal site.

7. Professional Liability Insurance

Required Minimum Limits of Coverage - See Division 00 87 07 for Minimum Limits of Coverage

Should Contractor, any Sub-Contractor of any tier or any supplier, be required by this contract to provide design services or the services of a professional engineer, including, but not limited to stamping, sealing, or certifying blueprints or other construction-related documents, Contractor, Sub-Contractors of every tier and suppliers are required to maintain Professional Liability Insurance as follows:

- a. Actual coverage or tail coverage must be purchased and maintained for a period of time equal to the statute of repose.
- b. Coverage can be written on an "Occurrence" or "Claims Made" Basis.
- c. Coverage can be written on 'Non-Admitted" paper.

8. Pollution Liability Insurance

Required Minimum Limits of Coverage - See Division 00 87 07 for Minimum Limits of Coverage

Should Contractor, any Sub-Contractor, of any tier, or any supplier, be required by this contract to perform demolition of any pre-existing structures, moving, removal, or handling of any hazardous materials, Contractor is required to maintain Pollution Liability Coverage as follows:

- a. Coverage can be written on an "Occurrence" or "Claims Made" Basis.
- b. Coverage can be written on 'Non-Admitted" paper.
- c. Policy shall be endorsed with Additional Insured Endorsement(s) in compliance with Section I below.
- d. Policy shall be endorsed with a Waiver of Subrogation Endorsement(s) in compliance with Section J below.

9. Builders' Risk

Required Minimum Limits of Coverage - See Division 00 87 07 for Minimum Limits of Coverage

Contractor shall purchase and maintain at its cost a builders "all risk" insurance policy for the project covering work at the at the project site. Contractors of every tier will be insured under this policy, but only to the extent that the policy's coverages and exclusions allow. Cost associated with any changes will not be recognized as a change order.

10. Additional Insured(s)

Contractor is required to add WMATA, its independent contractors, and the WMATA Board of Directors as additional insured(s) on all insurance policies purchased by Contractor, with the exception of Workers' Compensation and Professional Liability.

- a. Coverage provided to any Additional Insured shall be primary and non-contributory to any other insurance available to the Additional Insured.
- b. Coverage provided to any Additional Insured shall be for claims arising out of both ongoing operations and products and completed operations hazard.
- c. Coverage available to any Additional Insured under the products and completed operations hazard can only be limited to the applicable statute of repose in the jurisdiction where the contract scope of work takes place.
- d. Coverage available to the additional insureds is not limited to the minimum limits of coverage outlined in this document.

11. Waiver of Subrogation

Contractor and Sub-Contractors of every tier are required to have all insurance policies purchased by Contractor and Sub-Contractors of every tier, endorsed to waive the insurance company's rights of recovery against WMATA, its independent contractors and the WMATA Board of Directors.

- a. Coverage shall be provided on an endorsement that is acceptable to WMATA.

12. Certificate of Insurance (COI)

Contractor shall provide WMATA an ACORD Certificate of Insurance (COI) as evidence that the insurance requirements of this Section have been satisfied. Certificates of Insurance shall be emailed to COI@WMATA.COM.

The certificate holder box should read:

Washington Metropolitan Area Transit Authority
Office of Insurance, Room 8F
600 Fifth Street, NW
Washington, DC 20001

Additionally;

- a. Satisfactory COI delineating all required insurance coverage requirements under this Section shall be delivered before the execution of this Contract by WMATA.
- b. COI shall state the RFP# and the name of your WMATA Procurement contact.
- c. Failure to provide satisfactory evidence of all required insurance may result in Contractor and/or subcontractors of every tier being denied access to work locations, including, but not limited to WMATA properties.
- d. COI reflect total limits of insurance purchased by Contractor for the types of insurance required under this Contract.

- e. Proposed material modifications to insurance required under this Section must be received by WMATA at least 30 days prior to the effective date of the proposed modifications to such insurance.
- f. WMATA's receipt of copies of any COI, policy endorsements or policies does not relieve Contractor of the obligation to remain in compliance with the requirements of this Section at all times. Contractor's failure to so comply, and to continuously comply with these insurance requirements shall constitute a material breach of this Contract.
- g. The COI shall specifically delineate the following:
 - 1) Who is an Additional Insured under the policies delineated in this Section.
 - 2) That each additional insured(s) as required under this Section is an additional insured on a primary and non-contributory basis.
 - 3) That each additional insured(s) is an additional insured for ongoing operations of the Contractor in addition to the products and completed operations coverage.
 - 4) That coverage providing a waiver of subrogation to each Additional Insured is compliant with the Waiver of Subrogation article of this Section.
 - 5) That the issuing insurance company will mail written notice of cancellation of any of the required insurance policies to WMATA within 30 days of Cancellation. Use of "will endeavor to" as respects this requirement is not acceptable and must be deleted. Such notice shall be sent to:

Washington Metropolitan Area Transit Authority
Office of Insurance, Room 8F
600 Fifth Street, NW
Washington, DC 20001

- h. The City of Alexandria is receiving project funding from the Northern Virginia Transportation Authority (NVTA). As part of the funding reimbursement process, NVTA requires a Certificate of Insurance (COI) from the contractor that lists NVTA and the City of Alexandria as being named as additional insured for the project. This is a condition and requirement before reimbursements can be distributed.

00 87 08 – Minimum Insurance Limits of Coverage and additional Insurance Requirements.

1. Minimum Insurance Limits of Coverage - Contractor

- a. The limits of coverage outlined in this Division are minimum limits. Contractor is encouraged, at its sole cost and expense, to purchase any additional insurance coverages and or limits of insurance that Contractor deems prudent and necessary to manage risk in the completion of this contract. Liability of the contractor under this contract is not limited to the minimum limits of coverage nor the actual limits of coverage purchased by contractor.

2. Workers' Compensation and Employers' Liability

Workers' Compensation	Statutory	
Employers' Liability	\$1,000,000	Each Accident
	\$1,000,000	Disease Policy Limit
	\$1,000,000	Disease Each Employee

3. Commercial General Liability

\$50,000,000	Each Occurrence Limit
\$50,000,000	General Aggregate Limit
\$50,000,000	Products and Completed Operations Limit

4. Railroad Protective Liability

\$5,000,000	Each Occurrence Limit
\$10,000,000	Aggregate Limit

5. Business Auto Liability

\$2,000,000	Per Occurrence Combined Single Limit
-------------	--------------------------------------

6. Professional Liability Insurance

\$5,000,000	Each Claim and in the Aggregate
-------------	---------------------------------

7. Pollution Liability Insurance

\$10,000,000	Each Claim and in the Aggregate
--------------	---------------------------------

8. Builder's Risk Insurance

Limits equal to the value of the project	Each Occurrence
--	-----------------

00 87 09 LIQUIDATED DAMAGES

Modify Section 00 77 09, LIQUIDATED DAMAGES, to delete Paragraph A. and substitute the following Paragraph and subparagraphs:

- A. The Design-Builder understands that if it fails to complete portions of or all of the Work as described in Supplementary Conditions Section 00 82 04, PERIOD OF PERFORMANCE AND/OR PROJECT SCHEDULE, the Authority will suffer damages, which have been estimated and are as specified below:
- B. The Design-Builder understands that if it fails to complete portions of or all of the Work as described in Supplementary Conditions Section 00 82 04, PERIOD OF PERFORMANCE AND/OR PROJECT SCHEDULE, the Authority will suffer damages, which have been estimated and are as specified below:

Milestone 1: **Construction Access and Trailers:** Complete required demolition of Old Town Greens Park and construction access preparation including construction fencing and gates, erection of Design Builder and WMATA Construction Trailers (Field Office) and parking lot, construction access pedestrian bridge, and all temporary utilities that will be required for the Construction Trailers and construction access throughout the duration of the contract. **NTP+275 cds \$375.34 per cds**

Milestone 2: **Approvals and Permits:** Complete design and permitting required to obtain City of Alexandria Site Plan approvals and associated permits, including the issuance of Certificate of Appropriateness and Building Permits - Complete all jurisdictional approval processes including but not limited to the receipt of Final Site Plan Approval from the City of Alexandria, and Board of Architectural Review approvals, as well as all appropriate

approvals and permits from the City of Alexandria, National Park Service, and the Corp of Engineers required to construct the Potomac Yard Metrorail Station, Potomac Greens Park, and Potomac Yard Park. **NTP+300 cds \$635.62 per cds**

Milestone 3: **Complete IT Rooms and Systems Facilities:**– Complete construction of all required communications and IT rooms. The rooms shall be complete and securable, with HVAC, plywood backboard installation on walls, and static resistant flooring, fiber and copper backbone installation and testing and make ready for WMATA installation of IT equipment. All wiring, cables and/or fiber optic lines and appurtenances shall be installed, tested, and commissioned, **NTP+ 970 cds \$2,493.01 per cds**

Note: WMATA IT Complete Communications, and IT Room Equipment Installation **NTP Milestone 3 + 60 cds**

Milestone 4: **Complete Station Structure and Track Work:** Completion of the Station Structure, mezzanines, platforms, and roofs, track work, Automatic Train Control, and Traction Power required for abandonment of existing tracks. Complete initial Safety Certification items. Completion of the AC Room building and equipment, Tie Breaker, Train Control rooms and equipment. Commencement of train service through the Station for the remaining duration of contract. Decommission existing tracks and systems as required to commence construction of the Pedestrian bridges. **NTP+ 1030 cds \$898.63 per cds**

Milestone 5: **Final Station Completion-** Complete Station, Pedestrian Bridges, Entry Pavilions, and all ancillary facilities and equipment, and Potomac Yard Park. Conduct final Inspection, complete remaining Safety Certification Items. Complete all building systems and equipment commissioning , testing (Pre-functional & Functional Tests) and systems integration, as well as LEED Commissioning. Complete all required O&M training including videotaping and documentation. Complete submission of all deliverables including final as-builts, warranty documents, lien releases, spare parts etc., Facility ready for WMATA Beneficial Occupancy and Revenue Service. **NTP+ 1150 cds. \$2,772.46 per cds**

Milestone 6: **Wetland Restoration and Potomac Greens Park:** Complete the design, permitting and all work necessary for the restoration of the Wetland and the completion of Potomac Greens Park. **NTP+ 1350 cds \$882.14 per cds**

- C. See Section 00 72 04, PERIOD OF PERFORMANCE AND/OR PROJECT SCHEDULE, for Project Milestone(s).

00 88 09 PARTNERING – NOT USED

Modify Section 00 70 00, GENERAL CONDITIONS, to add the following Section: PARTNERING WILL NOT BE USED FOR THIS CONTRACT

00 89 04 LIVING WAGE

Modify Section 00 70 00, GENERAL CONDITIONS, to add the following Section:

00 79 04 LIVING WAGE

- A. This Contract is subject to the Authority's Living Wage Policy and implementing regulations. The Living Wage provision is required in all contracts for services (including construction) awarded in an amount that exceeds \$100,000 in a 12-month period.

1. The Authority Living Wage Rate is \$13.48 per hour, and may be reduced by the Design-Builder's per-employee cost for health insurance.
2. The Design-Builder shall:

- a. Pay, at a minimum, the Authority Living Wage Rate, effective during the time the Work is performed, to all employees who perform Work under this Contract, except as otherwise provided in paragraph (4) below;
 - b. Include the Living Wage clause in all Subcontracts that exceed \$15,000 in a 12-month period awarded under this Contract;
 - c. Maintain payroll records, in accordance with the retention and examination of records requirements in the General Conditions, and include or cause to be included, the substance of this Section, including this Paragraph c, in its Subcontracts covered by the Living Wage requirement at all tiers; and
 - d. Submit records with each monthly invoice supporting payment of the Living Wage Rate.
3. The Design-Builder shall not split or subdivide a Contract, pay an employee through a third party, or treat an employee as a Subcontractor or independent contractor to avoid compliance with the Living Wage provisions.
 4. Exemptions to the Living Wage provisions include:
 - a. Contracts and agreements with higher negotiated wage rates;
 - b. Contracts that are subject to higher wage rates required by federal law or collective bargaining agreements (e.g., Davis Bacon);
 - c. Contracts or agreements for regulated utilities;
 - d. Emergency services to prevent or respond to a disaster or imminent threat to public health and safety; and
 - e. Design-Builders who employ fewer than ten employees.
 5. The Authority may adjust the Living Wage rate effective in January of each year. The adjustment will reflect the average Living Wage Rate among Metro's Compact Jurisdictions with Living Wage provisions. If after Contract award the Living Wage Rate increases, the Design-Builder is entitled to an equitable adjustment to the rate in the amount of the increase for employees who are affected by the escalated wage.
 6. Failure to comply with the Authority's Living Wage provisions shall result in the Authority's right to exercise available Contract remedies, including Contract termination or debarment from future contracts.

00 89 05 COMMUNITY OUTREACH

Modify Section 00 70 00, GENERAL CONDITIONS, to add the following Section:

00 79 05 COMMUNITY OUTREACH

- A. The Authority will establish a program of public contact for conducting effective relationships with communities and businesses in proximity to the construction areas. Do not initiate contact with the public without Contracting Officer Representative approval.
- B. The Authority will contact those residents and business owners who might reasonably be expected to be affected by the construction and make known to them the name of the Authority's representative on the worksite with responsibility for community outreach and explain to them the means by which the representative can be contacted expeditiously.
- C. Design-Builder shall designate an on-Site, community outreach liaison with 24-hour, on-call availability for the duration of the Contract. Community outreach liaison duties include:

1. Staying informed of problems caused by the construction.
2. Assisting the Authority in notifying adjacent owners of upcoming work.
3. Preparing and posting advance notice signs as necessary to inform public and surrounding businesses of upcoming construction activities.
4. Assisting the Authority in responding to complaints.
5. Attending public outreach meetings, as necessary. Meetings can include regular construction information meetings, quarterly open houses, media inquiries, tours, ground breaking, and other milestone events.
6. Accommodating Site tours. Tours shall be arranged through the Contracting Officer Representative.

00 89 06 AVAILABILITY OF FUNDS

Modify Section 00 70 00, GENERAL CONDITIONS, to add the following Section:

00 79 06 AVAILABILITY OF FUNDS

- A. Funds are not presently available for performance under this Contract beyond the fiscal year which ends June 30, 2017. The Authority's obligation for performance of the Contract beyond that date is contingent upon the availability of funds from which payment for Contract purposes can be made. No legal liability on the part of the Authority for any payment may arise for performance under this Contract until funds are made available to the Contracting Officer for performance and until the Design-Builder receives notice of availability, to be confirmed in writing, by the Contracting Officer. Any option exercised by the Authority which will be performed in whole or in part in a subsequent fiscal year is subject to availability of funds in the subsequent fiscal year and will be governed by the terms of this Provision.

00 89 07 ACCESS TO RECORDS

Modify Section 00 70 00, GENERAL CONDITIONS, to add the following Section:

00 79 07 ACCESS TO RECORDS

- A. Apart from the more limited record access provisions of the Common Grant Rules, 49 U.S.C. Section 5325(g) provides FTA and DOT officials, the U.S. Comptroller General, or any of their representatives, access to and the right to examine and inspect all records, documents, and papers, including contracts, related to any FTA project financed with Federal assistance authorized by 49 U.S.C. Chapter 53.

00 89 08 FEDERAL STANDARDS

Modify Section 00 70 00, GENERAL CONDITIONS, to add the following Section:

00 79 08 FEDERAL STANDARDS

- A. The Design-Builder agrees to comply with applicable third party procurement requirements of 49 U.S.C. chapter 53 and Federal laws in effect now or subsequently enacted; with applicable U.S. DOT third party procurement regulations at 49 C.F.R. § 18.36 or 49 C.F.R. §§ 19.40 through 19.48, and with other applicable Federal regulations pertaining to third party procurements and later amendments thereto. The Recipient also agrees to follow the provisions of the most recent edition

and revisions of FTA Circular 4220.1F, "Third Party Contracting Guidance," except to the extent FTA determines otherwise in writing. The Design-Builder agrees that it may not use FTA assistance to support its third party procurements unless its compliance with Federal laws and regulations is satisfactory. Although the FTA "Best Practices Procurement Manual" provides additional third party contracting information, the Recipient understands and agrees that the FTA "Best Practices Procurement Manual" may omit certain Federal requirements applicable to specific third party contracts.

00 89 09 RECYCLED PRODUCTS

Modify Section 00 70 00, GENERAL CONDITIONS, to add the following Section:

00 79 09 RECYCLED PRODUCTS

- A. The Resource Conservation and Recovery Act of 1976, 42 U.S.C. Section 6962, requires governmental recipients to provide a competitive preference to products and services that conserve natural resources, protect the environment, and are energy efficient. EPA guidelines, "Comprehensive Procurement Guideline for Products Containing Recovered Materials," 40 CFR Part 247, direct that third party contracts of \$10,000 or more with governmental recipients specify a competitive preference for products containing recycled materials identified in those EPA guidelines. For information about EPA's recovered materials advisory notices, see EPA's Web site: <http://www.epa.gov/cpg/backgrnd.htm>.

APPENDIX:

APPENDIX D – 00 86 07 WAGE DETERMINATION RATES

END OF SECTION

General Decision Number: VA160035 10/14/2016 VA35

Superseded General Decision Number: VA20150035

State: Virginia

Construction Types: Heavy (Heavy and Sewer and Water Line)

Counties: Alexandria*, Arlington, Clarke, Culpeper,
Frederick, Fredericksburg*, Spotsylvania and Winchester*
Counties in Virginia.

*INDEPENDENT CITIES

HEAVY CONSTRUCTION PROJECTS (Including Sewer and Water Lines)

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.15 for calendar year 2016 applies to all contracts subject to the Davis-Bacon Act for which the solicitation was issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.15 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2016. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/08/2016
1	01/15/2016
2	06/10/2016
3	10/14/2016

BRVA0001-003 05/03/2015

	Rates	Fringes
MASON - STONE.....	\$ 35.19	16.17

* CARP0177-012 05/01/2016

	Rates	Fringes
CARPENTER, Includes Form Work....	\$ 27.81	9.93

ELEC0026-023 06/06/2016

ARLINGTON COUNTY, Cities of Alexandria and Fredericksburg

	Rates	Fringes
ELECTRICIAN.....	\$ 43.70	16.06+a

a. PAID HOLIDAYS: New Year's Day, Inauguration Day, Martin Luther King Jr.'s Birthday, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, the day after Thanksgiving and Christmas Day.

ELEC0026-024 06/01/2011

CLARKE, CULPEPER, FREDERICK COUNTIES, SPOTSYLVANIA COUNTY
(Excluding the City of Fredericksburg), City of Winchester

	Rates	Fringes
ELECTRICIAN.....	\$ 27.80	13.37+a

a. PAID HOLIDAYS: New Year's Day, Inauguration Day, Martin Luther King Jr.'s Birthday, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, the day after Thanksgiving and Christmas Day.

	Rates	Fringes
POWER EQUIPMENT OPERATOR:		
35 ton Cranes and Above.....	\$ 32.89	8.45+a
Cranes Below 35 tons.....	\$ 32.40	8.45+a
Mechanic.....	\$ 34.34	8.45+a
Tower and Climbing Cranes...	\$ 32.89	8.45+a
Tower Cranes and Cranes		
100 tons and Over.....	\$ 33.96	8.45+a
a. PAID HOLIDAYS: New Year's Day, Inaugural Day, Decoration Day, Independence Day, Labor Day, Martin Luther King's Birthday, Veterans' Day, Thanksgiving Day, Friday after Thanksgiving and Christmas Day.		
b. PREMIUM PAY:		
Tower crane and cranes 100-ton and over to receive \$1.00 per hour premium.		

LABO0710-010 04/01/2010

	Rates	Fringes
LABORER: Pipelayer.....	\$ 16.61	5.41

PAIN0051-014 06/01/2014

	Rates	Fringes
GLAZIER		
Glazing Contracts \$2 million and under.....	\$ 24.77	9.85
Glazing Contracts over \$2 million.....	\$ 28.61	9.85

PLAS0891-006 02/01/2014

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 27.15	9.61

SUVA2010-036 09/01/2010

	Rates	Fringes
DIVER TENDER.....	\$ 22.53	3.98
DIVER.....	\$ 23.73	4.21
IRONWORKER, REINFORCING.....	\$ 22.45	11.85
IRONWORKER, STRUCTURAL.....	\$ 20.55	8.25
LABORERS		
Common or General.....	\$ 11.24	1.32
Flagger.....	\$ 7.39	0.20
Landscape.....	\$ 10.00	
POWER EQUIPMENT OPERATOR:		
Backhoe.....	\$ 18.47	0.75
Bobcat/Skid Loader.....	\$ 11.40	
Bulldozer.....	\$ 17.54	
Excavator.....	\$ 17.79	
Loader.....	\$ 18.99	0.75
Trackhoe.....	\$ 12.75	1.24
Tugboat.....	\$ 19.00	
TRUCK DRIVER, Includes All		
Dump Trucks.....	\$ 12.14	0.75

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

=====

Unlisted classifications needed for work not included within

the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can

be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISION

SECTION 00 90 00
AMENDMENTS AND MODIFICATIONS

THIS PAGE RESERVED

SECTION 00 91 00
AMENDMENTS

THIS PAGE RESERVED

SECTION 00 92 00
CLAIMS

THIS PAGE RESERVED

SECTION 00 93 00
CLARIFICATIONS AND PROPOSALS

THIS PAGE RESERVED

SECTION 00 94 00
MODIFICATIONS

THIS PAGE RESERVED

END OF SECTION

SECTION 01 11 00
SUMMARY OF WORK

PART 1 – GENERAL

1.01 SUMMARY

- A. The Work includes designing and constructing the Project as indicated in the Contract Documents.
- B. The completed Project will result in the complete design, construction, testing, and commissioning of the following Authority facilities:
1. Track: Includes approximately 3,750-foot of new and re-aligned track, Traction Power, and Automatic Train Control. The Train Control Room shall be relocated from the existing Traction Power Substation to a dedicated Train Control Room located in the Potomac Yard Station. Included in the 3,750 feet long track will be a No. 8 Double Crossover north of the Station structure. The new, re-aligned track will be constructed east of, and adjacent to, the existing Blue/Yellow WMATA revenue tracks.
 2. AC Room Building: The Station AC Room Building shall be located west of the Blue/Yellow Line adjacent to the existing Traction Power Sub Station. The AC Room, although separate from the Station, shall comply with all WMATA Design Criteria. The Design-Builder shall provide all equipment, connections, utilities, communications, and systems needed to provide a fully functional AC Room. Construction of the AC Room Building shall not commence prior to the transition of revenue trains through the station structure and the abandonment of the existing Blue/Yellow track segment associated with the project.
 3. Station: The Design-Builder is responsible for designing, and constructing the Potomac Yard Station in accordance with the Project Requirements and WMATA Design Criteria, the requirements of the City of Alexandria, as well as all applicable Federal, State, and local codes and standards. The station consists of several elements including, but not limited to, mezzanines, side platform, below-platform service rooms, interior station lighting, a separate AC Room building, mechanical and electrical services and equipment, restrooms, WMATA systems equipment, and signage and graphics.

The design and layout of all rooms and functional spaces shall conform to the Project Requirements and Criteria. The square foot areas for rooms and spaces indicated represent minimum net floor area in square feet of usable floor space. The Design-Builder shall coordinate actual room dimensions and locations by functional relationships, all applicable codes and Americans with Disabilities Act (ADA) requirements, equipment requirements (including vertical and horizontal clearance requirements), as well as user access and maintenance requirements to ensure a proper and functional facility design. The Design-Builder is responsible for adjusting any rooms and spaces necessary to meet the design requirements for: circulation, wall thicknesses and construction types, structures, equipment arrangement, and furnishings.

The Design-Builder is responsible for coordinating and integrating station design and construction with all other disciplines to ensure a fully integrated WMATA Metrorail Station. The Design-Builder shall also provide all infrastructure, systems, facilities, and equipment necessary to facilitate the installation of equipment and materials to be provided by WMATA and others, including, but not limited to:

- Fare collection equipment for both the initial system configuration. The Design-Builder shall provide conduit and/or under floor ducts for the fare equipment and shall coordinate detailed installation requirements with WMATA. WMATA will furnish and install all fare equipment.
- Supports and display cases. WMATA will furnish and install all display materials.

Public restroom facilities shall be included in the paid areas of the stations. The Design-Builder shall provide the minimum number of plumbing fixtures per VUSBC requirements based on the NFPA 130 station occupant load.

4. **Pedestrian Bridges:** The station pedestrian bridges provide passenger access from the entrance Pavilions to the station. Required features include:
 - The general configuration (elevation and cross section), finishes, dimensions, and aesthetic elements shown in the Project Requirements and General Plans using materials, finishes, configuration, and dimension;
 - CSX minimum clearance requirements of 23'-3" above railway;
 - 16 foot minimum clear walkway between handrails for the South Pedestrian Bridge;
 - 12 foot minimum clear walkway between handrails for the North Pedestrian Bridge;
 - Horizontal walking slopes that do not exceed ADA or WMATA requirements;
 - Utility chases, CCTV cameras, public address speakers, lighting fixtures and signage maintaining all required minimum clearances and unobstructed views;
 - Provision for future maintenance or replacement of bearings supporting the pedestrian bridges;
 - Design of the structures, including superstructure, bearings, substructure and foundations, shall be designed in accordance with AASHTO LRFD Bridge Design Specifications;
 - Provision for maintenance access to the roof of the bridge;
 - Finishes including mesh, glazing and railings;
 - Branches at nodes where bridge changes plan direction; and
 - Roofing, gutters and downspout, and drainage provisions per WMATA Criteria and the requirements of the City of Alexandria.
5. **Entrance Pavilions:** The station entrance pavilions provide passenger access from the neighborhood streets and parks to the station. A pavilion includes two escalators, two elevators and a single stair. Required features include:
 - General configuration and aesthetic elements shown in the Project Requirements and General Plans using materials, finishes, configuration, and dimensions;
 - Adaptation to the site-specific conditions and grades and coordination of final grades with the approved Potomac Yard Park;
 - A canopy/roof design that conforms to the Project Requirements and General Plans and incorporates internal roof gutters and downspout drainage system that discharges to grade or a closed system per the Design-Builder's required approval for drainage design and subsequent approval by the City of Alexandria;
 - A roof/ceiling design that incorporates all required CCTV cameras, public address speakers, lighting fixtures, and signage, while maintaining all required minimum clearances and unobstructed views;
 - All necessary utility connections including water, sanitary sewer, electric and systemwide communications; and
 - Emergency phone at the lower elevator landing.
6. **Potomac Yard Park:** Includes, but is not limited to, demolition, grading, pervious and impervious pavement, site furnishings, sodding, seeding, erosion and sediment control, drainage, utility(s) relocation, irrigation, site lighting, and landscaping. The Potomac Yard Park shall be the location for the West WMATA Entrance Pavilion. All work shall be in coordination with the design of the Entrance Pavilion including utilities, retaining walls, bicycle ramps, and pedestrian bridges. All work shall comply with the all Federal, State, and local requirements and shall conform to ADAAG requirements. The final design of the Potomac Yard Park will required final approval from the City of Alexandria in coordination with the City Park and Recreation Department, Planning and Zoning (P&Z), Department of Project Implementation, and the Department of Transportation and Environmental Services, prior to the commencement of work. The park design shall comply with the City of Alexandria, Park Facility Standards Manual, and other applicable rules and regulations.

7. Potomac Greens Park: Includes, but is not limited to, grading, pervious and impervious pavement, gazebo, playground equipment, site furnishings, sodding, seeding, erosion and sediment control, drainage, utility(s) relocation, irrigation, site lighting, retaining walls, bicycle parking area, bicycle ramps, pedestrian bridges, raised high visibility crosswalk(s), and landscaping. All work shall comply with the all Federal, State, and local requirements and shall conform to ADAAG requirements. The final design of the Potomac Greens Park will required final approval from the City of Alexandria in coordination with the City Park and Recreation Department, Planning and Zoning (P&Z), Department of Project Implementation, and the Department of Transportation and Environmental Services, prior to the commencement of work. The park design shall comply with the City of Alexandria, Park Facility Standards Manual, and other applicable rules and regulations.

The Potomac Greens Park will require the demolition and removal of the existing playground equipment as depicted in the preliminary plan. Design-Builder shall provide new playground equipment, as approved by the City of Alexandria, to be located in the area depicted in the preliminary plan, for public use throughout the construction phase. At the end of the construction contract, the Design Builder shall remove and discard the temporary playground equipment

8. Tree Conservation and Protection Program (TCPP): A TCPP will be developed per the City of Alexandria Landscape Guidelines and to the satisfaction of the Directors of P&Z and RPCA and the National Park Service (NPS). All proposed tree protection details shall be depicted on the final site plan and early site preparation permit plans. Such tree protection measures shall be installed prior to any site or utility work and be maintained throughout the construction period. The tree preservation measures shall be inspected by the City Arborist prior to any construction, demolition, grading or utility work for the site.
9. Site Irrigation: A Site Irrigation Plan will be developed and installed for both Potomac Greens and Potomac Yard Parks. The irrigation system shall be fully compatible with the City's Maxicom Central Control System. In addition, the Site Irrigation plan will provide a plan to water the trees, plants, and groundcovers in the wetland/natural areas during the planting, establishment, maintenance, and warranty periods, as well as identify sources of supplement water during these periods
10. Site Lighting: All Site Lighting for both Potomac Greens and Potomac Yard Parks shall be in accordance with the City of Alexandria standards. The lighting plan and lighting details will be consistent with the approved Potomac Yard Urban Design Guidelines that allow minimum light leakage, particularly around the perimeter of the site in order to minimize the obtrusion to the George Washington Memorial Parkway.

In addition, the Design-Builder shall provide all Site work including site clearing, site and wetland restoration, site and wetland mitigation, site utilities, construction access roads required during construction, landscaping, graphics and signage required for the complete project.

11. Old Town Greens Tennis Courts and Playground: The Project will require the use of the property known as the Old Town Greens Neighborhood Association Tennis Courts and Playground for construction related access. The Design Builder will be required to demolish two tennis courts and a playground.

Tennis Courts: The complete removal of tennis court pavement, fencing, walls, and any other appurtenance related to the tennis courts such as lighting, seating, site furniture, and nets shall be required.

Playground: The Design Builder is responsible for providing a replacement playground for the residents of Old Town Greens. The existing playground equipment, seating, site furniture, and trash receptacles, shall be removed and new playground equipment, seating, site furniture, and trash receptacles, shall be supplied and installed by the Design Builder, to an area within Old Town Greens Neighborhood Association. The Design Builder shall provide new

playground equipment equal in size, quantity and quality, to the temporary playground. The temporary playground area shall be fenced and secured including gates, signage, as provided and installed by the Design Builder.

Any utilities that serve the existing tennis court and playground areas shall be caped, relocated, or removed as required to provide construction access.

Upon completion of the project, the Design Builder is required to restore the Old Town Greens Park. All elements of the tennis courts and playground including pavement, fencing, walls, nets, security fencing and gates, and playground equipment, as well as any other appurtenance related to the tennis courts and playground such as lighting, seating, site furniture, signage, and landscaping shall be supplied and installed by the Design Builder. Type, size, quantity and quality of the tennis and playground equipment shall be approved by the City of Alexandria and the Old Town Greens Home Owners Association.

Upon completion of the restored Old Town Greens Park, the Design Builder shall remove the temporary playground equipment and all temporary appurtenances associated with the temporary playground, and restore the site of the temporary playground to its original condition.

12. Potomac Greens Drive Traffic Circle: To facilitate the turning movement of large construction equipment and materials, the removal of the traffic circle at the intersection of Potomac Greens Drive and Carpenter Road will be required. The Design Builder shall remove brick paving, site lighting, trash receptacles, raised planter, site furniture, concrete curbs, landscaping and irrigation systems. The traffic circle shall then be paved with full depth capable of withstanding the loads and turning movement of construction equipment. The full depth asphalt shall be maintained by the Design Builder throughout the duration of the project.

Once paved, the Design Builder shall provide Maintenance of Traffic (MOT) at the intersection while providing an expanded turning radius for construction equipment and materials.

The Design Builder shall provide an MOT Plan to the City of Alexandria for approval and permit prior to the demolition of the existing traffic circle.

The haul route is subject to City approval. Design Builder is required obtain a permit per City requirements, when five (5) or more loads of waste materials of any type, building or construction supplies, materials or equipment of any type, or dirt, debris or fill of any type will be hauled into or out of a site within any consecutive thirty (30) day period. No dirt, mud or debris shall be tracked/spilled onto the public right-of-way. The design Builder shall submit its request for an approved haul route for permit and approval. Permit Application for Hauling Permit is available at:

https://www.formrouter.net/form01@COAVA/TES_hauling_app.pdf

Upon completion of the project, the Design Builder is required to restore the Traffic Circle and any other local road impacted by construction of the Potomac Yard Station project. The Design Builder shall design and construct all elements of the Traffic Circle including brick paving, site lighting, trash receptacles, raised planter, site furniture, concrete curbs, landscaping, irrigation systems, as well as any other appurtenance related to the Traffic Circle. Type, size, quantity and quality of the Traffic Circle elements to be designed and installed by the Design Builder shall be approved by the City of Alexandria and the Potomac Greens Home Owners Association.

13. Potomac Greens Drive, and Carpenter Road: In addition to the requirements included in Section 01 73 10 CUTTING AND PATCHING and Section 00 73 06, PROTECTION OF EXISTING VEGETATION, STRUCTURES, UTILITIES AND IMPROVEMENTS, the Design Builder shall keep Potomac Greens Drive and Carpenter Road in a state of good repair throughout the duration of the Contract. Any damages to, but not limited to pavement, concrete curb, brick sidewalks, landscaping, irrigation systems, fences, drainage structures,

utilities, or signage to, or adjacent to, Potomac Greens Drive and/or Carpenter Road that is the direct result of the use of these roads for construction related traffic, shall be the responsibility of the Design Builder to repair and/or replace at the time the damage occurs.

Complete restoration of Potomac Greens Drive and Carpenter Road shall be the responsibility of the Design Builder at Contract completion. All road restoration activities, including design, maintenance of traffic, materials, and advanced community notices, shall receive the approval of the City of Alexandria prior to the commencement of the restoration work.

14. Archaeologically sensitive areas are known to be present near the work zone and shall be avoided.

a. A professional Archaeologist shall supervise the installation of protective fencing in the area between the project Limits of Disturbance (LOD) and the boundaries of 44AX0221 and 44AX0222. Due to shallow depths of archaeological deposits in these areas (0 – 11 centimeters), the use of jersey barriers or a footed fence shall be used. If such barriers are used, protective surface matting shall be laid beneath these types of barriers. The protective barriers shall be installed prior to construction and maintained in place during the entirety of the construction project.

b. A professional Archaeologist meeting 36 CFR Part 61 qualifications will be present to monitor any ground disturbing activities in the vicinity of the archaeological sites 44AX0221 and 44AX0222. Construction activities with the potential to impact subsurfaces include, but are not limited to, excavation, grading, or the removal of the root system of vegetation. In the event that any archaeological remains may be encountered in the monitoring zone, the protocol established for unanticipated discoveries will be followed.

c. A professional Archaeologist will review the design drawings for excavation within fifty feet of soil borings B-101, B-102, B-103, B-14 and B-107 as shown in the Geotechnical Data and Site Investigation reports, to confirm the construction impacts do not exceed ten (10) feet beneath the current grade in those areas. If construction impacts exceed ten (10) feet beneath the current grade in those areas, additional archaeological monitoring shall be required.

C. The Project shall function as an integral part of and be fully compatible with the existing WMATA system.

D. It is the responsibility of the Design-Builder to gather all data necessary for the performance of the Work under this Contract that are needed in addition to Authority-furnished Contract Documents and to develop a complete and final design.

1.02 DAYS/HOURS OF WORK

A. The standard work week for the Contract will be 5 consecutive 8-hour days Monday-Friday, with the work scheduled as defined in Section 01 14 10, ACCESS TO SITE.

B. Provide Contracting Officer Representative 7 Days advance notice prior to changing shift hours and 48 hours advance notice for planned work shifts outside the established work week and work day.

1.03 LOCATION

A. The Project is located in Alexandria, Virginia. The Project Site is bounded by the Potomac Avenue to the west, George Washington Memorial Parkway to the East, and Potomac Greens community via Carpenter Road to the south.

1.04 SITE LOGISTICS

A. Access and Egress to and from the construction Site shall be from Route 1, Slaters Lane, Massey Lane, Potomac Greens Drive and Carpenter Road. Construction traffic shall not use the George

Washington Memorial Parkway (GWMP) or Potomac Greens Drive north of the intersection of Carpenter Road.

- B. Construction equipment and materials will not be staged within Authority Right-of Way.
 - 1. Construction operations will be required to be staged as shown in the RFP Documents..
 - 2. Staging shall be prohibited on any public Right of Way including but not limited to, Route 1, Slaters Lane, Massey Lane, Potomac Greens Drive and Carpenter Road.
 - 3. WMATA will not provide contractor or contractor employees parking.
 - 4. Design-Builder parking is prohibited on city streets in and around the project site.
- C. Constraints on Construction
 - 1. Work Sequence NOT USED
 - 2. Special Events
 - a. Minimize risks to the public during special community events that are located in close proximity to the Project Site. Construction activities
 - b. shall be coordinated with the event and the Authority when working to reduce construction impacts during events.
 - c. Maintain a Special Community Event List in coordination with the Authority for the duration of the Contract. The list shall identify local special holidays, parades, festivals, and other similar events that are within the proximity of the Project construction area and operations. The list shall include the following information:
 - (1) Name and general description of the event
 - (2) Date, time of day, and duration
 - (3) Location(s)
- D. Work performed by Others: NOT USED
- E. Coordination of Work with Others: Coordinate Work through the Contracting Officer Representative with the following:
 - 1. Utilities and jurisdictional authorities affected by or having jurisdiction over the Project.
 - A. Dominion Virginia Power - upgrade of equipment at the existing switching station on E. Abingdon Drive in Alexandria, and connect it to the Glebe Substation on S. Glebe Road in Arlington. Additional information may be viewed at the City of Alexandria website <https://www.alexandriava.gov/dvp/>
 - B. North Potomac Yard Development - The North Entry pavilion will be located on property conveyed to WMATA by the Developer of the North Potomac Yard (Developer) in coordination with the City of Alexandria. The Design Builder is required to coordinate construction activities, utility connections, construction laydown areas, and access, in the area of the North Potomac Yard development and the North Entry Pavilion with the Developer and the City of Alexandria.
 - 2. Other Contracting Officer Representatives, Authority consultants, and contractors associated with adjacent projects or properties.
- F. Survey Work: Perform as needed to execute the Project as specified in Section 01 72 10, LAYOUT OF WORK AND FIELD ENGINEERING.

- G. Geotechnical and Environmental Investigations: Perform additional investigations as needed to complete the Project.
- H. Permits: Obtain permits from Utilities and Jurisdictional Authorities as needed. The Authority will not be responsible for any delays or damages incurred by the Design Builder or the Design Builder's Third Party Permit Expeditor or similar third party consultant, in obtaining all necessary permits.
- I. Design and Design Services during Construction: Perform as described in Section 01 11 20, DESIGN AND PROGRAM REQUIREMENTS.
- J. Systems Integration: Develop a Systems Integration Plan as part of design development and perform and manage Systems Integration for the project in accordance with Section 01 11 30, SYSTEMS INTEGRATION
- K. Safety: Establish and manage Project safety in accordance with Section 01 11 40, SAFETY/ ENVIRONMENTAL REQUIREMENTS and Section 01 11 50, SAFETY AND SECURITY CERTIFICATION.
- L. Quality: Establish and manage a Quality System Section in accordance with Section 01 47 00, QUALITY MANAGEMENT SYSTEM.
- M. Inspection and Testing
 - 1. Inspect the Work to ensure that construction is being performed in accordance with Issued for Construction Drawings, Issued for Construction Specifications, and applicable submittals. Maintain Inspectors Daily Reports and submit to the Contracting Officer Representative weekly.
 - 2. Establish and perform component testing and system integration testing as specified in various specification sections and in accordance with Section 01 47 00, QUALITY MANAGEMENT SYSTEM. Develop and implement a testing plan based on WMATA Testing Program Plan
 - 3. Provide and manage the services of an independent testing agency that shall conduct material testing.
 - 4. Provide and manage the services of independent inspectors for those disciplines required by jurisdictional authorities. Independent inspectors shall perform third party inspections necessary to certify that construction has been performed in accordance with Issued for Construction Drawings and Issued for Construction Specifications. Independent inspectors shall have the qualifications required by jurisdiction authorities.
 - 5. The independent testing agency and independent inspectors may be provided through a single entity.
- N. As-Built Documents: Maintain a hard copy drawing and specification record of as-built conditions during construction phase, and provide As-Built Drawings and As-Built Specifications at the completion of the Project in accordance with Section 01 77 50, CLOSEOUT.
- O. Training: Provide training to WMATA staff as indicated in Section 01 82 00, DEMONSTRATION AND TRAINING for requirements.
- P. Salvaging of Materials and Equipment
 - 1. Maintain property control records for materials or equipment to be salvaged. The Design-Builder shall be responsible for the storage and protection of salvaged materials and equipment and shall replace salvage materials and equipment, which are broken or damaged during salvage operations as the result of negligence or while in the Design-Builder's care.

2. Salvaged material not specified for reuse shall become the property of the Design-Builder and shall be removed from the Site.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01 11 10
DESIGN-BUILDER KEY STAFF

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section specifies key staff that form s the Design-Builder's team and identifies their basic functions.

1.02 REFERENCES

- A. United States Green Building Council (USGBC)
 - 1. Leadership in Environmental Engineering and Design (LEED)
 - a. New Construction and Major Renovation
- B. Registrar Accreditation Board of the American Society for Quality (RABASQ)
- C. Occupational Safety and Health Association (OSHA)
 - 1. Construction Safety Training
 - 2. First Aid/CPR/Blood Borne Pathogens Training

1.03 SUBMITTALS

- A. Submit the following within 10 days of Award in accordance with Section 01 33 00, SUBMITTAL PROCEDURES:
 - 1. Evidence of qualifications and experience of Key Staff.

1.04 DESIGNER

- A. The Design-Builder shall be responsible for performing or furnishing design professional services and related services in all phases of the Project and require its Designer to perform the services in accordance with the specifications and requirements of the Contract and in accordance with professional standards of skill, care, and diligence adhered to by firms recognized for their expertise, experience, and knowledge in performing these services. The Design-Builder shall be responsible for the professional quality, technical accuracy, completeness, and coordination of the services and shall serve as the Architect of Record and the Engineers of Record for the Project.
- B. All architecture, engineering, and other design services rendered by or through the Design-Builder shall be accomplished, reviewed, and approved by the Designer's team of architects and engineers licensed to practice in their respective disciplines in the jurisdiction where the Project will be constructed. The Design-Builder shall comply with local laws regarding the licensing of design firms and personnel providing services for the Project.
- C. All positions shall be filled by competent personnel satisfactory to the Authority. Each position shall be held by a separate full-time employee unless otherwise specifically approved by the Authority.
- D. Individuals holding these key staff positions shall not be changed without written Authority approval for substitution of key staff.

E. Key Designer Staff

1. Design Engineering Manager

- a. A registered Professional Engineer licensed to practice engineering in all jurisdictions where the Project will be constructed, shall have a graduate degree in engineering with a minimum of 15 years experience in design and design management of complex multi-discipline projects in the rapid transit industry.
- b. Responsible for managing design and design services during construction for all disciplines involved in the Project. The Design Engineering Manager shall assign Architect and Engineer(s) of Record for Project and shall establish and implement design milestone submittal schedules. The Design Engineering Manager is responsible to ensure that design of all project elements is done in accordance with Contract Documents, Industry Standards, and jurisdictional codes and regulations. The Design Engineering Manager responsibilities also include but are not limited to managing design sub-consultants that support the Designer, developing and implementing a Design Control Plan (DCP), and a Design Quality Plan (DQP) in carrying out design of Project elements and ensuring that sub-consultants do the same, coordinating with Jurisdictional Authorities and utility companies and ensuring that all design complies with applicable jurisdictional codes and standards, preparation and submittal of design milestone and Issued for Construction Drawings and Issued for Construction Specifications, preparation of Working Drawings, responding to and managing review comments from the Authority and other reviewers, and assisting the Construction Manager in obtaining permits, all in a timely manner without affecting Project schedule.
- c. Responsible for managing the preparation of As-Built Drawings and As-Built Specifications.

2. Architect of Record

- a. A licensed Architect in the jurisdiction where the Project will be constructed, with an undergraduate or graduate degree in architecture, and with 15 to 20 years experience in design of complex multi-discipline projects of a similar type and financial magnitude in the rapid transit industry.
- b. Responsible for signing and sealing Issued for Construction Drawings and Specifications.
- c. The Architect of Record shall be an active participant in all phases of the Project, including the construction phase, for the selection of materials, products and finishes for submittals, approval of samples and mock-ups, coordination of architectural work with structural, mechanical, electrical, and other disciplines, and regular Site visits to verify conformance with the approved design.

3. Engineers of Record

- a. Registered Professional Engineers licensed to practice in their respective disciplines in the jurisdiction where the Project will be constructed, with undergraduate or graduate degrees in engineering, and with 15 to 20 years experience in design of complex multi-discipline projects of a similar type and financial magnitude in the rapid transit industry.
- b. Responsible for signing and sealing Issued for Construction Drawings and Specifications.
- c. Responsible to ensure that design within their disciplines is done in accordance with Contract Documents, Industry Standards, and jurisdictional codes and regulations. Responsibilities also include but are not limited to, implementing the Design Control Plan (DCP) and a Design Quality Plan (DQP), supporting the Design Engineering Manager in coordinating with Jurisdictional Authorities and Utility companies and ensuring that all design complies with applicable jurisdictional codes and standards, preparation and submittal of design milestone and Issued for Construction Drawings and Issued for

Construction Specifications, preparation of Shop Drawings and Working Drawings, and responding to and addressing review comments from WMATA and other reviewers.

- d. Engineers of Record shall be active participants in all phases of the Project, including the construction phase, for review of submittals, approval of samples and mock-ups, coordination of the Work of their respective disciplines with other disciplines, and regular Site visits to verify conformance with the approved design.

4. LEED Coordinator

- a. LEED Accredited Professional with documented experience in managing all aspects of LEED certification in accordance with USGBC and LEED for New Construction and Major Renovation and with a minimum of 5 years experience in attaining LEED certification for projects of a similar type and financial magnitude in the construction industry.
- b. Responsible for coordinating the design of the Project with architect and engineers to ensure that the Project attains LEED Silver Certification.
- c. LEED Coordinator shall be an active participant in all phases of the project, including the construction phase of the Project.

5. Systems Integrator

- a. The Systems Integrator shall be registered as a Professional Engineer, licensed to practice in the jurisdiction where the Project will be constructed. The Systems Integrator shall have 10 or more years experience in transportation infrastructure systems design of a similar type and financial magnitude, and previous related experience in the design of systems for rapid transit facilities.
- b. The Systems Integrator shall coordinate all systems-related interfaces between the Authority and the design disciplines.

1.05 DESIGN-BUILDER

- A. The Design-Builder shall responsible for management of the Project and for performing as the builder, including furnishing the services of Subcontractors and vendors, to perform all manufacture, fabrication, installation, and construction to complete the Project in accordance with the approved Issued for Construction Drawings and Issued for Construction Specifications, all applicable jurisdictional codes and regulations, the approved Quality Management System; the approved Safety Plan; the approved Systems Integration Plan, and environmental and other applicable requirements to achieve Acceptance in accordance with the approved Project Schedule. The Design-Builder shall obtain jurisdictional approvals and permits, and Utility approvals.
- B. All personnel involved in the performance of construction work shall be experienced and qualified to perform their trade, and all construction work shall be performed in a skilled and workmanlike manner.
- C. Individuals holding these key staff positions shall not be changed without written Authority approval for substitutions of key staff.
- D. Key Design-Builder Staff
 - 1. Project Manager
 - a. A registered Professional Engineer licensed to practice engineering with an undergraduate degree in engineering and a minimum of 15 years experience managing design and construction of complex multi-discipline projects of a similar type and financial magnitude in the rapid transit industry.

- b. In charge of design and construction of the Project as a whole, with overall responsibility for the successful and timely completion of the Project
 - c. Supervises the Key Staff, shall be the sole point of contact with the Contracting Officer Representative, shall be responsible for coordinating with outside agencies as required, shall be responsible for managing cost and maintaining schedule of the Project, shall be responsible for ensuring that QA/QC and Safety guidelines are followed, and shall be responsible for testing, commissioning, and close-out of the Project.
- 2. Construction Manager
 - a. Shall have an undergraduate degree in engineering with a minimum of 15 years experience in managing complex multi-discipline heavy construction projects and a minimum of 10 years managing the construction of projects of a similar type and financial magnitude in the rapid transit industry.
 - b. Responsible for managing construction of all facets of the Project.
 - c. In charge of the day-to-day construction activity of the Project. Responsibilities include but are not limited to acquiring construction permits, managing Subcontractors, independent testing companies, fabricators and Suppliers, coordinating with Quality Manager and Safety Manager in the implementation of project Quality and Safety plans, development, management, and implementation of Project Schedule, preparation, submittal, and management of construction submittals, maintaining as-built documentation, coordinating with Design Engineering Manager, outside agencies, and Utility companies on construction related matters. The Construction Manager is responsible to ensure that construction is based on Issued for Construction Drawings and Issued for Construction Specifications and that all applicable codes and standards are complied with.
- 3. Construction General Superintendent
 - a. Shall have a minimum of 15 years experience in complex multi-discipline heavy construction, a minimum of 10 years in rapid transit industry, and a minimum of 5 years in a supervisory capacity supervising projects of a similar type and financial magnitude.
 - b. Responsible for oversight of day-to-day construction at the Site.
 - c. Responsibilities include but are not limited to supervising construction activity, overseeing coordination between Subcontractors, and ensuring that construction is based on current Shop Drawings and Working Drawings. The Construction General Superintendent is also responsible for maintaining as-built documentation.
- 4. Quality Manager
 - a. A degreed engineer and trained as a Lead Auditor in a Registrar Accreditation Board of the American Society for Quality (RABASQ) approved course on the requirements of ISO 9001 and with a minimum of 10 years of related experience including a minimum of 5 years of management positions in a production, manufacturing, or construction environment performing QA/QC auditing. Transit industry experience is preferred.
 - b. Reports to one or more levels of management above the Design-Builder's Project Manager.
 - c. Responsible for the Quality Assurance (QA) and Quality Control (QC) for the Project and shall be fully familiar with the Federal Transit Agency's (FTA) Quality requirements.
 - d. Shall be a full time staff member of the Design-Builder and shall establish, implement, and maintain the Quality Management System, shall report directly to and be supervised by an Officer of the Design-Builder at a level above that of the Project Manager responsible for the Project, shall serve as a liaison officer with the Authority and the Jurisdictional

Authorities on matters relating to the Design-Builder's quality system, shall be responsible for ensuring that the Quality Management System is effective in ensuring that the Contract requirements are satisfied, and shall be responsible for the oversight of onsite and offsite testing by the Design-Builder.

- e. The Quality Manager may be approved as the Safety and Security Certification Manager as defined in Section 01 11 50, SAFETY AND SECURITY CERTIFICATION.

5. Safety Superintendent

- a. Shall have a degree in engineering with a minimum of 10 years experience in heavy industry construction safety practices and with a minimum of 5 years in rapid transit construction in operating conditions, and shall have completed OSHA Construction Safety Training and First Aid/CPR/Blood Borne Pathogens Training. Shall be a Certified Safety Professional (CSP).
- b. Responsible for development of a construction safety plan.
- c. Shall be a full time member of the Design-Builder and devotes full time to worksite safety in implementing, enforcing, and maintaining the safety program for the Design-Builder and Subcontractor forces. The Safety Superintendent shall have no duty other than safety supervision of persons, equipment, and property affected by Contract work.
- d. Shall have specialized training and experience in construction safety supervision and have a thorough knowledge of all OSHA regulations. The Safety Superintendent shall have the ability to develop and conduct safety-training courses. The Safety Superintendent shall be familiar with industrial hygiene equipment and testing as required for the protection of all personnel and the public

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01 11 20
DESIGN AND PROGRAM REQUIREMENTS

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section specifies requirements for carrying out detail design and design support during construction, as indicated, and provides requirements for design management to be followed by the Design-Builder. The Section also establishes Program Requirements for the Project.

1.02 REFERENCES

- A. Program Requirements – Potomac Yard Metrorail Station
- B. WMATA Manual of Design Criteria
- C. Federal Transit Administration - Accessibility Handbook for Transit Facilities
- D. U.S Green Building Council LEED for New Construction and Major Renovations
- E. City of Alexandria – ADD FROM ALEXANDRIA

1.03 SUBMITTALS

- A. Make the submittals of this Section for Approval by the Authority in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, unless noted otherwise.
 - 1. Design Control Plan within 15 Days of Notice to Proceed (NTP).
 - 2. Milestone documents as specified within this Section.
 - 3. Check sets of Design Drawings and Design Specifications at each design milestone.
 - 4. Test, acceptance, and verification criteria and procedures for the product being specified as described in Section 01 47 00, QUALITY MANAGEMENT SYSTEM.
 - 5. LEED-required documentation applicable for a goal of LEED Silver.
 - 6. Meeting minutes of all design coordination meetings attended by third-party entities as described in Section 01 31 20, Project Meetings
 - 7. At the end of the Contract, submit in accordance with Section 01 77 50 , CLOSEOUT, a complete configuration management database.

1.04 GENERAL DESIGN REQUIREMENTS

- A. Review Project requirements and discuss any issues needing clarification with Contracting Officer Representative along with WMATA design review team, end users and other stake holders at the Pre-Design-Build Meeting prior to beginning any design work. The meeting shall be attended by the Design-Builder's Project Manager, Design Engineering Manager, Architect and Engineers of Record, and LEED AP (LEED Accredited Professional) involved in designing the Project elements.
- B. Do not change the approved design firms(s), sub-consultants, and personnel once approved or shift design and engineering work from one sub-consultant to another without the prior written approval of the Contracting Officer Representative.

- C. All design and field engineering Work required to be performed by the Design-Builder shall be performed under the direct supervision of the Design Engineering Manager by a licensed professional and shall satisfy the laws of the jurisdiction in which the Project is located.
- D. Perform a code review for the Project and identify any potential conflicts amongst the design requirements, assumptions, field conditions, WMATA Manual of Design Criteria and jurisdictional codes that may affect scope, cost schedule, or quality of work. Notify the Contracting Officer Representative of potential conflicts as soon as practicable but no later than within [30] Days of NTP. The notification shall include a clear statement of the conflict, the source of the requirement and criteria, and a recommended solution to the potential conflict.
- E. Perform additional detailed surveys and investigations to verify the Site conditions as needed for development of the final design.
- F. Perform additional detailed geotechnical investigations and coordinate with the Jurisdictional Authorities as needed for the development of the final design and for obtaining all necessary permits.
- G. Perform additional detailed environmental investigations and coordinate with the Jurisdictional Authorities as needed for development of the final design and for obtaining all necessary permits.
- H. ADAAG Design and Construction Compliance
 - 1. Design and construct the Work in accordance with ADAAG regulations and Federal Transit Agency Accessibility Handbook for Transit Facilities. In projects that address only a portion of an existing facility, ADAAG requirements state that the connection to public use space shall be accessible to the public at finish of construction. Alterations cannot decrease public accessibility. Accessible paths must be provided both within scope of the facility being constructed or renovated and to adjacent properties. ADAAG requirements apply to facilities open to the public as well as facilities for Authority employees in accordance with ADAAG reference 4.1.1.5.
 - 2. Should ADAAG regulations and Federal Transit Administration Accessibility Handbook for Transit Facilities requirements conflict, the most stringent shall apply.
 - 3. Exceptions to ADAAG regulations and FTA requirements: NOT APPLICABLE
 - 4. Ensure that facility designs, except as noted, comply with ADAAG and FTA requirements by providing a duly certified ADAAG Design Compliance Certification Form using the form provided by the Authority. Refer to Attachment to this Section: Federal Transit Administration (FTA): Key and New Rail Station Checklist.
- I. This Project has a goal to obtain LEED Silver certification at its completion in accordance with the LEED Reference Guide for New Construction and Major Renovation.
- J. Develop and provide Design Drawings and Design Specifications. WMATA Standard Drawings and WMATA Standard Specifications shall be incorporated into the Design Drawings and Design Specifications without edits. Develop Project-specific specifications for work not addressed in the WMATA Standard Specifications. Submittals specified in the Project-specific specifications developed by the Design-Builder shall be submitted to WMATA for information only.
- K. Indicate on Design Drawings work to be carried out By Others such as by the Authority, Utilities, Jurisdictional Agencies, and other WMATA contracts.
- L. Design work pertaining to rehabilitation of existing facilities shall be based on the assumption that the facility will remain operational during on-Site inspections, design development, and construction. Coordinate facility access through the Contracting Officer Representative.

- M. Design Reviews: Authority will review and Approve milestone design submittals based on the requirements of the WMATA Manual of Design Criteria, WMATA Standard Specifications, and program requirements established in this Section. Set up meetings with Authority including outside agencies, if needed, to present the design packages for all milestone submittals. The Design Engineering Manager is responsible for obtaining comments from Jurisdictional Authorities and Utilities. Proceeding with furthering design prior to the resolution of all review comments from all entities to the Authorities satisfaction is at the Design-Builder's own risk. The City of Alexandria will review and approve milestone design submittals for Potomac Yard Park and Potomac Greens Park based on the requirements of the City of Alexandria and the contract documents. The Design Builder shall provide separate submittals based on the City of Alexandria requirements in addition to the required WMATA submittals listed in this RFP.
- N. Permits: Prepare designs necessary to submit plans and obtain all permits needed to implement the Project. Do not modify Contract Document requirements based on comments from Jurisdictional Authorities or Utilities without approval from the Authority.
- O. Provide Engineering and Architectural services during construction, such as performing Request for Information and submittal reviews prior to their submittal to the Contracting Officer Representative as further described in Section 01 33 00, SUBMITTAL PROCEDURES, and prepare As-Built Drawings and As-Built Specifications as further described in Section 01 77 50, CLOSEOUT.

1.05 DESIGN CONTROL PLAN

- A. Develop and maintain a Design Control Plan (DCP) that establishes basic guidelines for the preparation and development of design documents culminating in Issued for Construction Drawings and Issued for Construction Specifications. The DCP shall address the following requirements as a minimum:
 - 1. Control of design inputs and changes shall be managed by the Design-Builder in a manner that assures Contract and Design-Builder requirements are correctly translated into the drawings and specifications used for procurement, manufacturing, construction, and testing.
 - 2. Establish processes and procedures for preparing and checking of design calculations, drawings, and specifications for each milestone design submittal.
 - 3. Detailed checking of documents shall be carried out by an individual who has qualifications and experience equal to or greater than the preparer. Maintain record of check sets through the life of the Project and submit these with each milestone design submittal. Authority will audit these check sets periodically. Identify superseded documents with a stamp to avoid wrongful use of documents.
 - 4. Configuration management.
- B. Prepare plans for each design activity and define responsibility for its implementation.
- C. Provide verification and validation of software products designed for the Project.
- D. Design verification shall include checking and back-checking calculations, drawings, specifications, and other design elements without reliance on review and comments from the Authority and shall be conducted before providing each milestone design submittal to the Authority and before the start of construction or fabrication.
- E. Provide certification with each milestone design submittal stating that the documents being submitted are reviewed, checked and back-checked.
- F. Design and submit test, acceptance, and verification criteria and procedures for the product being specified. Test and acceptance criteria and procedures may be used by the Authority and its on-

call architectural and engineering consultants to verify designs and products. The design verification process shall test the design to assure that it meets Contract Document requirements.

- G. Implement configuration management and document change control for the duration of this Project for calculations, drawings, specifications, documents, systems, operating and maintenance documentation, and the physical materials. Maintain document change control and update all documents as the design and installation progresses. Configuration management system shall provide an accurate historical record that can trace decisions made through the life of the Contract. At the end of the Contract, submit to the Authority in accordance with Section 01 77 50, CLOSEOUT, a complete configuration management database.
- H. The Authority has the right to accept or deny a requested design change and no design change shall be implemented without Authority Approval. The Authority will only consider requested design changes, which are submitted to the Contracting Officer Representative with the following supporting documentation:
 - 1. A valid reason for the change.
 - 2. Evidence that the change is feasible
 - 3. An explanation of why the change is desirable
 - 4. Estimates of effects on performance, costs and schedule
- I. Include a means for contemporaneously relating the modification status of equipment and construction to the corresponding drawing or specification.
- J. Maintain process control, including:
 - 1. Completion of quality procedures, work instructions, and initial coordination meetings prior to the start of a design activity.
 - 2. Documented procedures for checking of calculations and survey computations.
 - 3. A formal system of continuous feedback of problems and their resolution shall be developed between the Designer and construction staff.

1.06 MILESTONE DESIGN SUBMITTALS

- A. Preliminary Design – Design Drawings, Design Specifications, calculations, and all associated design documents shall be completed to include the minimum requirements listed below:
 - 1. Drawings:
 - a. Plan and profile location of all potentially affected utilities and structures – Complete
 - b. Plan confirming adjacent property lines – Complete
 - c. Plan showing temporary and permanent Right-of-Way requirements – Complete
 - d. Plan and details of applicable Survey Control Monuments – Complete
 - e. Plan of existing conditions – Complete
 - f. Civil sections – In Progress
 - g. Sizing of primary structural members – Complete
 - h. Retaining wall elevations and sections – In Progress

- i. Architectural plans and elevations – In Progress
 - j. Architectural wall sections – In Progress
 - k. Architectural floor plans – In Progress
 - l. Sizing of primary structural members - Complete
 - m. Mechanical equipment list – In Progress
 - n. Electrical single line diagram – In Progress
 - o. Applicable codes and standards – Complete
 - p. CADD files for verification of file structure
2. Specifications: Index of all specification Sections - Complete
3. Preliminary design calculations for each discipline commensurate with design development.
4. Design Report including documentation of:
 - a. Constructability and Construction Staging Plan - Draft
 - b. Utility and Structures Relocation/Protection/Support - Draft
 - c. Traffic Impact Assessment including constraints, maintenance plans, parking inventories, truck haul routes, and new/modified road systems - Draft
 - d. Handling and Disposal of Excavated Material - Draft
 - e. Hydrology/Stormwater Management and Drainage -Draft.
 - f. Supplemental Geotechnical Investigation – Complete
 - g. Supplemental Environmental Documentation – Draft
 - h. Systems Interface Management Plan - Complete
 - i. Identification of required permits and jurisdictional authority approvals - Complete
5. Material sample boards
6. Public meeting presentation materials
7. Quality Assurance Documentation
8. Risk Assessment Documentation
9. Design Schedule - Complete.
10. Response to Authority and Jurisdictional Authority Review Comments
- B. Final Design – Design Drawings, Design Specifications, calculations, and all associated design documents shall be complete, checked, and ready for signing and sealing after Approval by the Authority.
- C. Issued For Construction – Design Drawings, Design Specifications, and calculations signed and sealed by Architect and Engineer of Record.

- D. The Design Builder shall provide a presentation to the Commission of Fine Arts (CFA) at approximately the 60% level of design. This presentation shall be scheduled and coordinated with WMATA and the City of Alexandria.

1.07 ADDITIONAL PROGRAM REQUIREMENTS

- A. Listed below are Project-specific Program Requirements that supplement or replace requirements imposed by WMATA Manual of Design Criteria, Contract Drawings, and Contract Specifications.
NOT USED

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION

3.01 DESIGN MANAGEMENT

- A. Appoint a Design Engineering Manager to lead and coordinate the Design-Builder's design effort.

3.02 IMPLEMENTATION

- A. Prepare the design by developing detailed Issued for Construction Drawings, Issued for Construction Specifications, design calculations, analyses and reports, with all engineering required in accordance with accepted industry practices and submit milestone design submittals to the Contracting Officer Representative for Authority Approval.
 - 1. WMATA recognizes that the Design Builder will provide designs prepared by subcontractors and suppliers instead of by the designer of record (DOR). In those instances, those design documents must be submitted to WMATA for review and approval and the drawings must be in the standard WMATA format. The Design Builder is responsible for developing an index of drawings that incorporates the subcontractor and/or supplier drawings into the drawing set created by the DOR. Drawings provided by subcontractor or supplier are to be submittal as part of the As-Built set of drawings and subject to all WMATA submittal requirements.
- B. Provide the engineering design as specified for facilities owned by states, cities, agencies, districts, and utilities including service connections, and facility modifications and relocations as applicable.
- C. Coordinate and resolve conflicts for locations and sizes of openings, conduits, equipment placement, power and HVAC requirements, and clearances and weights of all elements among all the disciplines as applicable.
- D. Immediately notify the Contracting Officer Representative in writing upon identification of design issues or problems, which may affect cost, schedule, the work of Utilities, or other contracts.
- E. Issued for Construction Drawings and Issued for Construction Specifications, design calculations, analyses, and reports and certifications shall be signed and sealed by registered Professionals licensed to practice engineering, architecture, and landscape architecture in all jurisdictions where the Project will be constructed, as applicable.
- F. Coordinate design with governmental, public and private agencies and others. Such coordination shall include attending meetings as may be necessary. Notify Contracting Officer Representative of coordination meetings a minimum of 2 Days prior to meetings. Prepare and submit to the Contracting Officer Representative meeting minutes of all such meetings attended. Promptly notify the Contracting Officer Representative in writing of any betterments or other work beyond the scope of the Contract Documents that are requested by jurisdictional authorities, Utilities and property owners.

3.03 INTERFACE REQUIREMENTS

- A. Investigate existing systems. Design, furnish, and install systems and materials, which interface with and are fully compatible with existing systems and that function in a fully compatible regard to safety, reliability, and maintainability as specified in Section 01 11 30, SYSTEMS INTEGRATION.
- B. Systems, which require functional and physical interface coordination, may include, but are not limited to:
 - 1. Drainage Systems
 - 2. Existing Underground Utilities
 - 3. Traffic Maintenance during Construction and Traffic Signalization
 - 4. Power and Energy Management System
 - 5. Mechanical Systems
 - 6. Plumbing Systems
 - 7. Electrical Systems
 - 8. Communications Systems including Voice and Data
 - 9. CCTV
 - 10. Automatic Train Control
 - 11. Traction Power System
 - 12. Elevators and Escalators
- C. Interface and compatibility requirements within various other interfaces for the Communications Systems include:
 - 1. Ancillary and Remote Facilities: Coordinate provisions for Fire and Intrusion Alarm System and wayside telephones.
 - 2. Local Fire Jurisdictional Authorities: Coordinate provisions for fire detection, alarm, and suppression to ensure compliance.
- D. Interface and compatibility requirements for the Utility systems:
 - 1. Coordinate equipment location and drain inlets and pipes. Coordinate new drain inlets and pipes with existing manholes, drain inlets, and pipes. Coordinate new sanitary sewer pipes with existing manholes and pipes.
 - 2. Coordinate electrical power requirements and location of equipment, feeders, and ductbanks.
- E. Interface and compatibility requirements for the Public Telephone system:
 - 1. Right-of-Way: Coordinate required changes to telephone company facilities affected by construction.
- F. Develop a Systems Interface Points matrix, which shall identify all system interfaces and describe in detail the functional and physical interfaces between new and existing systems. The descriptions shall include interface locations, operating parameters, and applicable test points. The Systems Interface Points matrix shall:

1. Assign primary and secondary responsibilities to the providers of the interfaced systems and provide assurances that the systems provided under this Contract are fully compatible and that interface connections will not degrade, be compromised, or otherwise interfere with the normal operations of either of the interfaced systems.
 2. Provide assurances that the systems provided under this Contract are interfaced in a manner similar to existing WMATA systems performing the same functions. Differences in the manner in which the systems are interfaced shall be clearly described and subject to the Approval of the Contracting Officer Representative.
 3. Provide a direct reference to one or more test procedures contained in the Design-Builder's approved Systems Integration Plan, which will verify that each system interface fully satisfies the requirements described therein.
 4. Be developed before or concurrent with the systems designs and shall be submitted for review along with each milestone design submittal.
- G. Control systems installation, its current configuration, and provide appropriate documents to support system configuration. Issue engineering recalls, update installed material, and update support material such as test equipment and documentation.

END OF SECTION

SECTION 01 11 30
SYSTEMS INTEGRATION

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section specifies systems integration requirements for the Project.
- B. The purpose of this Contract is for the Authority to receive a complete system that functions efficiently as a part of the overall WMATA System and within the local community. The Contract Documents set out the requirements that define the Authority's intent. The designs of Communications, Train Control, Trackwork, Mechanical, Electrical, and Traction Power systems as applicable are conceptual. It is the Design-Builder's responsibility to complete these designs and integrate these systems into the WMATA System. The Design-Builder is expected to advance the designs into a single unified whole.
- C. Systems Integration shall ensure that individual elements fit into components; components fit into subsystems; subsystems fit into systems; and systems fit into the existing WMATA System as applicable. The WMATA System includes train, bus, paratransit, and support facilities as necessary for operations.
- D. As part of the Systems Integration process, the Design-Builder shall implement a systems engineering program designed to assure attainment of the reliability, availability, and safety goals of WMATA.

1.02 SUBMITTALS

- A. Submit in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, and as noted below for Contracting Officer Representative's Approval:
 - 1. Systems Integration Plan within 30 Days of Notice to Proceed (NTP).
 - 2. Systems Integration Database software licenses, if other than Microsoft Access, and database structure within 60 Days of NTP.
 - 3. Integrated System Test Plan: Within 180 Days of NTP and updated monthly thereafter.
 - 4. Systems integration design at each milestone design submittal.
 - 5. Integrated system test procedures: 60 Days before use.
 - 6. Authority notification of testing within 15 Days of testing.
 - 7. Test results - within 10 Days of completion of test.
 - 8. Operations procedures: 60 Days prior to operations training.
 - 9. Documentation including drawings, manuals, and flow charts as system integration is completed for each interface.
 - 10. Certificates of compliance - before Acceptance

1.03 QUALITY ASSURANCE

- A. Systems Integration Manager shall have performed system integration and construction start-up on two projects of similar size and complexity.

1.04 PROCESS REQUIREMENTS

- A. Establish and maintain a systematic, documented, comprehensive, verifiable, and continuous systems integration process applied throughout the duration of the Contract to implement the intent of the Contract Documents and the Issued for Construction Drawings and Issued for Construction Specifications. At a minimum, the systems integration effort shall:
1. In addition to the Initial Systems Integration Plan submitted with the Technical Proposal, provide a Systems Integration Plan that defines the process for accomplishing these goals.
 2. Utilize the System Interface Points matrix specified in Section 01 11 20, DESIGN AND PROGRAM REQUIREMENTS, to develop the Systems Integration Plan that systematically identifies a process for integrating each interface identified therein.
 3. Provide a mechanism and assign project responsibility for interface management and control, such that every interface has a single entity within the Design-Builder's organization accountable for engineering and verifying the interface.
 4. Define methods to confirm interface compatibility and demonstrate said compatibility through tests or other approved verification methods.
 5. Assure that reliability, availability, maintainability, and safety requirements are propagated through all systems and system components so as to meet the overall availability, dependability, and safety criteria set out in this Contract.
 6. Develop special drawings for the sole purpose of demonstrating coordination among crafts, disciplines and systems, and work by others.
 7. Coordinate all disciplines, civil/structural/architectural, utilities, landscaping, trackwork, mechanical, electrical, train control, communications, and traction power, as applicable, to ensure that all systems are integrated and there are no integration issues.
 8. Allow WMATA to independently assess the effectiveness of, and audit, the Design-Builder's systems integration process.
- B. Provide systems integration procedures that:
1. Define a method for tracking system integration of physical, mechanical electrical, electronic, software, and operational interfaces of all systems components and between new and existing WMATA System components.
 2. Define a method for tracking contacts needed for systems integration coordination.
 3. List all Suppliers, Subcontractors, and their interfaces.
 4. Identify major coordination milestones.
 5. Identify major system integration demonstrations.
 6. Identify conflict resolution procedures.
- C. Provide system operations descriptions in text, flow charts, and simple graphics. Describe the system's function and how the function will be achieved. The purpose of these descriptions is to ensure that the Design-Builder and WMATA have a common understanding of the system's use and operation so that WMATA receives a truly turnkey product that will function as desired. These descriptions shall be in sufficient detail to assure a complete understanding of WMATA's intent and the Design-Builder's approach to meeting that intent.

- D. The systems integration design shall be provided in stages in accordance with milestone design submittals specified in Section 01 11 20, DESIGN AND PROGRAM REQUIREMENTS:
1. The preliminary systems integration design shall be delivered with the preliminary milestone design submittal and shall:
 - a. Provide draft description of route operations and WMATA operating system as applicable.
 - b. Provide draft systems integration procedures.
 - c. Provide a working model of the Systems Integration Database.
 - d. Identify the Design-Builder's Systems Integrator.
 - e. Identify all major systems.
 - f. Identify all major coordination efforts.
 - g. Identify interfaces that are on the critical path.
 - h. Identify WMATA reliability, availability, and safety goals.
 - i. Address generally as applicable:
 - (1) _____
 - (2) _____
 - (3) _____
 - (4) _____
 - j. Provided written disposition of the preliminary design review comments 10 Days after receiving comments from the Authority.
 2. The intermediate systems integration design shall be delivered with the intermediate milestone design submittal, shall build on the preliminary systems integration design, shall incorporate the comments on the preliminary systems integration design, and shall:
 - a. Provide a final draft description of route operations and WMATA operating system as applicable.
 - b. Provide final draft systems integration procedures.
 - c. Deliver a populated Systems Integration Database.
 - d. Identify all systems, their interfaces and schedule impact.
 - e. Identify all coordination efforts.
 - f. Identify interfaces that are on the critical path.
 - g. Identify compliance with WMATA reliability, availability, and safety goals.
 - h. Address in detail as applicable:
 - (1) _____
 - (2) _____
 - (3) _____

- (4) _____
- i. Provide written disposition of the intermediate design review comments 10 Days after receiving comments from the Authority.
3. The pre-final systems integration design shall be delivered with the pre-final milestone design submittal, shall build on the intermediate systems integration design, shall incorporate the comments on the intermediate systems integration design, and shall:
- a. Provide a complete set of drawings, cut sheets, and specifications, progressed to the pre-final level.
- b. Provide the route operations description and WMATA operating system as applicable.
- c. Provide final systems integration procedures.
- d. Deliver a fully populated Systems Integration Database.
- e. Update all impacts.
- f. Identify all coordination efforts.
- g. Identify interfaces that are on the critical path.
- h. Identify compliance with WMATA reliability, availability, and safety goals.
- i. Address in detail as applicable:
- (1) _____
- (2) _____
- (3) _____
- (4) _____
- j. Provide written disposition of the pre-final design review comments 10 Days after receiving comments from the Authority.
4. The final systems integration design shall be delivered with the final milestone design submittal, shall build on the pre-final systems integration design, shall incorporate the comments on the pre-final systems integration design, and shall as applicable:
- a. Provide a complete set of Final Design Specifications and Final Design Drawings, including cut sheets, progressed to the final level.
- b. Provide the route operations description and WMATA operating system as applicable.
- c. Deliver a fully populated Systems Integration Database.
- d. Update all impacts.
- e. Identify all coordination efforts.
- f. Identify interfaces that are on the critical path.
- g. Identify compliance with Authority reliability, availability, and safety goals.

E. Integration Design and Documentation:

1. Provide full technical documentation of the integration of each interface, and when required, provide detailed descriptive and operations procedures for operation of any particular interface. Systems Integration services shall address interfaces such as interactions with Authority operations and maintenance, local fire fighters, and others as applicable. When required, provide operations and procedures manuals to define exactly how each interface is designed and operated.
2. When the systems integration process results in a complete integrated product with no special parts or features, the Issued for Construction Drawings and Issued for Construction Specifications and approved Shop Drawings shall suffice as complete documentation. When the systems integration process requires a separate element, physical or otherwise, to assure proper operation, separate and full documentation will be required. Required documentation may take the form of additional drawings, procedures, manuals, flow charts, or other material. The Contracting Officer Representative shall be the sole arbiter of what documentation is required.
3. Documentation includes test and other records that relate to the performance of any particular interface.

1.05 INTERFACE STANDARDS

- A. The use of English (US customary units) standard measures shall be consistent with the current use of those standards at the Authority.
- B. A standard shall be deemed to exist when a previously existing interface, similar to that required by this Contract, is already in use on Authority property. Standard, in this context, means that this is the standard way to make this interface at this location. Provide a system that is consistent with current practices so as to minimize effects on the balance of the system. Adhere to standards unless an explicit written waiver is granted. Notify the Contracting Officer Representative in writing of deviations.
- C. When no existing standard for an interface exists, propose an interface standard to the Contracting Officer Representative. Minimize the number of interface types.

1.06 SYSTEMS INTEGRATION DATABASE

- A. Develop and maintain a Systems Integration Database that lists all physical, mechanical, electrical, electronic, software, operational, and other interfaces. The database shall be developed in the software of the Design-Builder's choice provided the software is ODBC (Open Data Base Connectivity) compliant and the data tables can be imported directly into Microsoft Access. Provide the Contracting Officer Representative two licensed copies of the database software used and upgrades, if any are required, so that the Authority may also run the database for the Project Schedule of the Contract. Submit the database structure to the Contracting Officer Representative for Approval. Further enhancements can be added to the database provided the initial Approved data fields are maintained unchanged upon Approval of the Contracting Officer Representative. Submit updated copies of the interface database at each progress meeting and when requested by the Contracting Officer Representative.
- B. Systems Integration Database shall include a full set of reporting tools. Retain the services of a database developer who is familiar with these reporting tools and who can create custom reports. Demonstrate the developer's adequacy by providing a sample database with sample reports showing how this tool can be used to manage the system interfaces. The Contracting Officer Representative shall be the sole judge of the adequacy of the database, its structure, and the developer.
- C. Maintain, in the Systems Integration Database, a complete listing of all interfaces and their relevant characteristics. Also maintain a library of standards and specifications relevant to the system interfaces. Provide the Contracting Officer Representative with copies of such standards

and specifications. Provide samples of interface materials (e.g., connectors, protocol conversion software, and black boxes as specified in the Issued for Construction Specifications.

D. Data fields/tables to be included in the database shall include such items as:

1. Interface ID number.
2. Type of interface (e. g. physical, mechanical, electrical, electronic, software, operational)
3. Interface Level as applicable (e. g. between subsystems, between subsystems and major systems, between major systems, between the route and WMATA operating system and the community
4. Purpose of interface.
5. Side-one identification including side-one standard and side-one contact person.
6. Side-two identification including side-two standard and side-two contact person.
7. Safety standard.
8. Status.
9. Open Issues/Conflicts.
10. Person taking action.
11. Projected resolution date.
12. Scheduled test date and test results (pass/fail).
13. Scheduled demonstration date and demonstration results (pass/fail).
14. Schedule conflict (yes/no).
15. Results/Impacts.
16. List of all interfaces, their characteristics, and specification references.
17. Training requirements.
18. Contacts including name, organization, address, telephone, fax, and e-mail.

1.07 INTEGRATED SYSTEM TEST PLAN

- A. An Integrated System Test Plan shall be submitted that delineates the specific integrated system tests required. These tests will directly involve Authority personnel. Revise, update, and submit this plan for Approval monthly.
- B. The Integrated System Test Plan shall include the following:
 1. A matrix of all systems testing required by the Contract Documents and the Issued for Construction Drawings and Issued for Construction Specifications to be performed by Design-Builder, Suppliers, or Subcontractors.
 2. Samples of test reports that shall meet the minimum requirements called for in the applicable test standards or specifications.
 3. Coordinate on-Site and off-Site testing.

4. Comply with Authority notification requirements for planned tests and inspections.
5. Prepare integrated system test procedures in compliance with the Integrated Systems Test Plan and include the following information:
 - a. System to be tested
 - b. Specification Section, Article, and Paragraph relative to test
 - c. Applicable standard
 - d. Type of test (e.g. total system, sub-system, factory)
 - e. Test equipment required
 - f. Qualifications required to perform test
 - g. Step-by-step procedures for the test and parameters to be tested
 - h. Test frequency
 - i. Test data sheets or test report forms
 - j. Responsibility for test performance
 - k. Completion status
 - l. Means of tracking and recording corrective actions being taken to assure compliance with the Contract Documents.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION

3.01 SYSTEMS INTEGRATION MANAGER

- A. Appoint a Systems Integration Manager to lead and coordinate the integration efforts. Do not change the designated person without the prior written approval of the Authority.

3.02 INTEGRATED SYSTEMS TESTING PREREQUISITES

- A. A prerequisite to integrated system testing shall be that all component testing has been satisfactorily completed and that system installation is complete and ready for system integration testing.

3.03 IMPLEMENTATION

- A. Implement system integration. System integration shall have been achieved once the Design-Builder demonstrates that all systems and subsystems operate as a unit with each other and within the overall WMATA System as applicable. All systems, including but not limited to Train Control, Traction Power, Communications, Trackwork, Automatic Vehicle Location, and Electrical and Mechanical Systems shall be integrated to perform as specified in the Contract Documents and the Issued for Construction Specifications.
- B. Provide composite clearance verification drawings that demonstrate the spatial location of all utilities and their relation to other utilities, facilities, and items such as foundations. The composite clearance verification drawings shall also demonstrate clearances for train movement.

3.04 INTEGRATED SYSTEM TESTING

- A. Provide integrated system testing to assure that system components interface properly. Appropriately test all interfaces and certify that the interfaces work properly and meet all Contract requirements. Create test procedures and test data sheets that fully exercise the interface and prove that the interface performs its intended function.
- B. The Contracting Officer Representative has the right to reject any integrated system test procedure or require additional integrated system tests if, in the Contracting Officer Representative's sole opinion, the proposed test does not adequately exercise or demonstrate the performance of the interface.
- C. Notify the Contracting Officer Representative in advance of each test. All test results shall be submitted to the Contracting Officer Representative.

3.05 PERFORMANCE DEMONSTRATION

- A. Integrated system testing shall culminate in system Performance Demonstration that shall simulate all operations and shall exercise all systems and system elements as specified in Section 01 82 00, DEMONSTRATION AND TESTING.

3.06 MONITORING AND AUDIT

- A. The Authority shall have the right to monitor and audit the systems integration process. Facilitate these audits by providing information and arranging for the Authority's auditors to have access to all relevant records. Provide timely information to the Contracting Officer Representative about interface problems that are identified, and the steps being taken to resolve them. Also invite Authority to attend meetings held within the organization or with Subcontractors to resolve interface definitions or systems integration issues. Furnish Authority with minutes of such meetings within 10 Days after such meeting, regardless of whether Authority attends.
- B. In addition, Authority reserves the right to witness all interface and systems integration tests. Notify the Contracting Officer Representative of each upcoming test. The Authority reserves the right to direct supplemental testing of a component, element, subsystem, or system in the interest of verifying achievement of specified performance levels, at no cost to the Authority.

END OF SECTION

SECTION 01 11 40
SAFETY/ENVIRONMENTAL REQUIREMENTS

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes construction safety and security and environmental safety requirements for the Project including WMATA's Safety Awareness Program.

1.02 REFERENCES

- A. WMATA Construction Safety and Environmental Manual (CSEM)
- B. ANSI/ISEA 107 - American National Standard for High-Visibility Safety Apparel
- C. Occupational Safety and Health Association (OSHA)
 - 1. 29 CFR §1910
 - 2. 29 CFR §1926
 - 3. 49 CFR §172
 - 4. 49 CFR §390-397
- D. U.S. Army Corps of Engineers - Safety Manual EM-385-1-1
- E. National Commission for the Certification of Crane Operators
- F. Resource Conservation and Recovery Act (RCRA) of 1976 and amendments
- G. Metrorail Safety Rules and Procedures Handbook (MSRPH) - SOP No. 19
- H. WMATA, Office of Rail Transportation Maintenance Operations Control, Administrative Procedure OAP 200-33, Site Specific Work Plan (SSWP)
- I. WMATA Department of Bus Service Employee Handbook (BSEH)

1.03 QUALITY ASSURANCE

- A. Safety Superintendent: As specified in Section 01 11 10, DESIGN-BUILDERS KEY STAFF
- B. First Aid Attendant
 - 1. Shall have current First Aid and CPR certification. A resume, certifications, and evidence of training shall be submitted documenting education and experience.
 - 2. Shall be trained in Blood-borne Pathogens in accordance with CFR §1910.1030.

1.04 SUBMITTALS

- A. Submit to the Contracting Officer Representative for approval in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, 60 Days prior to commencing construction, unless noted otherwise:
 - 1. Documentation and Certifications of Safety Superintendent's and First Aid Attendant's, as applicable, experience in construction safety.

2. Design-Builder's Organizational Health and Safety Program Plan that includes OSHA required plans listed below that are applicable to the Work.
 - a. Site-specific Emergency Response Plan.
 - b. Site-specific Temporary Fire Protection System Plan.
 - c. Site-specific Waste Water Discharge Plan if wastewater is generated.
 - d. Site-specific Contaminated Soils Disposal Plan.
 - e. Site-specific Pollution Control Program.
 - f. Site-specific Dust and Debris Control Plan.
 - g. Site-Specific Work Plans for all work that will be performed in the right-of-way and operational ancillary rooms within the station.
 - h. Site-specific Fall Protection Plan.
 - i. Bloodborne Pathogens Exposure Control Plan.
 - j. Hearing Conservation Program if employees are exposed to continuous noise in excess of the OSHA Action Level.
 - k. Respiratory Protection Program if employees are exposed to dust (including crystalline silica) or other toxic atmospheres in excess of the OSHA permissible exposure limits. If a respiratory program is required, provide documentation of training, medical clearance for respirator use, and respirator fit testing.
 - l. Hot Work Program.
 - m. Lockout Tagout Program.
 - n. Confined Space Program.
3. Job Hazard Analysis submitted prior to each element of construction.
4. Documentation to show that all Confined Space entrants and attendants are trained in Confined Space Entry, including hands-on-training or Confined Space Awareness, as applicable, and possess applicable licenses and certifications.
5. Site-specific Confined Space Permits at least 48 hours before entry.
6. Identity of all materials or chemicals to be used on Authority property (including welding rods), material safety data sheets (MSDSs) for these products, and a brief explanation of how they will be used and if wastes will be generated. Submit MSDS Review Request Forms prior to the use these materials or chemicals.
7. CCO Certificate before crane operators work on the Site.
- B. Submit to the Contracting Officer Representative for information in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, 60 Days prior to commencing construction, unless noted otherwise:
 1. Certificates of Insurance for pollution liability coverage, if applicable, in accordance with Section 00 87 07, INDEMNIFICATION AND INSURANCE REQUIREMENTS, for Design-Builder or Subcontractors performing work involving hazardous materials, hazardous substances, hazardous wastes, or contaminated soil or water.

2. Results of noise monitoring, air monitoring, and soil, water or waste sampling submitted weekly during work activities.
3. Documentation of medical surveillance submitted monthly.
4. Identity of equipment that may generate toxic atmospheres such as gasoline or diesel-powered generators, welding, and cutting equipment.
5. Documentation of licenses and certificates required for lead or asbestos abatement, UST removal, or installation, OSHA's Hazardous Waste Operations and Emergency Response Standard (HAZWOPER), or other work requiring licensing or certification such as welding.
6. Documentation of licenses, certificates, and U.S. EPA identification numbers required for transportation of hazardous materials, hazardous substances, or hazardous wastes.
7. Documentation of licenses, permits, and certificates required for disposal of hazardous wastes including the name and address of the waste disposal facility where hazardous waste materials are to be disposed.
8. Certification of Crane Operators Certificate before the crane operator works on the Site.
9. Identification of air monitoring devices that will be used to monitor air quality at the Work Site. Provide copies of most recent manufacturer calibration and all Design-Builder field calibration checks.

1.05 SAFETY REQUIREMENTS

- A. The Design-Builder shall be responsible for all Subcontractors, Suppliers, and other persons working under its direction to comply with all requirements as noted herein, and shall disseminate these requirements to those personnel.
- B. Cooperate with representatives of the Authority and federal, state, and local regulatory agencies during Site inspections or investigations. Inspection and investigation activities do not involve directing of Design-Builder's work, but may involve interviews with Design-Builder personnel. The Contracting Officer Representative will notify the Design-Builder if any operation that is not in compliance with federal, state, or local health and safety or environmental regulations or Authority policy and procedures, and that may require the Design-Builder to stop work on a specific task or operation.
- C. Immediately report all accidents and incidents (including near misses) that occur during the performance of the Work to the Contracting Officer Representative.
- D. The storage of hazardous and flammable materials (including such items as rags, mops, paper towels, or other combustible materials contaminated with hazardous or flammable products) on Authority property, is restricted. Design-Builders seeking to store hazardous or flammable materials on Authority property must obtain approval from the Authority by submitting material safety data sheet (MSDS) for each specific chemical and the quantity of each chemical to be stored on the Site. It may not always be possible to grant permission to store hazardous or flammable materials on Authority property. If permission is granted, store the materials in compliance with the jurisdictional codes and regulations. Acquire permits for use of hazardous materials as required by the jurisdictional Fire Marshal.
- E. The use of explosives for the performance of Contract work will not be permitted without written Approval from the Contracting Officer Representative. Obtain all permits and approvals from the Jurisdictional Agencies.
- F. Prior to performing any work on or above or under the right-of-way, arrangements shall be made through the Contracting Officer Representative for access rights and power outage in accordance with SOP No. 19 contained in the Metrorail Safety Rules and Procedures Handbook and

OAP 200-33 (SSWP). All special requests for access, single tracking, power outages, escorts, and other Authority support shall be submitted in writing. Site Specific Work Plans shall be submitted for all Work conducted in Authority Right-of Way and any operational facility. Ensure that personnel complete safety training by Authority on the rules and procedures for working on the Right-of-Way before starting such work.

- G. Employ and assign to the construction work a Safety Superintendent as specified in Section 01 11 10, DESIGN-BUILDER KEY STAFF, and a separate certified First Aid Attendant for on-site work activities. A first aid station shall be established and fully equipped to meet the needs of the anticipated work force. The certified First Aid Attendant shall be on duty in the first aid station at all times when construction work is in progress except when on emergency calls. In no event shall work at the Site be performed until the approved Safety Superintendent and First Aid Attendant are available to the Project.
- H. If, at any time, the Work Site is without the services of an approved Safety Superintendent and First Aid Attendant for a period of 15 Days or more, the Work may be closed down at the discretion of the Contracting Officer Representative. The Safety Superintendent and First Aid Attendant shall be acceptable to the Contracting Officer Representative, and their performance will be reviewed and documented by the Contracting Officer Representative on a continuing basis. If the Safety Superintendent's and First Aid Attendant's effectiveness is below standard, the Design-Builder shall provide immediate replacement at the Contracting Officer Representative's direction. Once employed, the Safety Superintendent and First Aid Attendant shall not be changed without permission of the Contracting Officer Representative.
- I. For all work within Confined Spaces, comply with all OSHA, state, and local Jurisdictional Authority rules and regulations for confined spaces defined by 29 CFR §1910.146. Confined spaces shall be classified as either non-permit confined space or permit-required confined space in accordance with OSHA regulations.
- J. Prior to the initial entry into a confined space, coordinate entry with the Contracting Officer Representative and take air quality readings to establish base readings and conditions. At a minimum, oxygen, lower explosive limit, carbon monoxide, and hydrogen sulfide, shall be measured. Measurement of additional parameters may be required depending on the location of the space and potential for atmospheric hazards related to contamination or work activities.
- K. Air quality and any additional parameter reading results shall be provided to the Contracting Officer Representative for recording purposes and shall determine if atmospheric hazards exist, which would classify the space as a permit-required confined space. Continuous and follow-up monitoring of air quality shall meet OSHA requirements, and all subsequent results shall be provided to the Contracting Officer Representative.
- L. Prior to the start of any work involving non-permit confined spaces, submit the following:
 - 1. Written Job Hazard Analysis for all work to be performed in the confined space, including MSDSs for chemicals to be used in the space. Submit MSDSs for all chemicals to be used on Authority property along with a brief description of how and where they will be used and if wastes will be generated. The MSDSs will be reviewed by Authority and if approved, the materials can be used in the system. If they are rejected, submit a substitute for Authority approval. The MSDSs must be recent (less than 3 years old) and comply with the OSHA Hazard Communication Standard 29 CFR §1910.1200. The Design-Builder is responsible for complying with the requirements of the MSDSs.
 - 2. Written Emergency Response Plan, which identifies emergency responders for rescue operations.
 - 3. Written plan for a temporary Fire Protection System as specified in Section 00 74 00, PROTECTION OF PERSONS AND PROPERTY, for use during the term of the Contract, for

- Authority approval. Ensure that work activities do not adversely impact existing fire protection system(s) i.e., sprinklers, stand pipes, and portable extinguisher.
4. Identification of air monitoring devices that will be used to monitor air quality at the work Site. Provide copies of most recent manufacturer calibration and all Design-Builder field calibration checks. As a minimum, Authority requires field calibration checks on air monitoring instruments, each day (or shift) before use. The field calibration check information shall include the date, time, calibration check data, and the printed name and signature of the person performing the calibration check.
 5. Documentation to show that all personnel working in or near non-permit confined spaces are trained in Confined Space Awareness.
- M. Prior to the start of any work involving permit-required confined spaces, submit the following in addition to those items required for non-permit confined spaces:
1. Written Site-specific Confined Space Program.
 2. Confined space permit for applicable space. Each permit is valid for a maximum of 24 hours.
 3. Written Respiratory Protection Program.
 4. Documentation to show that all personnel required to wear respiratory protection have received respiratory protection training, have been fit tested for the respirators they are required to wear (applies to tight fitting respirators) and have been medically evaluated to verify that they have no health problem that would interfere with their safe use of a respirator.
 5. A warning sign to identify the work Site as a permit-required confined space requiring authorization to enter.
 6. The Design-Builder is required to notify the State at least 24 hours prior to entering permit-required confined spaces or to employ State certified Safety personnel who will manage permit-required confined space access and who will perform the required record keeping.
- N. Provide a Job Hazard Analysis prior to the start of each phase of work.
- O. Work clothing consists of long pants, shirts with long or short sleeves, sturdy work boots, and appropriate personal protective equipment. Jewelry that hangs, loose clothing, or clothing with non-detachable hoods, drawstrings, or anything that can become entangled in machinery, shall not be worn on the work Site if machinery is in use on the work Site. Personal protective equipment such as hard hats and footwear shall meet the requirements of 29 CFR §1910.135 and §1910.136. Athletic-type footwear shall not be worn on the Site.
- P. Smoking is prohibited in the Metrorail system, Metrobus system, other Authority facilities, and in Authority vehicles. The Contracting Officer Representative will select a designated smoking area outside the system or facilities and Design-Builder will be informed of its location. Design-Builder personnel found smoking in un-designated areas will be subject to removal from Authority property. The Design-Builder's Safety Superintendent shall be responsible for ensuring compliance.
- Q. The OSHA Standard for Sanitation, 29 CFR §1910.141, shall be followed. Prior to starting work, furnish for the Design-Builder's staff, necessary toilet convenience secluded from public view. They should be kept in a clean and sanitary condition and shall comply with the requirements and regulations of the area in which the work is being performed. Potable drinking water shall be provided with individual cups and sanitary conditions for the water dispenser shall be maintained. A common drinking cup and other common utensils are prohibited.
- R. For all work at heights above 6 feet, submit a detailed, site-specific Fall Protection Plan. Comply with the most stringent OSHA requirements for Walking-Working Surfaces (29 CFR Part 1910

- Subpart D), Scaffolds (29 CFR Part 1926, Subpart L), and Fall Protection 29 CFR Part 1926, Subpart M.
- S. Comply with 29 CFR §1910.95, Occupational Noise Exposure for all work on Authority property, including construction. This standard requires that employees exposed to continuous noise in excess of the OSHA Action Level, participate in a Hearing Conservation Program. Instruments used for noise measurements must be appropriate for the type of noise being measured (impact/impulse or continuous).
 - T. If the Work involves removal of paints or coatings, test the paint or coatings to determine if they contain heavy metals such as lead that require special handling and disposal considerations. As a minimum, testing shall be conducted for the eight metals (arsenic, barium, cadmium, chromium, lead, mercury, silver, and selenium) required by the Resource Conservation and Recovery Act (RCRA) of 1976 and amendments. If any of these are present, the components will require special handling and disposal to prevent exposure to workers, patrons, the community, and the environment. The Design-Builder's personnel performing lead-based paint abatement, removal, or control, shall have all licenses and accreditation required by the jurisdiction in which the work is performed. Jurisdictions that do not have their own state lead plans fall under the auspices of the Environmental Protection Agency (EPA). The Design-Builder shall provide medical monitoring to meet the requirements of 29 CFR §1910.1025 and §1926.62. As a minimum, medical monitoring shall consist of biological monitoring for lead and zinc protoporphyrin and shall include a physician's medical determination. As a minimum, biological monitoring shall be conducted immediately prior to working on Authority property where the employee may be exposed to lead, and immediately upon completion of this work. The Design-Builder shall provide training for lead workers and supervisors as required by the jurisdictional regulations. Documentation shall be submitted to the Contracting Officer Representative prior to commencement of work. All documentation shall be authentic and verifiable. All materials shall be handled and disposed of in compliance with the jurisdictional regulations. MSDSs for replacement paints/coatings must be approved by Authority prior to use on Authority property.
 - U. If the Work involves removal of insulation, flooring, cove base, mastic, ceiling tile, roofing materials, or any other material that is suspected of containing asbestos, the Design-Builder must have the materials sampled and analyzed to determine if they contain asbestos. If the Design-Builder will be handling or removing asbestos-containing materials, the Design-Builder shall have all licenses and accreditations required by the jurisdiction in which the work is performed. The Design-Builder is required to provide medical monitoring to meet the requirements of 29 CFR §1910.1001 and §1926.1101. The Design-Builder shall provide training for asbestos workers and supervisors as required by the jurisdictional regulations. Documentation shall be provided to the Contracting Officer Representative prior to commencement of work. All documentation shall be authentic and verifiable. All materials shall be handled and disposed of in compliance with the jurisdictional regulations. All replacement materials shall be free of asbestos.
 - V. Design-Builder's personnel shall not be exposed to asphalt fumes in excess of the National Institute for Occupational Safety and Health (NIOSH) recommended ceiling limit of 5 milligrams of asphalt fumes per cubic meter of air (5 mg/m³), in any 15-minute period. NIOSH provides recommendations for control of asphalt fumes.
 - W. Work that generates visible dust requires submission of a Dust and Debris Control Plan to prevent exposure of employees, patrons, and the community to dust including crystalline silica dust. Be prepared to submit air-monitoring data to demonstrate effectiveness of dust control measures. If dust cannot be controlled, submit Respiratory Protection Program in compliance with 29 CFR §1926.103 or 29 CFR §1910.134, and submit evidence of air monitoring, training documentation, medical clearance for respirator use, and respirator fit tests for tight-fitting respirators.
 - X. Ensure that the level of exhaust emissions from equipment such as air compressors and generators, are within acceptable limits to comply with clean air regulations and that workers are

not exposed to exhaust fumes or gases (carbon monoxide, sulfur dioxide, nitrogen oxides, hydrogen sulfide, aldehydes) in excess of the most stringent of occupational exposure limits.

- Y. For all work generating waste water, submit a Waste Water Discharge Plan that describes how the Design-Builder will treat and release wastewater generated by activities at the work Site, for all work that generates wastewater. Apply for Temporary Discharge Permit from local sewer authority, as required by specific site activities. Comply with Consolidated Plan prepared by Authority for Bus Divisions and Rail Yards.
- Z. For Abrasive Blasting activities, all MSDSs for abrasives shall be submitted for Approval prior to abrasive blasting activities. Only abrasives containing less than 1 percent crystalline silica shall be used for abrasive blasting.
- AA. For Hot Work activities, provide documentation on certification for personnel who perform welding on Authority property. Ventilation in accordance with OSHA regulations shall be provided for hot work such as welding, cutting, or brazing.
- BB. At the Site of the work, a First Aid Kit shall be provided and fully equipped to meet the needs of the anticipated work force. Employees expected to render First Aid or CPR shall have the proper current certifications and be trained in Bloodborne Pathogens in accordance with 29 CFR §1910.1030.
- CC. Work shall not be performed in any area in use by the public, unless specifically required by the Contract or directed in writing by the Contracting Officer Representative. Give at least 48 hours' notice to the Contracting Officer Representative before beginning such work.
- DD. In cases where the movement of Design-Builder's motorized equipment is necessary, flag persons shall be provided to warn and direct personnel and patrons away from the area of travel. Flag persons shall be certified as trained in proper flagging techniques and Design-Builder employees involved in traffic control and devices shall be certified as trained in traffic management as required by the State or local jurisdiction. Certification shall be documented.
- EE. When it is necessary to maintain use of work areas involving stations, sidewalks, elevators, platforms, bus shelters, vehicular roadways, building entrances, and corridors, protect the area with guardrails, substantial barricades, temporary fences, overhead protection, and temporary partitions as deemed necessary by the Contracting Officer Representative. Under no circumstances will yellow or orange tape strung between barricades, or the like, be acceptable as a substantial barricade. Open manholes, access openings, or other breaks in the normal walking surface shall be isolated from personnel and the public using barricades.
- FF. Sidewalks, entrances, platforms, mezzanines, or any other location where personnel or the public traverses, shall always be kept clear of obstruction, tools, ladders, work debris, and excavation materials. When necessary, temporary sidewalks or pathways shall be provided for pedestrian traffic. Temporary sidewalks or pathways shall be free of tripping hazards and protected by proper guardrails and barricades. Temporary means of egress and access shall be marked for easy recognition. If work is required above sidewalks, overhead protection shall be provided. Protected walkways shall be Approved by the Authority.
- GG. Appropriate warning signs and instructional safety signs shall be conspicuously posted in all areas involving construction activities. Work involving electrical systems or equipment in or near the area to which personnel or the public have access shall be isolated using barricades and partitions. Exposed, live circuits shall not be left accessible to personnel or the public or left dangling overhead. Before completion of the Work:
 - 1. Ensure that all wiring is insulated and properly positioned.
 - 2. Verify grounding, bonding, or both, of all metallic conduit, wiring or electrical equipment that is in the areas of contractual effort, and to which the public can make contact.

3. Notify the Contracting Officer Representative immediately in those instances where verification cannot be made.
4. Design-Builder's personnel working near the platform edge or in the right-of-way shall wear reflective safety vests with the tear-away feature, to identify them to passing trains, as directed by the Authority at the right-of-way safety training required in this Section. The safety vests shall comply with the ANSI/ISEA 107 guideline entitled American National Standard for High-Visibility Safety Apparel. All of the Design-Builder's personnel are required to attend safety training provided by the Authority before starting work near the platform edge or in the right-of-way.

HH. Use of Cranes and Derricks:

1. General Safety Requirements. Comply with the following:
 - a. 29 CFR §1910.180 through §1910.189.
 - b. 29 CFR §1926.550 through §1926.556
 - c. U.S. Army Corps of Engineers, Safety Manual EM-385-1-1.
 2. No part of any crane or derrick boom shall swing over Authority patrons, tracks, or stations without an Authority Approved shield or procedure.
 3. Placement of crane or derrick shall be coordinated with the Contracting Officer Representative.
 4. A supervisory or a red tag power outage is required. Exceptions may be granted on an individual basis after a review and approval by the Authority.
 5. Hardhat requirements are enforced.
 6. "Swing Stop" requirements may be instituted based on the hazards involved.
 7. Use of cranes and derricks over common corridor railroads and highways is under the rules of the affected common corridor railroad or highway owner.
 8. All cranes used for erecting components of precast concrete on the Project shall be equipped with Load Moment Indicating (LMI) devices or Rated Capacity Indicators (RCI), an anti-two-block device. All crane operators shall be certified to operate the type of crane used by the National Commission for the Certification of Crane Operators (CCO) and their CCO certificates shall be submitted to the Contracting Officer Representative. To increase the factor of safety when picking structural elements of the building, all cranes shall have load capacity charts reduced (de-rated) by a factor of 30 percent. Submit a lift plan showing all pertinent information demonstrating that the total load does not exceed 70 percent of the maximum before crane delivery to the Project Site.
- II. All jobsite visits for visitors and tours shall be coordinated through Contracting Officer Representative in accordance with the WMATA Construction Safety and Environmental Manual, and Design-Builder insurance requirements.

1.06 ENVIRONMENTAL SAFETY REQUIREMENTS

- A. Comply with the most stringent of federal, state, or local environmental regulations for air, water, land, and waste in order to maintain the safety and health of employees, Authority patrons, and the community.
- B. If task requires specialized licenses or certifications, for example "lead or asbestos abatement contractor's license or certified tank installer/remover", show evidence of such registration prior to

- commencement of work. If the Work requires specialized training, for example lead or asbestos training, show evidence that employees have received such training prior to commencement of work.
- C. If the Work requires transportation of hazardous materials or hazardous substances, provide evidence of Department of Transportation General Awareness Driver's Training in compliance with 49 CFR §172 and Commercial Driver's License in compliance with 49 CFR §390-397, prior to commencement of work.
 - D. All hazardous materials and hazardous substances shall be stored in "Performance Oriented Packaging" in compliance with 49 CFR §178, Subpart L.
 - E. If the Work requires disposal of hazardous wastes, disposal shall be to a Treatment/Storage/Disposal facility with a Part B Permit and the waste hauler shall have a state or local license and U.S. EPA identification number. Apply and pay for temporary EPA Generator ID number required to dispose of hazardous waste. Submit evidence of all applicable licenses and permits along with the name and address of the waste disposal facility where hazardous waste materials are to be disposed, prior to commencement of work.
 - F. If the Work involves response to spills of hazardous materials, hazardous substances or hazardous wastes, all personnel shall have appropriate training that complies with 29 CFR §1910.120.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01 11 50
SAFETY AND ENVIRONMENTAL CERTIFICATION

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes the process used to certify that the WMATA system complies with the specified safety and security requirements.

1.02 REFERENCES

- A. Federal Transit Administration
 - 1. Handbook of Transit Safety and Security Certification
 - 2. Guideline 5800.1 - Safety and Security Management Guide for Major Capital Projects
- B. Transportation Safety Institute
- C. WMATA Safety and Security Certification Program Plan

1.03 SUBMITTALS

- A. Submit the following documents for approval in accordance with Section 01 33 00, SUBMITTAL PROCEDURES:
 - 1. Safety and Security Certification Plan (SSCP) within 60 Days of NTP.
 - 2. Preliminary Certifiable Items List (CIL) for design, construction and testing within 90 Days of NTP
 - 3. Updated CIL for design, construction and testing every 60 Days for the duration of the Contract after submittal of preliminary CIL.
 - 4. Final CIL for design, construction and testing and Certification Report in accordance with FTA Guideline 5800.1, Safety and Security Management Guidance for Major Capital Projects.
 - 5. Updated Hazard and Vulnerability Resolution and Tracking System within 60 days of NTP and every 30 days for the duration of the Contract.
 - 6. Preliminary Hazard Analysis and Threat Vulnerability Assessment within 120 days of NTP.

1.04 QUALITY

- A. Design-Builder's Certification Program Representative shall have, within the last 3 years, completed a recognized certification training course provided by Federal Transportation Administration (FTA), Transportation Safety Institute (TSI), or other recognized Safety and Security Certification Training Agency.

1.05 GENERAL

- A. The purpose of the Safety and Security Certification program is to ensure that:
 - 1. The design, construction, fabrication, installation, testing, and commissioning of all safety critical facility and system elements have been evaluated for compliance with the safety and security requirements, including applicable codes and standards, and to verify their readiness for operational use.

2. WMATA's rail and bus facilities and systems are operationally safe and secure for customers, employees, and the public.
- B. The objective is to achieve an acceptable level of safety and security risk through a systematic approach to safety hazard and security vulnerability management through adherence with the design criteria, compliance with technical specifications, and testing verification.

1.06 SECURITY AND SAFETY CERTIFICATION PROCESS

- A. Participate in the WMATA Safety and Security Certification Program Plan for the duration of the Contract as follows:
 1. Design-Builder's Certification Program Representative shall manage and oversee compliance with the WMATA Safety and Security Certification Program Plan requirements.
 2. Participate in working groups with Authority Safety, Security, and Project Staff for development of the CIL and the certification status of the items on the Certifiable Items List.
 3. Identify certifiable items and complete development of the Authority provided sample CIL to address all Contract specific items requiring safety and security certification based on the Design-Builder's design, construction and testing plan, and input from the working group
 4. Identify the safety and security design criteria, technical specifications, and testing requirements, including applicable codes and standards, for each certifiable item on the CIL.
 5. Demonstrate that the final design complies with the identified safety and security requirements for those items on the CIL.
 6. Demonstrate that the construction, fabrication, and installation comply with the safety and security requirements for those items on the CIL.
 7. Demonstrate through testing the compliance with the safety and security requirements for those items on the CIL.
 8. Identify and categorize project hazards by their potential severity and probability of occurrence. Analyze each hazard for its potential impact to the Project.
 9. Evaluate the project for susceptibility to potential threats and identify design corrective actions that can reduce or mitigate the risk of serious consequences from a security incident. Analyze each identified threat for its potential impact to the project.
 10. Provide and update a tracking system for all hazards and threat vulnerabilities identified during preliminary and final design.
 11. Maintain a document management system within the Authority's Project Management Software System (PMSS) that enables the retrieval of verification documentation that demonstrates compliance with the safety and security requirements in designs, construction, fabrication, installation, and testing for each item in the CIL. Verification documentation may consist of design drawings, analysis or calculation sheets, fabrication approvals, inspection, test results, certificates, or other supporting documents.
 12. Complete the design, construction/installation, and testing sections of the CIL as compliance is achieved and provide the required CIL verification documentation to WMATA as the design, construction and testing progresses.
 13. Prepare Certification Report.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

3.01 CERTIFICATION PROGRAM REPRESENTATIVE

- A. Appoint a Certification Program Representative with the qualifications noted in this Section to lead and coordinate the certification process.

3.02 SAFETY AND CERTIFICATION PROGRAM WORKSHOPS

- A. Conduct Safety and Security workshops on a monthly basis for the duration of the Contract.

3.03 CIL AND FINAL REPORT

- A. Prepare, update and complete CIL throughout the Project Schedule of the Contract and prepare final CIL and Certification Report prior to Acceptance of the Project.

END OF SECTION

SECTION 01 11 60
IDENTIFICATION AND SECURITY

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes identification and security requirements for work on Authority Property.

1.02 DEFINITIONS

- A. Authority Property: Includes the Authority's Rail and Bus Operating System and Authority administrative facilities, whether under construction or being rehabilitated.

1.03 SUBMITTALS

- A. Forms necessary to initiate background check process, including color copy of the front and back of Design-Builder personnel's Driver License or other accepted form of identification.

1.04 PRE-EMPLOYMENT CRIMINAL BACKGROUND CHECK

- A. Criminal background checks of all Design-Builder employees working at a WMATA facility on this Contract will be required pursuant to Metro Policy/Instruction 7.40/0, Background Screenings and Metro Policy/Instruction 6.10/5, Metro Employee Identification Cards, Section 5.04. Eligibility for access to WMATA property will be based on WMATA's pre-employment Criminal Background Check criteria. WMATA will provide the Design-Builder employees with background check consent forms that the Design-Builder's employees must complete and sign. The forms will require the Design-Builder employees to appear in person, provide their full legal names, including middle initials if applicable, as well as their Social Security numbers, in addition to other information that will be necessary to conduct the background checks. The operating hours are Monday through Friday from 7:30 AM to 3:30 PM except holidays. Upon receipt of the completed, signed forms, WMATA will conduct background checks including criminal court searches and Social Security Number verifications of the Design-Builder employees. If there is derogatory information that would disqualify a Design-Builder employee from receiving a badge to access WMATA property, the Design-Builder and its employee will be notified that the background check failed. The completed forms are secured in a locked file cabinet and are destroyed 1 year after the expiration date on the Design-Builder employee's badge. These background checks are expected to take 1 business day for processing. The Design-Builder employee must allow sufficient time for completion. The background check is free of charge.
- B. Background checks are conducted to promote a safe work environment and to protect our company's most important assets: the people we serve and the people with whom we serve. This enables WMATA management to make prudent decisions and maintain a high quality workforce. Design-Builder employees who successfully complete the background checks are eligible to enter WMATA property once they are issued a Design-Builder badge. Design-Builder employees who do not authorize background checks or whose background checks are unsatisfactory will not be granted Design-Builder badges or access to WMATA property. The records generated by these background checks that contain private information will not be disclosed unless disclosure is required under the PARP/Privacy Policies.

1.05 IDENTIFICATION AND SECURITY CHECKS

- A. All employees of the Design-Builder and its Subcontractors working on WMATA projects shall prominently display an identification badge issued by the Authority.
- B. Design-Builder Photo ID Badges: Individuals requiring the Design-Builder photo ID badges are subject to the following identification and security checks

1. Provide valid and current photo identification, such as a State-issued Driver's License, State-issued Identification Card, U.S. Passport, or identification from the Immigration and Naturalization Service, such as a Permit to Work or a Permanent Residence Card (Green Card).
2. The individual's identification may be matched against the FBI Watch List and security clearance.
3. The photo identification will be matched against the Design-Builder's list of employees authorized to work on a particular job.

1.06 NON-CONFORMANCE

- A. In the event any employee of the Design-Builder or its Subcontractors fails to adhere to the requirements of this Section, the employee or Subcontractor will be removed from the job until non-conformance is corrected. Such removal will not be grounds for any time extension or additional compensation.

1.07 ADMINISTRATION

A. Design-Builder Photo ID Badge:

1. A Design-Builder Photo ID badge will be required if the individual will be present on Authority Property. Issuance of the Design-Builder Photo ID badge will require the individual to schedule and report to the Authority's Jackson Graham Building at 600 Fifth Street, NW, Washington DC for processing.
2. Design-Builder Photo ID badge takes approximately 14 Days to obtain unless personnel have lived outside of the United States within the last year, in which case the background checking process will require additional time to complete.
3. It will be the Design-Builder's responsibility to immediately notify the Contracting Officer Representative if a worker loses his or her Design-Builder Photo ID badge. A fee of \$25 will be charged for each lost badge.
4. All Design-Builder Photo ID badges shall be returned to the Contracting Officer Representative when they are no longer needed.
5. Design-Builder Photo ID badges shall be renewed on an annual basis.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01 14 10
ACCESS TO SITE

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section specifies requirements for gaining access to Site and describes work hours the Design-Builder will be allowed in WMATA Trackway and Operating Facilities.

1.02 DEFINITIONS:

- A. Non-Revenue Hours of Work – When the Authority is not operating revenue service trains and the track is made available to the Design Builder.
- B. Revenue Service Adjustment (RSA) Hours of Work – There are two service conditions:
 - 1. Single tracking when a single track is made available to the Design-Builder to work while the Authority operates trains in both directions on the opposite track.
 - 2. Shutdowns when both tracks of a section of line are made available to the Design-Builder to work.

1.03 IDENTIFICATION CARDS

- A. All Design-Builder personnel needing access to trackway or WMATA operating facilities must have WMATA Safety Certification badges. Additionally, Design-Builder shall provide its personnel, visiting or working at the Site, with Design-Builder Photo ID Badges. Both badges shall be displayed in a prominent manner on each person while engaged in the Work. Access to the Site will be granted only to properly accredited representatives of the Design-Builder and its Subcontractors when they have completed the required WMATA safety certification and training and received Photo ID Badges.

1.04 HOURS OF WORK

- A. Work such hours per shift, with or without overtime, as many shifts per day and as many days per week as necessary to complete the various parts of the Work and the entire Work within the dates specified and within the restrictions listed below.
- B. Work within WMATA trackway, on station platforms and within WMATA operating facilities affecting revenue service shall be carried out during non-revenue hours and/or Revenue Service Adjustment (RSA) hours and under the oversight of WMATA escorts.
- C. Coordinate and schedule all work with the Contracting Officer Representative to ensure that the Design-Builder's activities do not interfere with the operation of or access to the Authority's facilities.
- D. Typical working hours not requiring access to track or other Authority facilities that require escorts for access are 0700 to 1600.
- E. Project Schedule, as required in Section 01 32 20, CONTRACT PROGRESS REPORTING, shall include a detailed construction-phasing plan based on the Hours of Work commitments by the Authority. If the phasing plan requires RSA hours, these shall be identified by the Design-Builder in the Project Schedule by calendar quarter within which they will occur.
- F. There are Federal Holidays that occur on Monday's throughout the year creating a 3-day weekend. In addition to the Work Hours indicated in Article 1.04G herein, on holiday weekends

listed below, single track RSAs will be permitted between 2200 Friday and 0400 Tuesday and complete shutdown RSAs will be permitted between 0300 Saturday and 0400 Tuesday.

1. Martin Luther King Day
 2. President's Day
 3. Memorial Day
 4. Columbus Day
 5. Labor Day
- G. The Hours of Work associated with non-revenue and RSAs and the frequency that these Hours of Work will be available to the Design-Builder are noted below. Also included are specific dates for the first year of construction which shall be incorporated into the Project Schedule by the Design-Builder as required work dates.
1. Non-revenue (0100 to 0400) – 2 of 5 weeknights
 2. 2-day weekend single tracking (2200 Friday to 0400 Monday) - 1 time per mo.
 3. 3-day weekend single tracking (2200 Friday to 0400 Tuesday) - 1 time per mo.
 4. 2-day weekend shutdown (0300 Saturday to 0400 Monday) - 4 times per mo.
 5. 3-day weekend shutdown (0300 Saturday to 0400 Tuesday) - 2 times per yr.
- H. RSAs will not be permitted during the following periods in any calendar year:
1. March 12 through April 21
 2. The first Saturday of June (Race for the Cure)
 3. The week containing July 4 including the preceding and succeeding weekends.
 4. The 4th Sunday of October (Marine Corps Marathon)
 5. Thanksgiving eve through the following Monday
 6. Christmas eve and Christmas day
 7. New Year's eve and New Year's day
- I. Many times during a calendar year there are large events scheduled in the Washington DC area that require special attention by WMATA. These events are typically scheduled no sooner than 90 Days in advance of their occurrence. Plan no more than three such events in any calendar year. WMATA will notify the Design-Builder of the scheduling of these events as soon as they become known. If the event conflicts with a scheduled RSA, then the Design-Builder RSAs will need to be advanced or delayed 1 week unless there is conflict with the black-out periods listed above.
- J. There shall be no early endings of the working days on nights of regularly scheduled sporting events such as baseball, basketball, hockey, or soccer.
- K. Emergencies, excluding Acts of God, arise during the course of Metrorail operations that could cause the cancellation of a scheduled RSA. Anticipate no more than four cancellations within a calendar year. If an emergency occurs, then the Design-Builder RSAs will need to be delayed 1 week unless it conflicts with the black-out periods listed above.

- L. Construction of the Potomac Yard Metrorail Station and its facilities will require the operation of heavy equipment adjacent to the active WMATA railroad. Equipment operations that pose a threat to the railroad right-of-way cannot occur during revenue rush hour operations but can occur, on a limited basis, during non-rush hour operations with the presence of a WMATA flagperson. A flagperson will only be supplied with a 1-week notice from the Design-Builder. An example of restricted equipment operations would be a crane positioned such that its load or the crane itself would breach the railroad right-of-way in the event of a failure or accident. Positioning or operating equipment that eliminates this risk would permit operation to proceed without restrictions.
- M. Construction of the Potomac Yard Metrorail Station and its facilities will require the operation of heavy equipment adjacent to the active CSX railroad. The Design Builder shall coordinate all activities with CSX and any operations that pose a threat to the CSX railroad right-of-way cannot occur without the expressed written permission of CSX and the presence of a CSX flagperson.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01 18 00
PROJECT UTILITY INTERFACE

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section specifies the Design-Builder's responsibilities regarding interface with Utility companies and agencies.

1.02 SUBMITTALS

- A. Submit sets of drawings and specifications to those Utilities and agencies affected by the design as required. All transmittals and requests to agencies and Utilities for approvals, reimbursable estimates, and other data shall indicate the submittal stage. Provide the Contracting Officer Representative with an electronic copy of all transmittal letters and other communications and replies thereto as each is sent to or received from a Utility or agency. The Utilities and agencies noted below shall be provided with the following review submittals. Comply with the requirements of each Utility and agency:
 - 1. Copies of each of the composite utility plans,
 - 2. Copies of each of the appropriate individual utility plans and profiles,
 - 3. Copies of all pertinent Sections of the specifications, and
 - 4. Copies of index sheets, key plans, and general information drawings as appropriate. Prepare key (location) plans as necessary to cover all the disciplines required to do the Work. Do not prepare individual key plans for each discipline.
- B. Complete list of affected Utilities and agencies to the Contracting Officer Representative:
 - 1. Confirmation of approval by the affected Utility or agency of the treatment, design, and standards must accompany the submittal to the Contracting Officer Representative of the Design Drawings and Design.
 - 2. Shop Drawings for utility connections and special facilities during construction.

1.03 UTILITIES AND AGENCIES

- A. The Design-Builder is responsible for coordination, treatment, and design of all utilities or properties owned or controlled by Utilities or agencies. An active effort shall be made by the Design-Builder as early in the design as possible to coordinate with all affected Utilities and agencies to determine their current standards. Prepare a new drawing(s) reflecting the latest standards and code requirements.
- B. The Utilities and agencies listed hereinafter may not be all inclusive. Recommend additional agencies/utility companies as appropriate. Determine all affected Utilities including but not limited to the following agencies or their successor agencies and submit complete list to the Contracting Officer Representative:
 - 1. Verizon
 - 2. Washington Gas
 - 3. Dominion Virginia Power
 - 4. Virginia American Water Company

5. Comcast
6. Cox Cable
7. Plantation Pipeline Company
8. Other identified utility owner (cable, fuel lines, etc.) whose facility will be affected by the construction

PART 2 – PRODUCTS

2.01 APPROVED PRODUCTS

- A. All products to be utilized on any utility shall be as approved by that Utility.

PART 3 – EXECUTION

3.01 DESIGN, CONSTRUCTION, AND MAINTENANCE OF UTILITY FACILITIES

- A. All work performed by the Design-Builder on any utility, if any, shall be performed in accordance with the requirements of that Utility and the full knowledge of the Contracting Officer Representative.
- B. Indicate in the Design Drawings where Utilities will perform design, construction, and maintenance of their facilities in relation to this Contract. Provide the engineering design as specified for facilities owned by Utilities including service connections, facility modifications, and relocations as applicable.
- C. Provide the Utilities with detailed Shop Drawings for utility connections and special facilities during construction.

END OF SECTION

SECTION 01 25 00
CONTRACT MODIFICATION PROCEDURES

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section specifies procedures for making Contract Modifications.

1.02 GENERAL

- A. Out-of-Scope Items: Specific approval must be received from the Contracting Officer Representative prior to doing work, which may be considered to be outside the Scope of Work and for which additional reimbursement may be requested in accordance with the General Conditions.
- B. Requests for additional work may be initiated by the Authority. Claims for an increase in Contract Price shall be thoroughly documented as specified in the General Conditions and directed to the Contracting Officer Representative who, upon Approval, will issue a Modification stating the amount of the increase in fee.
- C. Should the Design-Builder be excused from the provision of certain services identified in this Scope of Work, the Design-Builder will be requested to give a credit to the Authority. The offer for the credit shall be documented and directed to the Contracting Officer Representative who, upon Approval at the appropriate level, will issue a modification.
- D. Should the Authority approve design modifications that result in the Design-Builder being excused from certain services identified in this Scope of Work, the Design-Builder will be requested to give a credit to the Authority. The offer for the credit shall be documented and directed to the Contracting Officer Representative who, upon Approval at the appropriate level, will issue a modification.

1.03 TIME AND MATERIALS WORK FOR THE CONSTRUCTION EFFORT

- A. In the event equitable adjustment cannot be agreed to in a timely manner, the Authority reserves the right to order work on a time and materials basis as specified in the General Conditions. When work is ordered under this Section, notwithstanding the provisions of other Sections, compensation for the work shall be determined as hereinafter provided and shall constitute the total compensation to be paid for the changes to the Work. The methods, labor, materials, and equipment used in the performance of such work shall be subject to the Approval of the Authority.
- B. Work performed by or for the Design-Builder: labor, materials, services, and equipment shall be furnished by the Design-Builder or by a Subcontractor or by others on behalf of the Design-Builder. The Design-Builder will be paid therefor as hereinafter provided, except where agreement has been reached to pay in accordance with Article 1.03C. below.
1. Labor: The cost of labor used in performing the work, whether the employer is the Design-Builder, Subcontractor, or other forces, will be the sum of the following:
- a. The gross actual wages paid including income tax withholding but not including any employer payments to or on behalf of workmen for health and welfare, pension, vacation, insurance, and similar purposes.
- b. To the actual gross wages, as defined in Article 1.03B.1.a above, will be applied a percentage based upon current applicable labor rates concerning payments made to or on behalf of workmen other than actual wages, which percentage shall constitute full compensation for all payments other than actual gross wages as defined in Article 1.03B.1.a above and subsistence and travel allowance as specified in Article 1.03B.1.c below. The Design-Builder shall compute a separate percentage for each craft or a composite percentage for all crafts, if so approved by the Authority. All computed percentages shall be

- submitted to the Contracting Officer Representative for Approval within 30 Days after start of construction work or as directed by the Contracting Officer Representative prior to time and materials work being performed.
- c. Subsistence and travel allowance paid to such workmen if required by collective bargaining agreements. The charges for labor shall include all classifications through foremen when engaged in the actual and direct performance of the Work. They shall not include charges for such overhead personnel as assistant superintendents, superintendents, office personnel, timekeepers, and maintenance mechanics.
2. Materials: The cost of materials required for the accomplishment of the Work will be delivered cost to the purchaser, whether Design-Builder, Subcontractor, or other forces, from the Supplier thereof, except as the following are applicable:
 - a. If a cash or trade discount by the actual supplier is offered or available to the purchaser, it shall be credited to the Authority notwithstanding the fact that such discount may not have been taken.
 - b. If materials are procured by the purchaser by any method, which is not a direct purchase from and a direct billing by the actual supplier to such purchaser, the cost of such materials, including handling, shall be deemed to be the price to the actual Supplier as determined by the Contracting Officer Representative.
 - c. If the materials are obtained from a supply or source owned wholly or in part by the purchaser, payment therefor will not exceed the price paid by the purchaser for similar materials furnished from said source on Contract items or the current wholesale price for such materials delivered to the job Site, whichever price is lower.
 - d. The cost of such materials shall not exceed the lowest current wholesale price at which such materials are available in the quantities concerned, delivered to the job Site, less any discount as provided in Article 1.03B.2.a above.
 - e. If the Design-Builder does not furnish satisfactory evidence of the cost of such materials from the actual supplier thereof, the cost shall then be determined in accordance with Article 1.03B.2.d above.
 - f. The Design-Builder shall not be compensated for indirect costs and profit on Authority-furnished materials.
 3. Equipment: The Design-Builder will be paid for the use of equipment in accordance with the Contract. The Design-Builder shall furnish all data, which might assist the Authority in the establishment of such rates.
 - a. Operators of equipment will be paid under Article 1.03B.1 above.
 - b. Small tools (defined as equipment less than \$2,000 in acquisition costs) are computed at a maximum of 5 percent of direct base labor wages.
 4. Subcontracts: The cost for Subcontract work at any tier will be the actual cost to the Design-Builder/Subcontractor for work performed by a Subcontractor as computed in accordance with Articles 1.03B.1 through 1.03B.3 above. For the purposes of this Article, Subcontractor is defined as an individual, partnership, corporation, association, joint venture, or any combination thereof, who contracts with the Design-Builder to perform work or labor or render service on or about the work. The term Subcontractor shall not include those who supply materials only. When work paid for on a time and materials basis is performed by forces other than the Design-Builder's organization, the Design-Builder shall reach agreement with such other forces as to the distribution of the payment made by the Authority for such work, and no additional payment

- therefore will be made by the Authority by reason of performance of the Work by a Subcontractor or by others.
5. To the totals, completed as indicated in Articles 1.03B.1 through 1.03B.4, shall be added field office overhead as follows:
 - a. If the costs determined above do not exceed \$100,000 and the adjustment in time for Contract performance is 10 Days or less, the markup shall be computed in accordance with Article 1.04 below.
 - b. In all other cases, the most recent audited daily field office overhead rate will be used.
 6. Home Office General and Administrative (G&A) costs will be determined using the most recent audited rate at the time the work was accomplished. A fixed rate of 3 percent will be used in the absence of an audited rate.
 7. Profit will be negotiated as provided in Article 1.07 below.
 8. A percentage for Design-Builder's bond, not to exceed 1 percent, may be added.
- C. Special items of work: If the Contracting Officer Representative and the Design-Builder, by agreement, determine that either: an item of time and materials work does not represent a significant portion of the total Contract Price, or such item of work cannot be performed by the forces of the Design-Builder or the forces of any of its Subcontractors, or it is not in accordance with the established practice of the industry involved to keep the records, which the procedure outlined in Article 1.03B above would require, charges for such special time and materials work item may be made on the basis of invoices for such work without complete itemization of labor, materials, and equipment rental costs. To such invoiced price, less a credit to the Authority for any cash or trade discount offered or available, whether or not such discount may have been taken, will be added a negotiated amount not to exceed 5 percent of the discounted price, in lieu of the negotiated lump sum not to exceed the percentages provided for in Article 1.03B above.
- D. Records: The Design-Builder shall maintain its separate records in such a manner as to provide a clear distinction between the direct costs of work paid for on a time and materials basis and the cost of other operations.
1. The Design-Builder shall prepare, and furnish to the Contracting Officer Representative one electronic copy of report sheets of each day's work paid for on a time and materials basis the day after such work was performed. The daily report sheet shall itemize the materials used, and shall cover the direct cost of labor and the charges for equipment rental, whether furnished by the Design-Builder, Subcontractor, or other forces, except for charges described in Article 1.03C above. The daily report sheet shall provide names or identifications and classifications of workmen, the hours worked, and the size, type, and identification number of equipment, and hours operated.
 2. Material charges shall be substantiated by valid copies of vendor's invoices. Such invoices shall be submitted with the daily report sheets, or if not available, they shall be submitted with subsequent daily report sheets. Should said vendor's invoices not be submitted within 60 Days after the date of delivery of the material or 15 Days after acceptance of the Work, whichever comes first, the Authority reserves the right to establish the cost of such materials at the lowest current wholesale prices at which such materials are available in the quantities concerned delivered to the location of the Work less any discounts provided in Article 1.03B.2.a above.
 3. Said daily report sheets shall be signed by the Design-Builder or its authorized agent.
 4. The Contracting Officer Representative will compare the Authority's records with the Design-Builder's daily report sheets, make any necessary adjustment, and compile the costs of work paid for on a time and materials basis on daily time and materials work report forms furnished by the Authority. When these daily reports are agreed upon and signed by both parties, they shall

become the basis of payment for the work performed, but shall not preclude subsequent adjustment based on a later audit. The use of any specific Authority form, such as the Daily Report – Labor, Materials, & Equipment Form C-113, to segregate change order costs does not, in and of itself, invoke the provisions of this Article 1.03 or other provision of this Contract.

- E. Payment: Payment as provided in Articles 1.03B and 1.03C above shall constitute full compensation to the Design-Builder for performance of work paid for on a time and materials basis and no additional compensation will be allowed therefore.
- F. Design: Design efforts associated with contract modifications as defined above shall not exceed a dollar amount equal to 15% of the construction cost associated with the contract modification.

1.04 EQUITABLE ADJUSTMENT FOR MINOR CONTRACT MODIFICATIONS FOR THE CONSTRUCTION EFFORT

- A. When the Authority and Design-Builder agree to an additive or deductive amount for a Modification to this Contract made pursuant to this Contract when the fair and reasonable price in aggregate amount does not exceed \$100,000, and further agree to an adjustment in the time for Project Schedule resulting from said Modification, which increases or decreases the completion date 10 or less Days, the equitable adjustment in Contract amount shall consist of the sum of the following:
 - 1. Direct labor, material, and equipment costs as agreed to by the Authority and Design-Builder (small tools, defined as equipment less than \$2,000 in acquisition costs, are included in equipment costs and computed at a maximum of 5 percent of direct base labor wages.)
 - 2. Job Office Overhead costs, the sum of which shall be limited to a maximum of 10 percent of direct labor costs, including fringe benefits, but excluding FICA, FUTA, and State Unemployment Insurance (SUI); a maximum of 10 percent of direct material costs; a maximum of 5 percent of direct equipment costs (including small tools); and a maximum of 5 percent of Subcontract costs.
 - 3. Home Office General and Administrative (G&A) costs are computed using the most recent audited rate or a fixed rate of 3 percent in the absence of an audited rate.
 - 4. Profit will be determined in accordance with the guidelines specified in Article 1.06 below.
- B. In using the above rates, the following shall apply:
 - 1. Payroll Tax (FICA, FUTA, and SUI) amounts are added immediately after direct and indirect costs are totaled.
 - 2. Subcontractors' indirect costs and profit shall be computed in the same manner as above.
 - 3. Indirect costs shall not be duplicated in direct costs.
 - 4. When the Project Schedule is increased, the change in Contract amount for direct and indirect costs computed by application of the above rates includes costs of impact and extended performance due to the time extension and no further consideration of costs arising from the specific Modification and cited pending change orders (PCOs) will be given. The Design-Builder shall not receive both a percentage and a daily rate markup for job office overhead costs when a time extension to the Project Schedule is recognized.
 - 5. Bond costs will be allowed at actual cost without markup.
- C. Equipment rates shall be determined from prior Authority audits. In the absence of audited rates for equipment owned or controlled by the Design-Builder, hourly rates shall be computed in the same fashion as described in Article 1.07D.

1.05 COST OR PRICING DATA

- A. The Design-Builder shall submit to the Contracting Officer Representative, either actually or by specific identification in writing an electronic copy of cost or pricing data under the conditions described in this Paragraph and certify that, to the best of the Design-Builder's knowledge and belief, the cost or pricing data submitted is accurate, complete, and current as of the date of execution, which date shall be as close as possible to the date of agreement on the negotiated price of the Contract Modification. The cost or pricing data shall be submitted at the time the Design-Builder submits its proposal for the pricing of any Modification to this Contract, whether or not cost or pricing data was required in connection with the initial pricing of the Contract, when the Modification involves aggregate increases or decreases in costs plus applicable profits expected to exceed \$100,000, or less at the discretion of the Authority Representative.
- B. The submittal of certified cost or pricing data will not be required if the price is based on adequate price competition, established catalog or market prices of commercial items sold in substantial quantities to the general public, or prices set by law or regulation. The Design-Builder agrees that the terms "adequate price competition" and "established catalog or market prices of commercial items sold in substantial quantities to the general public" will be determined by the Authority in accordance with the guidelines as set forth in Subpart 15.8 of the Federal Acquisition Regulations (48 CFR 15.8).
- C. Cost or pricing data consists of all facts existing up to the time of agreement on price, which prudent buyers and sellers would reasonably expect to have a significant effect on the price negotiations for the Modification. The definition of cost or pricing data embraces more than historical accounting data; it also includes, where applicable, such factors as Subcontractor, Supplier, and vendor quotations, nonrecurring costs, changes in construction methods, unit cost trends such as those associated with labor efficiency and any management decisions which could reasonably be expected to have a significant bearing on costs under the proposed Modification and the Contract Work. Cost or pricing data consists of all facts, which can reasonably be expected to contribute to sound estimates of future costs as well as to the validity of costs already incurred. Cost or pricing data, being factual, is that type of information, which can be verified. Because the certificate pertains to cost or pricing data, it does not make representations as to the accuracy of the Design-Builder's judgment on the estimated portion of future costs or projections. The certificate does, however, apply to the data upon which the Design-Builder's judgment is based.

1.06 CONTRACT MODIFICATIONS, REQUIREMENTS FOR PROPOSALS, PRICE BREAKDOWN, NEGOTIATION OF PROFIT

- A. The Design-Builder, in connection with any proposal it makes for a Contract Modification as specified in Section 00 75 00, ACCOUNTING AND RECORD KEEPING, shall furnish a price breakdown, itemized as required by the Contracting Officer Representative. Unless otherwise directed, the breakdown shall be in sufficient detail to permit an analysis of all material, labor, equipment, Subcontract, and overhead costs, as well as profit, and shall cover all work involved in the Modification, whether such work was deleted, added, or changed. Any amount claimed for Subcontracts shall be supported by a similar price breakdown. In addition, if the proposal includes a time extension, a justification therefore shall also be furnished. The original and one electronic copy of the proposal, together with the price breakdown and time extension justification, shall be furnished by the date specified by the Contracting Officer Representative.

- B. Where profit is negotiated as an element of price, with either the Design-Builder or Subcontractor, a reasonable profit will be negotiated for each Modification by using the following procedure as a guide:

1. Breakdown:

Factor	Rate	Weight	Value
Degree of risk	20		
Relative difficulty of work	15		
Size of job	15		
Project Schedule	15		
Design-Builder's investment	5		
Assistance by Authority	5		
Subcontracting	25		
TOTAL	100%		

2. Based on the circumstances of each Modification, each of the above factors shall be weighted from 0.03 to 0.12 as indicated below. The value shall be obtained by multiplying the rate by the weight. From the value column when totaled the fair and reasonable profit can be determined under the circumstances of the particular Modification.
- Degree of risk: Where the modified work involves no risk or the degree of risk is very small, the weighting should be 0.03. As the degree of risk increases, the weighting should be increased up to a maximum of 0.12. Lump sum items will have generally a higher weighted value than unit price items for which quantities are provided. Other things to consider: The portion of the Work to be done by Subcontractors, nature of work, where work is to be performed, reasonableness of negotiated costs, amount of labor included in costs, and whether the negotiation is before or after performance of work.
 - Relative difficulty of work: If the modified work is most difficult and complex, the weighting should be 0.12 and should be proportionately reduced to 0.03 on the simplest of jobs. This factor is tied in to some extent with the degree of risk. Things to consider: The nature of the Work, by whom it is to be done, the location, and the time schedule.
 - Size of job: All modified work not in excess of \$100,000 shall be weighted at 0.12. Work estimated between \$100,000 and \$5,000,000 shall be proportionately weighted from 0.12 to 0.05. Work from \$5,000,000 to \$10,000,000 shall be weighted at 0.04, and work in excess of \$10,000,000 at 0.03.
 - Period of performance: Modifications providing for an extension of time in excess of 30 Days shall be weighted at 0.12. Jobs of lesser duration shall be proportionately weighted to a minimum of 0.03 for jobs not to exceed 1 Day. No weight will be granted for this factor where there is no extension of the Project Schedule or interim dates due to work under this Modification.
 - Design-Builder's investment: Should be weighted from 0.03 to 0.12 on the basis of below average, average, and above average. Things to consider: Amount of Subcontracting, mobilization payment item, Authority-furnished property, and method of making progress payments.

- f. Assistance by Authority: Should be weighted from 0.12 to 0.03 on the basis of average to above average. Things to consider: Use of Authority-owned property, equipment and facilities, and expediting assistance.
 - g. Subcontracting: Should be weighted inversely proportional to the amount of Subcontracting. Where 80 percent or more of the Work is to be Subcontracted, the weighting should be 0.03, and such weighting proportionately increased to 0.12 where all the work is performed by the Design-Builder's own forces.
- 3. When considered necessary because of very unusual circumstances or local conditions, the range of weight may be increased to an upper limit of 0.15 if supported by adequate justification and Approved by the Authority.
- 4. When negotiations between the Contracting Officer or the Contracting Officer Representative and the Design-Builder are joined to determine an equitable adjustment for a Modification of this Contract, the Design-Builder shall encourage involved Subcontractor(s) to be present and to present their cost data and to participate in the resolution of a fair and equitable adjustment. In any event, if after reasonable effort, a negotiated settlement cannot be reached between the Contracting Officer or the Contracting Officer Representative and the Design-Builder and the Subcontractor(s) involved, then at the request of the Subcontractor(s) concerned, the Contracting Officer or the Contracting Officer Representative may process Part 1 of a two-part Modification to cover the direct costs only, as agreed upon or, if not agreed upon, as determined unilaterally by the Contracting Officer or the Contracting Officer Representative. Subcontractor(s) requests for a Part 1 Modification shall be submitted to the Design-Builder, and the Design-Builder shall forward such requests promptly to the Contracting Officer Representative. Any payments received by the Design-Builder under this procedure shall be passed along within 10 Days thereafter to the Subcontractor concerned.
- C. Change orders: When the Contracting Officer directs a change in accordance with the provisions of this Contract, the Design-Builder shall identify in its proposal for equitable adjustment the network activities that precede and follow the change order work activities. If the change order work activities are performed concurrently with existing network activities, those concurrent network activities shall be identified. If the change order work activities restrain network activities, those restraints shall be identified.

1.07 PAYMENT FOR USE OF EQUIPMENT

- A. The following methods of determination of equipment costs shall apply to all adjustments to Contract Prices arising under the provisions of the Contract except for Section 00727, TERMINATION FOR CONVENIENCE OF THE AUTHORITY, provisions thereunder.
- B. Allowable ownership and operating expense for construction plant and equipment in sound workable condition, owned by the Design-Builder, Joint Venture, Partnership, organizations under common control, and any equipment under lease purchase or sale-lease back agreements, will be paid for at hourly rates applicable to the Project Schedule, published in the Rental Rate Blue Book for Construction Equipment (Blue Book) by PRIMEDIA Information, Inc., by applying the following formula: the Regular Hourly Rate shall be 75 percent of the sum of the monthly rate (area adjustment map not used) divided by 176 and the estimated operating cost per hour. Regular Hourly Rate shall be full compensation for equipment ownership and operating expenses and shall include the cost of fuel, oil, lubricants, supplies, spare parts, repairs and maintenance, major overhauls, mechanics and servicing labor, depreciation, storage, insurance, interest, taxes, record keeping, and all incidentals. The cost of equipment operators is not included. For forward pricing, the Blue Book rates in effect at the time of negotiations shall apply. For retrospective pricing, the Blue Book rates in effect at the time the work was performed shall apply. Manufacturers ratings and manufacturer-approved modifications shall be used to classify equipment for the determination of the Regular Hourly Rate. The hourly rates are calculated as shown in the following example:

	Regular Hourly Rate	Multi-shift Hourly Rate	Standby Hourly Rate
Monthly Rental Cost	\$6,070.00	\$6,070.00	\$6,070.00
Divided by Hours	176	176	176
Hourly Rental Cost	\$34.49	\$34.49	\$34.49
Hourly Operating Cost	18.20	18.20	18.20
Subtotal	52.69	52.69	52.69
Adjustment	75%	75%	75%
Regular Hourly Rate	39.52	39.52	39.52
Status	100%	60%	40%
Payment Rate	\$39.52	\$23.71	\$15.81

1. For Design-Builder owned equipment as identified in Article 1.07B, the first 8 hours, or fraction thereof, usage in any one day shall be paid for at the Regular Hourly Rate, and any additional time in excess of 8 hours, shall be considered to be an additional shift, or fraction thereof, and shall be paid for at 60 percent of the Regular Hourly Rate. Standby time, if authorized by the Contracting Officer Representative, will be paid for at 40 percent of the Regular Hourly Rate. Standby time shall be limited to the regular 8-hour shift and shall not exceed 40 hours in a week. Any usage time less than 30 minutes shall be considered to be 1/2 hour.
2. For third-party rented equipment, the Authority will accept rental rates actually paid and substantiated by certified reproduced copies of invoices or bills. Such invoices or bills shall indicate the amount of operating expenses and operator wages and fringes, if any, included in the rental rate. In no case shall the bare rental rate per hour (operating expense, and operator wages and fringes not included) exceed the appropriate Regular Hourly Rate. Where required, the operating costs per hour will be agreed upon between the Design-Builder and the Authority using operating costs per hour from the Blue Book for the same or similar equipment
3. When approved by the Contracting Officer Representative, use of equipment not listed in the Blue Book will be permitted. An equitable hourly rate for such equipment will be established by the Contracting Officer Representative based on Design-Builder furnished cost data and basic information concerning the equipment. Information required to determine rates includes, but is not limited to, manufacturer, year, size, model, serial number, capacity, and weight. This information shall be furnished to the Contracting Officer Representative prior to the use of the equipment. Authority shall be granted audit access to verify information related to or pursuant to this Section.
4. The Regular Hourly Rate does not include "move-in" and "move-out" costs.

5. These equipment rates shall apply to equipment in sound workable condition. The equipment shall be of approved size and capacity to provide normal output or production required for the work to be done. Equipment not meeting these requirements may be used only with the Contracting Officer Representative's approval and at agreed, reduced rates. Usage time or standby time will not be allowed while equipment is inoperative due to breakdown, and such equipment shall be removed from the jobsite at the direction of the Contracting Officer Representative.
- C. Items of equipment with an acquisition cost of \$2,000 or less shall be considered as small tools.
- D. Equipment costs that are paid under the equipment use rate shall not be duplicated in the Design-Builder's other direct or indirect costs.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01 31 20
PROJECT MEETINGS

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section specifies administrative and procedural requirements for Project meetings.
- B. During the term of this Contract, attend meetings and conferences with officials of the Authority, governmental agencies, and others interested in the Work as may be directed by the Contracting Officer Representative. Meeting minutes, prepared by either the Design-Builder or the Contracting Officer Representative as specified herein, shall state the place and time of the meeting, the names and identification of those present, a brief description of the matters discussed, and the agreements reached.
- C. Meetings shall be held in the Project office or at other locations in the Washington Metropolitan Area, as needed. Design-Builder and other concerned parties attending these meetings shall each be represented by persons thoroughly familiar with and authorized to conclude matters relating to the Work described in the Contract Documents.

1.02 PRE-DESIGN CONFERENCE

- A. The Authority will schedule a pre-design conference and organizational meeting in the Washington Metropolitan Area with the Design-Builder 10 Days after the issuance of the Notice of Award. The purpose of the meeting will be to review the parties' responsibilities and personnel assignments and to submit the required submittals to the Authority. The Contracting Officer Representative will publish an agenda at least 1 week prior to the meeting.
- B. The pre-design conference shall be chaired by the Authority and attended by representatives of the Authority and the Design-Builder's Key Personnel.
- C. Agenda discussion items for the meeting may include, but are not limited to, the following:
 - 1. DBE participation and certifications
 - 2. Site security
 - 3. Required Pre-Design Conference Meeting submittals
 - 4. Project Schedule and Work sequencing
 - 5. Procedures for processing design decisions and approvals
 - 6. Procedures for processing progress payment requests
 - 7. Authority Design Criteria and other Contract Documents including requirements for ADA Facilities Accessibility Checklist submittals and certification of ADAAG regulations compliance submittals during design process by the Design-Builder
 - 8. Submittal of Design Drawings, Design Specifications, Shop Drawings, Working Drawings, Product Data, Samples, Certifications, Reports and other documentation
 - 9. Preparation and submittal of As-Built Drawings, As-Built Specifications, and Operations and Maintenance Manuals
 - 10. Use of the premises
 - 11. Office, work, and storage areas

12. Equipment deliveries and priorities
 13. Safety procedures and administration of the overall safety program
 14. Quality Assurance and Quality Control Requirements
 15. First aid
 16. Housekeeping
 17. Working hours
 18. Codes and permits
 19. Approvals required before construction proceeds
 20. Mobilization plan
 21. Equipment and manpower availability
 22. Systems Integration plans
- D. The Contracting Officer Representative shall record meeting minutes and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from the meeting.

1.03 DESIGN REVIEW COMMENT MEETINGS

- A. The Authority will schedule a design review meeting in the Washington Metropolitan Area with the Design-Builder after receipt of each design milestone submittal as specified in Section 01 33 00, SUBMITTAL PROCEDURES, to resolve Design-Builder's written comment responses that are not in agreement with the Authority's position.
- B. The design review meeting will be chaired by the Design-Builder and its Key Staff, the Contracting Officer Representative, and other representatives of the Authority.
- C. The Design-Builder shall record meeting results, update design review comment forms, and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting. The Design-Builder shall initiate whatever actions are necessary to incorporate the agreed to required changes and additions into the Design Drawings and Design Specifications.

1.04 PRE-CONSTRUCTION MEETINGS

- A. Conduct pre-construction meetings at the Site prior to the start of construction activities that require special coordination for those activities that are deemed to require a separate meeting because of the technical nature of the installation.
- B. The Design-Builder's Key Staff, Subcontractors, representatives of manufacturers and fabricators involved in or affected by the installation, coordination, or integration with their materials and installations that have preceded or will follow and the Authority, the Contracting Officer Representative, and other representatives of the Authority shall attend the meeting.
- C. Notify the Authority in advance of the date, time, location, and topics for review and discussion at each pre-construction meeting. Ensure that other attendees are properly notified. Topics that may require pre-construction meetings include, but are not limited to the following:
 1. Installation of equipment or systems
 2. Items that require connection to existing Authority equipment or systems as applicable

3. Other pre-installation meetings as may be called by the Design-Builder or the Contracting Officer Representative
- D. Agenda discussion items for the meeting may include, but are not limited to, the following:
 1. Design issues
 2. Governing regulations
 3. Safety
 4. QA/QC
 5. ADAAG compliance
 6. LEED Compliance
 7. Temporary facilities
 8. Space and access limitations
 9. Shop Drawings, Working Drawings, Product Data, Quality Control Samples, Certifications, and Documentation
 10. Purchases and deliveries
 11. Manufacturers' recommendations
 12. Inspection and testing requirements
 13. Required performance results
 14. Recording requirements
 15. Possible conflicts and compatibility problems
 16. Weather limitations
- E. Work shall not proceed if the meeting cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of work and schedule a follow-up meeting with the Authority at the earliest date.
- F. Record meeting minutes and distribute copies to everyone in attendance and to others affected by decisions or actions resulting therefrom.

1.05 PROGRESS MEETINGS

- A. Conduct progress meetings [weekly] at regularly scheduled times convenient for all parties involved. Progress meetings are in addition to specific meetings held for other purposes, such as coordination and pre-construction meetings. A Three-Week Work Plan will be developed by the Design-Builder prior to the start of the meeting as specified in Section 01 32 20, CONTRACT PROGRESS REPORTING, and will be discussed during the planning portion of the agenda. Additionally, discussions will address administrative and technical issues of concern, determining resolutions, and development of deadlines for resolution within allowable time frames.
- B. Determine, together with the Contracting Officer Representative, who should attend the meeting in addition to the Contracting Officer Representative, other representatives of the Authority, the Design-Builder's Key Staff, and those Subcontractors, Suppliers, or other entities critical to the current progress or involved in planning, coordination, or performance of future activities that are part of the Work.

- C. Contracting Officer Representative will publish an agenda prior to each meeting and will distribute copies to Design-Builder. Agenda items may include:
1. Review of minutes of the previous progress meeting
 2. Design-Builder's design and construction schedules and construction sequence
 3. System interface requirements
 4. Safety, including discussions of hazards and risks
 5. QA/QC, including discussion of Non-Compliance Notices
 6. ADAAG compliance
 7. LEED Compliance
 8. Temporary facilities and services
 9. Site utilization, Site access needs and Hours of Work issues
 10. Updated submittals list and submittal priorities
 11. Requests for Information
 12. Documentation of information for payment requests
 13. Pending Change Orders and Modifications
 14. Resource allocation
 15. Off-Site fabrication problems
 16. Purchases and deliveries
 17. Housekeeping
- D. The Contracting Officer Representative will record meeting minutes and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting. Meeting minutes will document issues of significance including submittals, schedules, quality assurance/quality control, safety, problems encountered, and the assignment of responsibilities for future action.

1.06 PROGRESS AND QUALITY STATUS REPORT REVIEWS

- A. A preliminary progress and quality status report meeting will be held on a monthly basis prior to the submittal of the Design-Builder's final Monthly Progress Report and associated documents. The purposes of the meeting are to review and determine the status of each activity in relation to the Design-Builder's draft Monthly Progress Report and any deficiencies based on the Quality System as specified in Section 01 47 00, QUALITY MANAGEMENT SYSTEM, in order to develop an informal agreement on the monthly progress payment request.
- B. The meetings shall be attended by the Design-Builder's Key Personnel, the Contracting Officer Representative, and other representatives of the Authority.
- C. The Monthly Progress Report and associated documents, as specified in Section 01 32 20, CONTRACT PROGRESS REPORTING, shall be updated on a monthly basis. Job progress shall specifically include actual start and completion dates for all activities completed during the reporting period, actual start dates and percent complete for activities started but not completed

during the reporting period, estimated start dates for activities scheduled to start during the next period, approved changes in durations of activities, and separate tabulation of monthly earnings including a cumulative tabulation of monthly earnings to date. In computing the monthly earnings, no value will be allowed for partially completed activities.

- D. Update the Monthly Progress Report and associated documents to incorporate all changes agreed to during the preliminary progress and quality status report meeting. A formal progress and quality status report meeting will be held prior to the submittal of the Design-Builder's progress payment request. The purpose of the meeting is to review and develop a formal joint agreement on the Monthly Progress Report, job progress, pay items, and quality certification. This meeting shall be held 5 working days after the preliminary progress and quality status report meeting.
- E. Submit the approved Monthly Progress Report and the progress payment request in accordance with Section 00 74 04, METHOD OF PAYMENT.

1.07 SYSTEMS INTEGRATION PROGRESS MEETINGS

- A. Progress Meetings shall be held by the Design-Builder monthly in the Washington Metropolitan Area starting 10 Days after receipt of the Design-Builder written responses to the Authority's design review comments on the preliminary Systems Integration Design. The purpose of these meetings will be to clarify the comments, update Authority personnel on the systems integration issues, resolve interface definitions or systems integration issues, and exchange ideas and information. Meeting intervals can be revised by the Contracting Officer Representative, if deemed appropriate.
- B. These meetings shall be attended by the Design-Builder's Key Staff, those Subcontractors, Suppliers, or other entities critical to the resolution of any open issues, the Contracting Officer Representative, and other representatives of the Authority.
- C. The agenda for the progress meetings shall be similar to the progress review meeting agenda and shall include all unresolved issues raised in previous systems integration progress meetings.
- D. All interface problems shall be identified at the earliest possible opportunity. Provide a list of problem interfaces along with an assessment of the project impact and potential resolutions at each progress meeting.
- E. Record meeting minutes and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

1.08 CHANGE MEETINGS

- A. Separate meetings will be held in the Washington Metropolitan Area by either the Authority or the Design-Builder, on an ad hoc basis, to discuss and resolve change order issues as they arise during the course of design and construction.
- B. This meeting shall be attended by the Design-Builder's Key Staff, Contracting Officer Representative, and those Subcontractors, Suppliers, or other entities critical to the resolution of any open issues. The parties shall each be represented by persons thoroughly familiar with and authorized to conclude matters relating to the Work described in the initial Contract Documents and in the Issued for Construction Specifications and Issued for Construction Drawings.
- C. The Contracting Officer Representative will record meeting minutes and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01 32 10
CONSTRUCTION PHOTOGRAPHS

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes procedural requirements for photographic documentation, including digital images and video recordings.

1.02 SUBMITTALS

- A. Make submittals in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, and as described in Section 01 32 20, CONTRACT PROGRESS REPORTING.
- B. Key Plan: Submit key plan 30 Days prior to start of construction. If vantage points are altered, submit key plan updates with corresponding photographic documentation submittal.
- C. Digital Still Photographs: Submit with record of photographs indicating name of photographer, identification of vantage point, date of photograph and electronic file name. Submit the following types of still photographs:
 - 1. Pre-Construction Photographs: Submit 30 Days prior to start of construction.
 - 2. Monthly Construction Photographs: Submit every 30 Days.
 - 3. Subject-specific construction photographs such as, but not limited to still photos showing potential change, non-conformance, quality, and property damage, and LEED-required photo documentation.
 - 4. Completion of Construction Photographs: Submit within 30 Days of Notice of Substantial Completion.
- D. Digital Video Recordings: Submit with a record of the contents of each segment of the video recording identifying name of photographer, location, time of day, viewing direction, traveling direction, and starting and ending points. Submit the following types of video recordings:
- E. Pre-Construction Video Recording: Submit 30 Days prior to start of construction.
 - 1. Monthly Video Recordings: Submit every 30 Days.
- F. Photographer and Videographer Information: Submit a complete list of photographer names and contact information within 30 Days of Notice to Proceed.
- G. Usage Rights Documentation: Obtain and transfer copyright usage rights from photographers to the Authority for unlimited reproduction of photographic documentation within 30 Days of Notice to Proceed.

1.03 QUALITY ASSURANCE

- A. Qualifications:
 - 1. Photographer Qualifications: Professional photographer experienced in construction photography for a minimum of 3 years.
 - 2. Videographer Qualification: A professional firm experienced in audio-video documentation for construction or similar documentary projects for a minimum of 3 years.

PART 2 – PRODUCTS

2.01 KEY PLAN

- A. Indicate project site with notation of vantage points marked for location and direction of each still photograph and video recording.
- B. Include location and type and model of still and video camera(s).
- C. Include description of vantage point indicating location, direction (by compass point), and elevation.

2.02 STILL PHOTOGRAPHS

- A. Camera Specifications: Provide digital camera with sensor resolution of a minimum of 8 megapixels for producing color digital photographs.
- B. Format:
 - 1. Set camera to produce a digital stamp of the current date and time on each image.
 - 2. Provide required images in .JPG format.
 - 3. Digital photographic files shall be capable of producing standard commercial quality photographs, 8 inches by 10 inches in size.
 - 4. Identification:
 - 5. Electronically label each still photograph with the following information on the bottom left corner:

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

Project: _____ Contract No.: _____

Design-Builder _____

Photograph No. _____ Date: _____

Description: _____

2.03 DIGITAL VIDEO RECORDINGS

- 1. Camera Specifications: Provide digital video camera for producing color digital video images and meeting the following requirements: Capable of producing NTSC 1080 lines/60 fields
- 2. Resolution in the Y channel shall contain a minimum of 500 TV lines at center, utilizing no less than three charge-coupled-device (CCD) chips, each containing no less than 5 megapixels for optimum picture clarity
- 3. Format: Set camera to produce a digital stamp of the current date and time on each video sequence containing the month, day, year, hours, minutes and seconds.
- 4. Provide high-resolution NTSC or agreed upon format.
- B. Identification: Electronically label video recordings with the following information: location, project name, and municipality. With each submittal, provide the following information:
 - 1. Name of Project

2. Contract Number
3. Name of Design-Builder
4. Video recording ID number
5. Date video recording was recorded
6. Description

PART 3 – EXECUTION

3.01 GENERAL

- A. All photographic and video documentation shall be captured digitally. Submit digital images exactly as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.

3.02 STILL PHOTOGRAPH REQUIREMENTS

A. Preconstruction Photographs:

1. Provide pre-construction still photographs at each site.
2. Take sufficient overlapping still photographs to show existing conditions of adjacent properties before starting the Work.
3. No construction shall begin prior to Contracting Officer Representative review and approval of the pre-construction photographs of the construction area.
4. Take still photos at locations to be disturbed or likely to be affected by construction and at locations designated by the Contracting Officer Representative.

B. Monthly Construction Photographs: Take still photos of construction during the progress of the Work.

1. Take a minimum of twenty still construction photos at each site every 30 Days starting after the pre-construction digital survey and continuing until Substantial Completion is achieved.

C. Subject-specific Construction Photographs:

1. If there are any evident changes in conditions, non-conformance in the Work, or signs of potential damage to property or constructed project, take sufficient photographs to document the conditions and no less than ten still photographs.
2. The photographer shall provide scale to the area/condition, such as a tape measure to substantiate cracking.
3. Provide construction photos as required to demonstrate compliance with established LEED design goals.

D. Final Completion Construction Photographs:

1. Take a minimum of twenty still photos at each site at Substantial Completion.

3.03 VIDEO RECORDING REQUIREMENTS

A. General:

1. Audio:

- a. Begin each recording with the name of videographer, Project name, Contract number, date and start time, location, and direction of travel.
 - b. End recording with date and time.
 - c. Narration: Describe scenes on video recording by audio narration. Include description of items being viewed, recent events, and planned activities. At each change in location, describe vantage point, location, direction (by compass point), and elevation or story of construction.
 2. Video:
 - a. Set to continuously record: transparent digital information shall include the date and time of recording.
- B. Preconstruction Video Recordings:
1. Document the entire Project Site.
 - a. Include all surface features located within at least 300 feet of the construction site and accompany with appropriate audio description. Include all existing curbs, sidewalks, driveways, ditches, paved areas, landscaping, trees, culverts, headwalls, retaining walls and buildings.
 2. Duration: approximately 120 minutes.
- C. Monthly Construction Video Recordings: Select vantage points to show status of construction and progress since last video recordings were recorded. Minimum recording time shall be 30 minutes.

END OF SECTION

SECTION 01 32 20
CONTRACT PROGRESS REPORTING

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section specifies the requirements for reporting progress and the development and maintenance of schedules and work plans for both the design and construction of the Project.
- B. The Design-Builder shall carefully monitor the progress of the Work during design and construction and provide the Authority with Monthly Progress Reports detailing the progress of that work.
- C. The approved schedules shall be used by the Design-Builder to ensure adequate planning, scheduling, managing, and executing of the Work, and to enable the Authority to evaluate work progress and progress payments. These approved schedules shall not be revised without the prior approval or direction of the Contracting Officer Representative. Schedules shall include the following Initial 180-Day Schedule; Project Schedule; monthly updates of the Project Schedule; 90-Day Schedule; and Three-Week Work Plan.

1.02 REFERENCES

- A. Associated General Contractors Manual - Construction Planning and Scheduling.

1.03 SUBMITTALS

- A. Make the following submittals in accordance with Section 01 33 00, SUBMITTAL PROCEDURES:
- B. Monthly Progress Status Report shall be submitted in electronic format in MS Word and Adobe (.PDF) and formatted to 8-1/2 by 11 inches or 11 by 17 inches in size.
- C. Schedule submittals including Initial 180-Day Schedule, Project Schedule and monthly updates, 90-Day Schedule, and Three Week Work Plan, shall be generated in Primavera Project Planner (P6) for Windows and formatted to 11 by 17 inches or 22 inches by 34 inches. Submit monthly in Primavera (.XER) and Adobe (.PDF) format and on paper media for the 180-Day Schedule or the Project Schedule, whichever is in use.
 - 1. CPM terminology, definitions, and conventions as required herein shall be consistent with the technical portions of the Associated General Contractors Manual titled Construction Planning and Scheduling.
 - 2. All schedules and reports shall be prepared and submitted in electronic format and labeled with the Contract Number, Project name, Design-Builder's name, data date, run date, and with any access codes or file designators listed.
- D. The Project Schedule submittal, all subsequent schedule updates, and time extension requests shall also include the following computer-generated reports:
 - 1. Successor Report: This report shall contain all activities shown on the graphic network diagram listed in ascending order of activity ID based on successor relationships.
 - 2. Predecessor Report: This report shall contain all activities shown on the graphic network diagram listed in descending order of activity ID based on their predecessor relationships.
 - 3. Float Report: This report shall contain all activities shown on the graphic network diagram listed in order of ascending total float values and, where float values are equal, in chronological order of the early start date.

4. Late Finish Report: This report shall contain all activities as shown on the graphic network diagram listed in chronological order of the late finish date.
- E. Contracting Officer Representative will review and return the Contractor's schedule submittal with comments according to the following schedule from the date of receipt:

Initial 180-Day Schedule	7 Days
90-Day Schedule	7 Days
Project Schedule	21 Days
Three-Week Work Plan	1 Day

1. The Design-Builder shall make all corrections to the schedule requested by the Contracting Officer Representative and resubmit the schedule for approval. If the Design-Builder does not agree with the Contracting Officer Representative's comments, the Design-Builder shall provide written notice of disagreement within 5 Days from the receipt of the Contracting Officer Representative's comments for the Project Schedule. Contracting Officer Representative's comments to the Initial 180-Day Schedule, Project Schedule, 90-Day Schedule, and Three-Week Work Plans with which the Design-Builder disagrees shall be resolved in a meeting held for that purpose.
- F. Resubmittals shall conform to the same requirements as original submittals.

1.04 MONTHLY PROGRESS REPORTS

- A. The Monthly Progress Reports shall include a narrative report, schedules, a Quality Compliance Certification and construction photographs as follows:
 1. A narrative description of work accomplished, work activities planned for the upcoming reporting period, problem areas and actions intended by the Design-Builder to mitigate the problem areas, work that is being performed out of sequence with accepted schedules, status of change orders, notices of potential Claims, status of submittals, and status of Design-Builder procurement items. Proposed minor logic changes shall be listed and described in the narrative. Include narrative of design progress each month until design is complete and Approved.
 2. Schedules including the Initial 180-day Schedule, or the Project Schedule, or the Monthly Update of the Project Schedule as appropriate; 90-Day Schedule; and a Three-Week Work Plan. Schedules shall clearly identify the critical path(s).
 3. Cash flow curves indicating graphically the total percentage of work activity/event dollar value scheduled to be in place on early finish, late finish, and actual finish on a monthly and cumulative basis.
 4. Quality Compliance Certification as specified in Section 01 47 00, QUALITY MANAGEMENT SYSTEM.
 5. A complete list of scheduled submittal dates for each design review submittal and design completion.
 6. A summary of meetings or conferences held or attended during the report period.
- B. A listing of actions or decisions required of the Authority with an indication of the date by which such action or decision is required to avoid any adverse impact on the schedule.
 1. Utility/Jurisdictional Authority coordination and approvals report. Include telephone conversations and dates of contact made with each Utility/Jurisdictional Authority.

2. Construction photographs, as described in Section 01 32 10, CONSTRUCTION PHOTOGRAPHS.

1.05 INITIAL 180-DAY SCHEDULE

- A. A cost loaded schedule covering the first 180-Days Days of the Contract shall be submitted within 20 working days following the date of the Notice of Award. The Initial 180-Day Schedule is the Design-Builder's plan for planning, managing, executing, and for recording completed work during the first 180-Days of the Project. All approved activities in the Initial 180-Day Schedule shall be incorporated into the Project Schedule.
- B. The schedule shall be time-scaled and may be submitted in either bar chart or Critical Path Method (CPM) format. The Initial 180-Day Schedule shall include the same requirements as the Project Schedule with the exception of information that is not reasonably available in the first 180-Days.
- C. Work items defined in the schedule shall not exceed 20 working days duration.
- D. The initial submittal shall be accompanied by a written narrative that describes the schedule and the approach to the Work that the Design-Builder intends to employ during the initial 180-Day period of the Contract.
- E. The Initial 180-Day Schedule will be used to process progress payments for the 180-Day period following NTP until the Project Schedule is Approved.

1.06 PROJECT SCHEDULE

- A. A cost loaded, calendar time-scaled CPM network diagram schedule covering the complete Project Schedule of the Project shall be submitted within 150 Days following the date of the Notice to Proceed. A Project Schedule, acceptable to the Contracting Officer Representative, shall be in place prior to the [sixth] progress payment request being submitted. The original logic of the Initial 180-Day Schedule shall be incorporated into the Project Schedule unless identified changes are submitted and approved by the Contracting Officer Representative.
- B. The schedule must meet all of the dates listed under Special Conditions Section 00 82 04, PROJECT SCHEDULE.
- C. The Project Schedule shall be prepared utilizing the Precedence Diagram Method (PDM) of CPM scheduling technique.
- D. The Project Schedule shall show clearly the sequence and interdependence of activities and shall list specifically:
 - 1. Interim milestone completion dates as specified and staging of the Work shall be prominently identified.
 - 2. Design development and Authority review of design submittals.
 - 3. Acquisition of permits, and Jurisdictional Authority and Utility approvals.
 - 4. Submittals and Authority review of submittals.
 - 5. Procurement, fabrication, delivery, installation, and testing of major materials and equipment.
 - 6. Delivery of Authority-furnished equipment, if any.
 - 7. Interfacing, coordination, and dependencies with preceding, concurrent, and follow-on contractors.
 - 8. Work to be performed by other agencies, which affect the schedule.

9. Manpower, material, and equipment restrictions, if any.
10. Inspection of the Work including Punch List and Acceptance.
11. The progressive delivery of As-Built Documents as major sections of the work are completed; for example completion of foundation piling or completion of underground utility work.
12. Resources necessary to accomplish the Work for that activity including, but not limited to, specific equipment, manpower, and material requirements.
13. The costs of the work for each activity.
14. The graphic network diagram shall be composed of two parts, a Table of Activity Data and a time-scaled graphic network diagram, and shall include the following:
 - a. A Table of Activity Data in columnar format with the pertinent data for each activity in the row corresponding to that activity's placement of schedule. The minimum required data are:
 - (1) Activity ID,
 - (2) Activity Description,
 - (3) Early Start date,
 - (4) Early Finish date,
 - (5) Late Start date,
 - (6) Late Finish date,
 - (7) Total Float,
 - (8) Planned Duration,
 - (9) the monetary value in whole dollars for that activity, labor-days applicable to each activity, and all lag/lead time.
 - b. The Contracting Officer Representative may require additional data such as total shifts or other resource data.
 - c. An activity numbering system will be utilized, which assigns a unique activity identification number to each activity. No two activities shall bear the same activity number or description.
 - d. Activity descriptions shall be brief but shall convey the scope of the work described. Unusual abbreviations shall be explained in a legend. If an activity includes work to be done by a Disadvantaged Business Enterprise (DBE), that fact shall be identified in the activity description by inclusion of an appropriate parenthetical entry (e.g., Install West Footing Reinforcing Steel (DBE 1)) with DBE properly identified in the legend.
 - e. Percentages shall generally not be used in activity descriptions e.g., Pour West Footing (0 to 50 percent) is not acceptable.
 - f. A time-scaled graphic network diagram showing logical relationships and constraints formatted in accordance with the following requirements:
 - (1) A bar (node) representing the duration of each work activity scaled to the planned duration with arrows (relationship lines) defining predecessor and successor

relationships. Each bar shall contain the following information positioned above, below, or adjacent to it in a consistent and legible manner:

- (a) activity description;
- (b) abbreviated start and finish dates (the day of the month in which the event occurs),
- (c) and the activity duration.

(2) Lag time in whole Project units (e.g. working days) shall be displayed on each relationship line where it occurs. The use of lag must be minimized and restricted to only those situations where it is not possible to properly define the start or finish of an activity by the use of a normal Finish-to-Start, Start-to-Finish, Start-to-Start, or Finish-to-Finish relationship. Negative lag shall not be used.

15. Monetary value of each activity indicated in the Schedule shall be identified in the Table of Activity Data following the description. The allocation of monetary values assigned to activities shall be subject to approval and shall contain, as close as can reasonably be determined, all labor, equipment, material, and Subcontractor cost plus its proportional share of all indirect costs. The total of all values allocated to the individual work activities shall equal the total Contract value. Should the Design-Builder intend to deliver materials and receive payment under the delivered Materials on Site (MOS) provision of the Contract, with the approval of the Contracting Officer Representative, the following shall be incorporated into the schedule:

- a. A MOS delivery activity shall be incorporated into the schedule in logical sequence with the associated installation activity. The cost allocated to the installation activity shall be reduced by the approved MOS activity amount. The activity description shall contain the MOS designation and an MOS activity code shall be assigned.
 - b. The monetary value assigned to that MOS activity shall be arrived at by considering only those materials the monetary values of which are to be excluded from the monetary values of the installation activities to which they relate. The monetary value of the delivery activity shall equal the projected invoiced values of materials, as restricted above and in other relevant provisions of the Contract, to be delivered to the Site. The Design-Builder shall submit a separate, detailed breakdown of the projected total of all MOS activities.
- E. Individual schedule activities shall not exceed 20 working days duration, except certain procurement, delivery, or MOS activities, which may exceed 20 working days with the approval of the Contracting Officer Representative. Activities exceeding 20 working days duration shall be subdivided.
- F. Schedule activities shall be sufficiently described to include what is to be accomplished and of the activity sequence (i.e. group activities by category of work, work area, and responsibility). Activity durations shall be expressed in whole days. Work that is to be performed by Subcontract shall be clearly defined.
- G. The schedule diagram shall indicate a clearly defined critical path, which shall be prominently distinguished.

- H. A written narrative shall accompany the schedule submittal describing the Design-Builder's approach and methods for completion of the Work. The narrative shall be adequate for the Contracting Officer Representative to understand the schedule and specifically identify the use of lag time.
 - 1. The supporting narrative shall include the following:
 - a. A realistic approach to meeting the Contract completion date required by the Contract.
 - b. A discussion of the critical path and the most critical activities in meeting the required completion dates.
 - c. A listing of holidays and special non-working days planned during the Contract duration.
 - d. A separate tabulation of estimated monthly and cumulative planned earnings. The monetary values shall be generally consistent with the proposal item breakdown.
- I. Submit the calendar(s) used to calculate the Project Schedule, including: (i) the proposed number of working days per week; (ii) the planned number of shifts per day; (iii) the number of hours per shift; and (iv) all non-working days.
- J. In addition to the Project Schedule, the Design-Builder shall submit for approval a summarized Project Schedule depicting the entire Project Schedule in graphical, time-scaled format that clearly identifies the Design-Builder's work areas, activities, and planned logic for completion of the Work. The summarized Project Schedule shall consist of hammocked activities or otherwise summary bars of logically-grouped activities, of approximately 300 to 500 activities total.
- K. A schedule showing the work completed in less than the Project Schedule, which is found practical and Approved by the Authority, shall be considered to have float. The float shall be the time between the scheduled completion of the Work and the Contract completion date. Float shall not be for the exclusive benefit of either the Authority or the Design-Builder. Float shall be a resource available to both parties.
- L. A schedule found to be impractical by the Contracting Officer Representative for any reason shall be revised by the Design-Builder and resubmitted.
- M. Upon Approval by the Authority, the Project Schedule shall be the baseline schedule used to monitor progress.

1.07 MONTHLY UPDATES OF THE PROJECT SCHEDULE

- A. At least once each month, the Design-Builder shall submit an updated Project Schedule showing the progress of the Work to date and anticipated activities to be worked on.
- B. The Project Schedule shall not be revised to include additional activities, deleted activities, revised activity durations, revised network logic, or any other changes to the schedule, without approval of the Contracting Officer Representative. Only actual progress, completion dates, and anticipated future progress shall be incorporated in a schedule update.
- C. If according to the current updated Project Schedule, the Design-Builder is 60 or more working days behind the Contract completion date of any milestone, or the schedule contains 60 or more working days of negative float, considering all granted time extensions, the Design-Builder shall submit a Recovery Schedule, showing a practical plan to complete the work within the Contract time. The Design-Builder shall execute some or all of the following remedial actions: (i) increase construction labor in such quantities and crafts as necessary to eliminate the backlog of work; (ii) increase the number of working hours per shift, shifts per working day, working days per week, the amount of construction equipment

or any combination to eliminate the backlog of work. The Authority may withhold progress payments until a revised schedule, acceptable to the Contracting Officer Representative, is submitted by the Design-Builder.

- D. Any revisions to the planned sequence, activity durations, interdependency of activities and any other change to the schedule shall be submitted separately for review. Written notification and explanation for the proposed changes and separately revised Project Schedule and narrative reports shall accompany the submittal. Changes shall not be incorporated into the current schedule until the submittal has been accepted by the Contracting Officer Representative. The baseline Project Schedule, i.e., the current schedule excluding schedule changes, shall be submitted along with the proposed schedule changes for the Contracting Officer Representative's review and approval.
- E. Maintain the As-Built Project Schedule data according to the field records and submit to the Contracting Officer Representative on a monthly basis. In addition, retain all monthly schedule updates until the Work has been Accepted.
- F. After all Contract work items are complete, and as a condition of Final Payment, the Design-Builder shall submit three copies of an As-Built Project Schedule showing actual start and finish dates for all work activities and milestones, based on the accepted monthly updates. The schedule submittals shall be in tabular and in time-scaled PDM plot formats. See Section 00 74 04, METHOD OF PAYMENT, for additional retainage to be withheld until the As-Built Project Schedule is delivered to the Contracting Officer Representative, is reviewed, and is determined to be complete and accurate.

1.08 90-DAY SCHEDULE

- A. A schedule depicting activities occurring in the upcoming 90-Day period in greater detail than specified in the Initial 180-Day and Project Schedules. The logic shall follow the logic of the approved Project Schedule.
- B. The schedule shall be time scaled and may be submitted in either bar chart or Critical Path Method (CPM) format.
- C. Activities shall be 10 Days or less duration with particular focus on design, procurement, and associated activities to be performed in this time frame.
- D. The 90-Day Schedule shall be updated and submitted monthly for review and approval by the Contracting-Officer Representative.

1.09 THREE WEEK WORK PLAN

- A. A schedule in a calendar time-scaled bar chart format depicting the Design-Builder's intended work activities for the upcoming 3-week period shall be submitted on a weekly basis due on the first working day of each week. Each activity having 1 day duration shall be prominently noted.
- B. Deviations, including but not limited to sequences of work, timing, and durations of activities from the Initial 180-Day or Project Schedules shall be noted and explained in writing.
- C. The form of submittal may be formatted smaller than specified in Article 1.03 herein; however, the format shall not be less than 8-1/2 by 11 inches in size.

1.10 MONTHLY DESIGN PROGRESS REPORT

- A. A description of design progress in the previous month, and a look ahead to the completion of design work.
- B. Identify all design submittals issued to the Authority and the status of the submittals.

- C. Identify all design submittals to be issued to the Authority for review or approval within the next 60 Days.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION

3.01 GENERAL

- A. Schedules shall represent a practical plan to complete the Work within the Project Schedule, and shall convey the Design-Builder's intent in the manner of prosecution and progress of the Work.
- B. The scheduling and executing of the Project Work in accordance with the schedule are the responsibility of the Design-Builder.
- C. The submittal of schedules shall be understood to be the Design-Builder's representation that the schedule meets the requirements of the Contract Documents and that the Work will be executed in the sequence and duration Indicated in the schedule.
- D. All schedule submittals are subject to review and acceptance by the Contracting Officer Representative. The Authority retains the right to withhold progress payments until the Design-Builder submits a schedule, payment schedule, and updates acceptable to the Contracting Officer Representative.
- E. The approved Project Schedule will be used as the basis for progress payments to the Design-Builder. Payments will be made by the Contracting Officer Representative only for activities that are 100 percent complete.

3.02 PAYMENT

- A. Submittal Monthly Progress Report at least 5 working days prior to the submittal of a progress payment request. No progress payment request will be processed if there is not an agreed update in place.

3.03 PROJECT SCHEDULER

- A. To prepare the Project schedules, the Design-Builder shall engage the services of a full time scheduler who is skilled in the time and cost application of scheduling using PDM network techniques for heavy construction projects.
- B. The Design-Builder's scheduler may or may not be an independent consultant; however, the scheduler shall be available to the Design-Builder and Contracting Officer Representative to address schedule questions and shall attend all Periodic Progress Review and Schedule meetings convened by the Contracting Officer Representative.
- C. In the event that the Project scheduler is not found to be competent or to have sufficient relevant experience, WMATA will request that the Project scheduler be removed from the Project pursuant to Section 00 70 09, PROJECT MANAGEMENT AND SUPERINTENDENCE AND KEY STAFF. In that event, the Design-Builder shall submit a new candidate for consideration within 10 Days.

3.04 REQUESTS FOR TIME EXTENSIONS

- A. The Design-Builder is responsible for submitting a written request for any extensions of Project Schedule within the time specified by the Contract. Requests not submitted in writing, without the required documentation, and not submitted within 30 Days will not be considered.

- B. The request shall include documentation with written justification for the extension of time, supporting evidence, and specific references to the Contract for which the basis of the request is being made.
- C. The request shall also include a calendar time-scaled CPM network schedule analysis and reports specified in Article 1.06 herein, depicting the time impact basis of the request with the affected areas prominently highlighted. The Project Schedule to be used in determining the time extension request shall be the current and accepted schedule at the time of the event.
- D. If the Contracting Officer Representative finds that the Design-Builder is entitled to an extension of time of any completion date under the provisions of the Contract, the Contracting Officer Representative's determination of the total number of days extension will be based upon the current analysis of the currently approved Project Schedule and upon data relevant to the extension. Extensions of time for performance under any and all of the provisions of the Contract will be granted only to the extent that equitable time adjustments for the activity or activities affected exceed the total float along the paths involved of the most critical path to Project completion.
- E. The Design-Builder shall submit a CPM fragnet with enough detail to depict the causes, duration, and logic relationship and impact of the current schedule activities. The quantum of delay impact on Contract completion or interim milestone(s) must be determined for time extension.
- F. Critical delays, i.e., delay, which may affect the activities on the current critical path, will be contemporaneously discussed and mutually agreed by all the parties involved. In case the quantum of delays or impact cannot be resolved, the background, issues, work performed, as well as start and finish dates of delays shall be well-documented in chronological order. The Contracting Officer Representative's determination of merit for time extension(s) will be awarded after the Contracting Officer Representative finds entitlement to the Design-Builder's request and only after the alleged delays are demonstrated to impact the most critical path(s). Data furnished by the Design-Builder will be used as a basis in the findings of the Contracting Officer Representative.
- G. A complete As-Built Schedule, which has enough detail to depict delay and demonstrate cause-effect delay impact, shall be submitted at the end of the Project.

END OF SECTION

SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section specifies the general requirements and procedures for preparing and submitting design and construction documents to the Authority and Jurisdictional Authorities for approval or for information. The submittals shall consist of, but not be limited to design drawings, computations, and specifications; Shop Drawings; Working Drawings; product data; samples; documents, letters, certifications and reports; permit applications and Jurisdictional Authority approval documents; and other submittals.

1.02 DEFINITIONS

- A. Schedule of Required Submittals: A compendium of all required design and construction related submittals identified throughout the Contract Documents.
- B. Contract Document Submittal Log: A document indicating the status of all Required Submittals listed in the Schedule of Required Submittals.

1.03 SUBMITTAL SCHEDULE

- A. Coordinate the schedule for design submittals with the Project Schedule. The schedule for design submittals shall reflect the time required for designing, reviewing, ordering, manufacturing, fabricating, and delivery, including additional time required for re-submittals.
- B. Provide a preliminary Schedule of Required Submittals, as described in Section 00 72 00, SUBMITTALS, within 14 Days after the effective date of Notice to Proceed (NTP) for the Authority's review. The preliminary Schedule of Required Submittals shall be updated through discussions with the Authority during weekly progress meetings or through special meetings subsequent to initial Authority approval.
- C. Submit a final Schedule of Required Submittals within 180 Days after the effective date of NTP.
- D. Submit a Contract Document Submittal Log, as described in Section 00 72 00, SUBMITTALS, within 30 Days after the effective date of NTP. The Contract Document Submittal Log, created in MS Excel or MS Access, shall consist of all submittals required by the Contract Documents and Issued for Construction Specifications. Populate the Contract Document Submittal Log with submittal data as the design and construction progress. The Contract Document Submittal Log shall list all versions of a submittal, however only one version of a submittal may be in effect at any one time.
- E. Submittals made shall be arranged and maintained in a tabular format by specification Section as well as in chronological order by the dates required for construction. The log shall include:
 - 1. Scheduled date for initial Submittal, review, and "need" date for acceptance in order to fabricate and install, corresponding to the Project Schedule activity.
 - 2. Contract number, specification Section number and title
 - 3. Name of Subcontractor
 - 4. Type of Submittal (Shop Drawings, product data, samples, or other), description of the item, name of manufacturer, trade name, and model number

5. Highlight submittals that are on the critical path and require expedited review to meet the schedule. Indicate lead time to the date of fabrication and installation.
6. State if submitted for approval or information.
7. If a Submittal is a safety critical item based on the approved Certifiable Items List (CIL), include the "Item" number and "Section" (paragraph) number, as shown on the Certifiable Items List.
8. Re-submittals: Reason for change
9. Tested/Inspected By: Identify the entity performing the test

F. The Contract Document Submittal Log shall be updated and submitted on a monthly basis.

1.04 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. Submit one electronic copy in the format specified, unless noted otherwise, through the Authority's Project Management Software System (PMSS). The Contracting Officer's Representative will return one electronic copy through the PMSS.
- B. Allow 30 Days for the initial review of each design submittal; allow 21 Days for all other submissions and resubmissions.
- C. The Contracting Officer's Representative will discard submittals received from sources other than the Design-Builder.
- D. Prepare separate submittals for each item in a specification Section. Group them in the order listed, paragraph by paragraph, and package them together.
- E. Transmit submittals of related parts of the Work concurrently such that processing will not be delayed for coordination. Incomplete submittals will be returned to the Design-Builder with no action taken by the Authority.
- F. For Design Drawings submittals, include title block in accordance with the WMATA CAD Manual. For Design Specification submittals:
 1. Indicate Project name and Contract number and the date of submission.
 2. Indicate name of firm or entity that prepared each submittal.
- G. For all other submittals, place a permanent label or title block on each submittal item for identification.
 1. Indicate Project name and Contract number, the date of submission, reference to the specification Section article, and drawing number and detail to which the submittal applies.
 2. Indicate name of firm or entity that prepared each submittal.
 3. Provide a blank space approximately 5 by 5 inches, in the lower right corner of each drawing just above the title block, to record the Design-Builder's review and approval markings and action taken by the Contracting Officer Representative.
- H. All submittals shall be accompanied with a transmittal form containing the following minimum information.
 1. Project name and Contract number, the date of submission, Subcontractor, Supplier, manufacturer name, and submittal number

2. Submittal purpose and description
3. Reference to the specification Section, drawing number, and title
4. Reference applicable standards, such as ASTM or Federal Specification numbers
5. Location(s) where product is to be installed, as appropriate
6. Identification of deviations from the Issued for Construction Drawings and Specifications
7. Notation that Submittal is a safety critical item, if identified on the "Certifiable Items List"

1.05 DESIGN DOCUMENTS

- A. All Design Documents shall be submitted for the Authority's review at the progressive completion levels designated by the Authority. This includes design drawings, supporting calculations, design reports based on geotechnical data and field surveys, Jurisdictional Authority correspondence, private and public utility company correspondence, and any other pertinent design basis information.
- B. Submit Design Drawings in AutoCAD and bookmarked-by-discipline Adobe (.PDF) formats that can be edited (without seals) and plotted either as full-size or half-size drawings that are scalable. Submit Adobe (.PDF) of Issued for Construction Drawings sealed and signed by a professional engineer or architect, as applicable, registered in the jurisdiction where the work will be performed for official record.
- C. Submit Design Calculations and Reports in MS Word and bookmarked-by-discipline Adobe (.PDF) formats.
- D. Submit Design Specifications in MS Word and bookmarked-by-Section Adobe (.PDF) formats. Submit Adobe (.PDF) of Issued for Construction Specifications sealed and signed by a professional engineer or architect, as applicable, registered in the jurisdiction where the work will be performed for official record.
 1. The Design Builder shall not change any content provided in the WMATA Standard Specifications. Any changes in WMATA Standard Specifications shall be subject to the WMATA Variance and/or WMATA Change Review Board processes.

1.06 MEETING MINUTES

- A. Prepare meeting minutes that are the responsibility of the Design-Builder immediately after each meeting. Submit draft copy to Contracting Officer Representative for review within 5 Days in MS Word format.
- B. Submit final meeting minutes in Adobe (.PDF) format 3 Days after receipt of Authority review.

1.07 SHOP DRAWINGS

- A. General:
 1. Submit Shop Drawings in AutoCAD and Adobe (.PDF) formats.
 2. Shop Drawings shall indicate all pertinent features of the products and the method of fabrication, connection, erection, or assembly with respect to the Work.
 3. The first drawings submitted by Design-Builder, Subcontractor, or vendor will be reviewed for conformance with this Section. Once accepted, use the drawing format as a standard for subsequent drawings.

B. Dimensioning: Follow applicable dimensioning and tolerance practices as specified in ANSI/ASME Y14.5.

1. Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
2. Provide sufficient dimensions on drawings so that size, shape, and location may be determined without calculation.
3. Show each dimension clearly so that only one interpretation is possible. Show each dimension for a feature once.
4. Text must be legible on 11 by 17-inch prints.
5. Include on the Shop Drawings details necessary for the installation, maintenance, and repair of all equipment provided.

1.08 WORKING DRAWINGS

- A. Submit Working Drawings in AutoCAD and Adobe (.PDF) formats.
- B. Working Drawings indicate the Design-Builder's plan for temporary structures that will not become part of the completed Project such as decking, temporary bulkheads, support of excavation, support of utilities, groundwater control systems, and forming and falsework for underpinning; and for such other work as may be required for construction.
- C. Working Drawings and calculations shall be signed and sealed by a professional engineer registered in the jurisdiction where the work will be performed and shall convey, or be accompanied by information sufficient to completely explain the structure, machine, or system described and its intended manner of use.

1.09 PRODUCT DATA

- A. Submit product data in Adobe (.PDF) format.
- B. If information must be specially prepared for a submittal because standard published data is not suitable for use, submit as Shop Drawings, not as product data.
- C. Modify manufacturers' standard drawings, catalog cuts, brochures, diagrams, schedules, performance charts, illustrations, calculations, printed installation, erection, application, and placing instructions, and other descriptive data to delete information that is not applicable to the Contract. Indicate dimensions, clearances, performance characteristics, capacities, wiring and piping diagrams, and controls. Supplement standard information with additional information applicable to this Contract.
- D. Submit product data concurrent with samples.

1.10 SAMPLES

- A. Submit samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittals and actual components as delivered and installed.

- B. Maintain sets of accepted samples at the Site, available for quality control comparisons throughout the course of construction activity. Sample sets may be used to determine conformance of construction associated with each set.
 - 1. Samples that may be incorporated into the Work are indicated in individual specification Sections. Samples not incorporated into the Work, or otherwise designated as the Owner's property, are the property of Design-Builder.
- C. Samples for Verification: Submit full-size units or samples of a size indicated, physically identical with material or the product proposed for use and that shows a full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
- D. Number of Samples: Submit five sets of Samples. The Contracting Officer Representative will retain three Sample sets; the remainder will be returned. Mark up and retain one returned Sample set as a project record sample.
 - 1. Submit a single sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
- E. If variations in color, pattern, texture, or other characteristics are inherent in the material or product represented by a sample, submit at least three sets of paired units that show approximate limits of variations.

1.11 CERTIFICATES AND CERTIFICATIONS

- A. Submit original certificates and certifications in MS Word and Adobe (.PDF) formats.
- B. Provide certificates and certifications that demonstrate proof of compliance with Contract specification requirements for products, materials, equipment, and systems.
- C. Authority Approval of a certification shall not be construed as relieving the Design-Builder from furnishing products that meet the specified design intent.

1.12 REPORTS

- A. Submit original reports, signed and sealed by a professional engineer in the jurisdiction that the Work is to be constructed, and any related drawings in MS Word, AutoCAD and Adobe (.PDF) formats.
- B. The Design-Builder shall provide reports that demonstrate proof of compliance with Contract specification requirements. The reports include manufactured products, materials, research, equipment, systems, and test reporting in the field or laboratory.
- C. Authority Approval of submitted reports shall not be construed as relieving the Design-Builder from furnishing products that meet the specified design intent.

1.13 DATA

- A. Submit data and any related drawings in MS Word, AutoCAD and PDF formats.
- B. The Design-Builder shall provide written and graphic information including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations that demonstrate proof of compliance with Contract specification requirements. Provide the name and version of software used for calculations.
- C. Authority Approval of submitted data shall not be construed as relieving the Design-Builder from furnishing products that meet the specified design intent.

1.14 CONSTRUCTION PHOTOGRAPHS AND VIDEO

- A. All still photographic documentation of the Work shall be provided by the Design-Builder in digital format.
- B. Video documentation recordings of the Work, accompanied with audio recording, shall be provided by the Design-Builder in digital format.
- C. For detailed submittal procedures see Section 01 32 10, CONSTRUCTION PHOTOGRAPHS.

1.15 AS-BUILT DOCUMENTS

- A. The Design-Builder shall maintain a record set of As-Built Drawings and Specifications annotated to show all changes incorporated as Work progresses.
- B. Submit As-Built Drawings in AutoCAD and bookmarked-by-discipline Adobe (.PDF) formats that can be plotted either as full-size or half-size drawings that are scalable.
- C. Before the scheduled date of Substantial Completion, the Design-Builder shall submit approved as-built documents for the completed Work as specified in Section 01 77 50, CLOSEOUT.

1.16 DESIGN-BUILDER'S REVIEW

- A. Prepare written responses to the Authority's comments on the Design-Builder's Design Drawings and Design Specifications using the Design Review Form provided by the Authority and submit to the Authority within 5 Days of receiving the comments. Responses to Authority comments that are not agreed to by the Design-Builder shall be resolved in a Design Review Meeting. Resolution between the Design-Builder and the Authority of responses to comments in writing on the Design Review Form is required prior to incorporating comments in the subsequent design submittal.
- B. Review each submittal, including all those provided by Subcontractors and Suppliers of any tier, check for coordination with other Work and for compliance with the Issued for Construction Drawings and Issued for Construction Specifications. Note inconsistencies with Contract Documents and Issued for Construction Drawings and Issued for Construction Specifications. Submittals shall bear the Design-Builder's approval stamp and initials of the reviewer before submitting to the Authority.
- C. Each submittal transmittal form shall be signed by the Design-Builder with a statement, "Having checked this submission, we certify that it conforms to the requirements of the Contract in all respects, except as otherwise indicated".
- D. Do not start work where submittals are required until submittal review is completed by the Authority and Approval, if required, has been received.
- E. Identify approval methods of the various jurisdictional authorities and obtain their approvals as required.

1.17 AUTHORITY'S REVIEW

- A. Design Review
 - 1. The Contracting Officer's Representative is responsible for receiving all Project design submittals from the Design-Builder and distributing to the appropriate Authority reviewers.
 - 2. For each design submittal, the Authority will provide written review comments on Design Review Forms to the Design-Builder for incorporation into the design documents. Submittals will be reviewed in accordance with the specified design submittal review schedule.

3. The Authority will review the Design-Builder's responses to comments within 5 Days after receiving the responses. If, in the opinion of the Authority, comments are not resolved, the Authority will arrange a Design Review Meeting with the Design-Builder to discuss and resolve all unresolved comment responses within 21 Days of receiving the responses.
- B. The Contracting Officer Representative shall receive construction submittals from the Design-Builder and will distribute them within the Authority for review.
 1. Shop Drawings, samples, and other submission reviews by the Authority will not include checking of dimensions for potential conflicts.
 2. Approval by the Authority of a specific item will not indicate Approval of an assembly of which the item is a component.
 3. Incomplete submittals will be returned for resubmission without review.
- C. Submittals that are reviewed by the Authority will be returned to the Design-Builder with one of the following approval codes:
 1. Code 1: Approved Without Condition or Comment.
 2. Code 2: Approved As Noted, Resubmittal Not Required. The Design-Builder shall comply with changes, conditions, or comments on the submittal.
 3. Code 3: Disapproved. The entire submittal is disapproved and shall be resubmitted.

1.18 RESUBMISSIONS, DISTRIBUTION, AND USE

- A. Make resubmissions in same form and number of copies as initial submittal. Note the date and content of previous submittal. Clearly indicate extent of revision.
- B. Furnish copies of final submittals to manufacturers, Subcontractors, Suppliers, fabricators, installers, Jurisdictional Authorities, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- C. Retain complete copies of submittals on Site.

1.19 RFI ADMINISTRATIVE REQUIREMENTS

- A. Submit one electronic copy on the RFI form provided by the Authority, through the Authority's Project Management Software System (PMSS). The Contracting Officer's Representative will return one electronic copy through the PMSS.
- B. Allow 7 Days for the review of each RFI.
- C. The Contracting Officer's Representative will discard RFIs received from sources other than the Design-Builder.
- D. All submittals shall be accompanied with a transmittal form containing the following minimum information.
 1. Project name and Contract number, the date of submission, and RFI number
 2. Clear statement of the question to be addressed by the Authority
 3. Reference to the specification Section, drawing number, and title that is the subject of the RFI

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01 41 00
REGULATORY REQUIREMENTS

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes information required for conformance to regulatory requirements, such as building codes, mechanical codes, electrical codes, ADAAG regulations, or other regulations applicable to the Project.

1.02 GENERAL

- A. Meet or exceed the WMATA Manual of Design Criteria and WMATA Standard Specifications relevant for each element of the Work as these represent the standards to be used for design and construction. Comply with all Federal, state, and local laws and regulations that control the design and construction of the Project, and meet or exceed the laws and standards relevant for each element of the Work to be installed if they are more stringent than the WMATA Manual of Design Criteria and WMATA Standard Specifications.

1.03 THE JURISDICTIONAL AUTHORITIES, RAILROADS, UTILITIES, AND MISCELLANEOUS AGENCIES

- A. Coordinate with the following entities as appropriate and relevant to the Project.

B. Federal agencies:

1. Environmental Protection Agency (EPA)
2. Federal Aviation Administration (FAA)
3. Federal Highway Administration (FHWA)
4. Federal Transit Administration (FTA)
5. General Services Administration (GSA)
6. Department of the Interior:
 - a. National Park Service (NPS), National Capital Region
7. Occupational Safety and Health Administration (OSHA)
8. U.S. Army, Corps of Engineers (COE):
 - a. Washington Aqueduct Division
 - b. Baltimore District
 - c. Norfolk
9. U.S. Coast Guard (USCG)
10. U.S. Navy, Naval Facilities Engineering Command (NAVFAC)
11. Architectural and Transportation Barriers Compliance Board (ATBCB):
 - a. American with Disabilities Act Accessibility Guidelines (ADAAG)

12. Federal Emergency Management Agency (FEMA)
13. U.S. Army Engineer District
14. Department of Defense (DOD)
15. National Park Service (NPS)
- C. District of Columbia: NOT USED
- D. Commonwealth of Virginia:
 1. Department of Public Works and Transportation
 2. Virginia Department of Highways and Transportation
 3. Virginia (Northern) Planning District Commission
 4. Virginia (Northern) Park Authority
 5. Virginia (Northern) Transportation Commission
 6. Virginia State Water Control Board
 7. Virginia State Highway Commissioner
- E. City of Alexandria:
 1. Department of Transportation and Environmental Services
 2. Fire Department
 3. Alexandria Sanitation Authority
 4. Police Department
- F. Railroads:
 1. Virginia Railway Express (VRE)
 2. CSX Transportation:
 - a. Richmond, Fredericksburg and Potomac Railroad Company
 3. National Railroad Passenger Corporation (AMTRAK):
 - a. Washington Terminal Company
- G. Utilities: See Section 01 18 00, PROJECT UTILITY SOURCES.
- H. Miscellaneous agencies:
 1. Metropolitan Washington Airports Authority
 2. National Capitol Planning Commission
 3. Commission of Fine Arts (CFA)
 4. American Association of State Highway and Transportation Officials (AASHTO)

I. Other

1. U.S. Green Building Council (USGBC)

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01 42 00

REFERENCES

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section lists the reference standards cited in the Contract Documents, the organizations or Jurisdictional Authorities whose standards are cited, and common acronyms used in the Contract Documents.
- B. When reference is made to codes, regulations, reference standards, and specifications, the Work shall conform to the current edition as of the date of Award, unless it is superseded by Jurisdictional Authorities.

1.02 ABBREVIATIONS AND ACRONYMS

AAR	Association of American Railroads
AASHTO	American Association of State Highway and Transportation Officials
ABS	Acrylonitrile-Butadiene-Styrene
ac	Alternating Current
ACGIH	American Conference of Governmental Industrial Hygienists
ACI	American Concrete Institute
A/D	Analog to Digital
ADA	Americans with Disabilities Act
ADAAG	Americans with Disabilities Act Accessibility Guidelines
AHA	American Hardboard Association
AHDGA	American Hot Dip Galvanized Association, Inc
AI	Asphalt Institute
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AMCA	Air Moving and Conditioning Association
AMTRAK	National Railroad Passenger Corporation
ANSI	American National Standards Institute (synonymous with USASI-ASA)
API	American Petroleum Institute
AREMA	American Railway Engineering and Maintenance of Way Association
ARI	Air Conditioning and Refrigeration Institute
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASNT	American Society of Nondestructive Testing
ASTM	ASTM International
ATBCB	Architectural and Transportation Barriers Compliance Board
AT&T	American Telephone and Telegraph Company
AWG	American Wire Gauge (synonymous with Brown and Sharpe)

AWI	Architectural Woodwork Institute
AWWA	American Water Works Association
AWS	American Welding Society
AWPA	American Wood Preservers' Association
BG&E	Baltimore Gas and Electric Company
BIA	Brick Institute of America
BLS	Bureau of Labor Statistics
B&O	Baltimore & Ohio Railroad (Division of the CSX Transportation)
BOCA	Building Officials and Code Administrators International
BTU	British Thermal Unit
BTUH	British Thermal Units Per Hour
C	Celsius (Centigrade)
CAGI	Compressed Air and Gas Institute
CE	US Army, Corps of Engineers
cfm	Cubic Feet Per Minute
CISPI	Cast Iron Soil Pipe Institute
CMU	Concrete Masonry Unit
C&O	Chesapeake and Ohio Railroad (Division of the CSX Transportation)
CONRAIL	Consolidated Rail Corporation (formerly Penn Central)
CQCS	Contractor's Quality Control System
CRSI	Concrete Reinforcing Steel Institute
CSX	CSX Transportation (formerly Chessie System, B&O, C&O, and Chesapeake & Ohio)
CTI	Cooling Tower Institute
dB	Decibel(s)
dc	Direct Current
DFT	Dry Film Thickness
DILM	Ductile Iron Pipe, Cement-Lined and Coated, Mechanical Joint
DILP	Ductile Iron Pipe, Cement-Lined and Coated, Push-On-Joint
DPST	Double Pole, Single Throw
DTS	Data Transmission System
EPA	Environmental Protection Agency
EPR	Ethylene-Propylene-Rubber
F	Fahrenheit
FAA	Federal Aviation Administration
FCCCR	Foundation for Cross-Connection Control Research of the University of Southern California Engineering Center
FHWA	Federal Highway Administration

FM	Factory Mutual Associates
FS	Federal Specifications
FED STD	Federal Standard
FTA	Federal Transit Administration (formerly UMTA)
GPH	Gallons Per Hour
GSA	General Services Administration
HOA	HAND/OFF/AUTOMATIC
HP	Horsepower
HVAC	Heating, Ventilating and Air Conditioning
IBC;	International Building Code
ICEA	Insulated Cable Engineers Association
ICI	Industrial Coatings International
ID	Inside Diameter
IEEE	Institute of Electrical and Electronic Engineers
IPS	Iron Pipe Size
ISO	International Organization for Standardization
JGB	Jackson Graham Building 600 Fifth Street, N.W. Washington, D.C. 20001
kHz	Kilo Hertz
kV	Kilovolts
kVA	Kilovolts-amperes
kW	Kilowatts
LED	Light Emitting Diode
LEED	Leadership in Energy and Environmental Design
mV	1,000 volts
mVA	1,000 volts-amperes
MCM	1,000 Circular Mils
MCP	Motor Circuit Protector
METRO	Logo for the Washington Metropolitan Area Transit Authority
MS	Military Specification
MSG	Manufacturers' Standard Gauge
MIL STD	Military Standard
MSS	Manufacturer's Standardization Society of the Valve and Fitting Industry
MTPD	Metro Transit Police Department
MUTCD	Manual of Uniform Traffic Control Devices
MWAA	Metropolitan Washington Airports Authority
NAAMM	National Association of Architectural Metal Manufacturers

NACE	National Association of Corrosion Engineers
NAVFAC	USN, Naval Facilities Engineering Command
NBGQA	National Building Granite Quarries Association
NBS	National Bureau of Standards
NC	Normally Closed
NCMA	National Concrete Masonry Association
NEBB	National Environmental Balancing Bureau
NEC	National Electrical Code
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NO	Normally Open
NPS	National Park Service
NTP	Notice to Proceed
NTIS	National Technical Information Service
OCCB	Operations Control Center Building 600 Fifth Street, N.W. Washington, D.C. 20001 (see JGB)
OD	Outside Diameter
OS&Y	Outside Stem and Yoke
OSHA	US Department of Labor, Occupational Safety and Health Administration
PCI	Prestressed Concrete Institute
PDI	Plumbing and Drainage Institute
PE	Polyethylene
PEI	Porcelain Enamel Institute
PEI	Petroleum Equipment Institute
PPHM	Parts Per Hundred Million
PPM	Parts Per Million
psf	Pounds Per Square Foot
psi	Pounds Per Square Inch
psig	Pounds Per Square Inch Gauge
PVC	Polyvinyl Chloride
RCRA	Resource Conservation and Recovery Act
rms	Root Mean Square
rpm	Revolutions Per Minute
ROD	Revenue Operation Date
RQD	Rock Quality Designation
SDI	Steel Deck Institute or Steel Door Institute, depending upon context in which it

	occurs
SMACNA	Sheet Metal and Air-Conditioning Contractors National Association
S1S	Smooth One Side
S2S	Smooth Both Sides
SJI	Steel Joist Institute
SPDT	Single Pole, Double Throw
SPST	Single Pole, Single Throw
SSPC	Steel Structures Painting Council
TBM	Tunnel Boring Machine
TCA	Tile Council of America
TGA	Thermogravimetric Analysis
UFAS	Uniform Federal Accessibility Standards
UL	Underwriters Laboratories, Incorporated
UMTA	Urban Mass Transit Administration
UPS	Unit Price Schedule or Uninterruptible Power System, depending upon context in which it occurs
USBR	US Bureau of Reclamation
USCG	US Coast Guard
USCS	US Commercial Standard
USDA/SCS	US Department of Agriculture - Soil Conservation Service
USDOT	US Department of Transportation
USGBC	US Green Building Council
USN/CD	US Navy, Chesapeake Division
USPS	US Product Standard
USSG	United States Standard Gauge
VDOT	Virginia Department of Transportation
WAD	Washington Aqueduct Division (Element of U.S. Army C.E., Baltimore District)
WSSC	Washington Suburban Sanitary Commission
XLPE	Cross-Linked Polyethylene

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01 47 00
QUALITY MANAGEMENT SYSTEM

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section specifies the Design-Builder's requirements to formalize a system that documents the structure, responsibilities, and procedures required to achieve effective quality management of the Work throughout the duration of the Contract.
- B. The Quality Management System shall be consistent with ISO 9001 standard. The Design-Builder is not required to be ISO certified, however, certain Suppliers and manufacturers shall be certified as required in these specifications.
- C. The Quality Management System shall include a Quality Plan, Design Control Plan, Inspection and Test Plans and corresponding procedures and forms necessary to establish, document, maintain, and execute work that conforms to the Contract Documents.
- D. Inspection and Testing shall be performed by qualified staff and laboratories as specified herein.

1.02 REFERENCES

- A. Federal Transit Administration (FTA)
 - 1. FTA-PA-27-5194-12.1, Quality Management System Guidelines
- B. International Organization for Standardization (ISO)
 - 1. ISO 9001 – Quality Management Systems
 - 2. ISO 10013 – Guidelines for Quality Management System Documentation
- C. U.S. national standards maintained by the U.S. National Institute of Standards and Technology (NIST) and the U.S. Naval Observatory.

1.03 SUBMITTALS

- A. Make submittals in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, and as noted below. Submit plans, procedures, audit schedules and certifications for Approval. Remaining submittals are for information.
- B. Design Control Plan: As specified in Section 01 11 20, DESIGN AND PROGRAM REQUIREMENTS.
- C. Quality Plan: Contract-specific Quality Plan modeled after ISO 9001 within 30 Days of NTP and with each revision. As a minimum, the following quality elements shall be included in the Quality Plan.
 - 1. Management Responsibility
 - 2. Document Control
 - 3. Subcontracting and Purchasing
 - 4. Product Identification and Traceability
 - 5. Inspection and Testing

6. Inspection Measuring and Test Equipment
 7. Inspection and Test Status
 8. Nonconformance
 9. Corrective Action
 10. Quality Records
 11. Quality Audits
 12. Training
- D. Quality Procedures: Procedures for each of the quality elements in the Quality Plan within 120-Days of NTP.
- E. Inspection and Test Plans/Specific: Submit Work task or component specific Inspection and Test Plans a minimum 60 Days in advance of when the covered work is scheduled to begin.
- F. Quality Reports: Submit the following reports in accordance with the approved Quality Plan and Quality Procedures.
1. Design Status Reports: Monthly.
 2. Daily Quality Reports: Daily.
 3. Test Status Report: Monthly.
 4. Review and Disposition of Nonconforming Product: With each occurrence.
 5. Summary of Management Reviews: Monthly during the first 6 months after NTP and not less than quarterly thereafter.
 6. Proposed audit schedule within 60 Days of NTP.
 7. Report of audit results and completion of corrective actions within 30 Days of the completion of an Audit.
 8. Quality Compliance Certification with each Monthly Progress Report

1.04 QUALITY MANAGEMENT SYSTEM REQUIREMENTS

A. Quality Management System

1. The Quality Management System shall be updated to improve the system as necessary throughout the Project Schedule of the Contract to reflect changes determined to be necessary by Design-Builder management review, Design-Builder internal audit, and Authority audit. Each update of the Quality Management System requires Authority Approval.
2. During the Project Schedule, exercise positive control over all of the Work, including that of subconsultants, Subcontractors, fabricators, manufacturers, installers, and Suppliers in accordance with the Quality Plan and Quality Procedures described within the approved Design-Builder Quality Management System.
3. The execution of the Quality Management System shall be subject to Authority audit throughout the Project Schedule of the Contract.

B. Quality Plan

1. The Quality Plan shall include the signatures of the Officer(s) responsible for the Design-Build entity indicating their approval of the Quality Management System.
2. Quality Manager
 - a. Shall have the qualifications specified in Section 01 11 10, DESIGN-BUILDER KEY STAFF.
 - b. Shall perform as the Design-Builder's Management Representative.
 - c. Is responsible for implementing the Quality Management System and shall have the authority to stop the Work.
3. Document Control: Current version of all documents shall be managed in the Authority's Project Management Software System (PMSS). The database shall be kept current throughout the Project Schedule of the Contract.
4. Subcontracting and Purchasing
 - a. Purchased material, equipment, and services shall be controlled to ensure that they are properly integrated into the Work.
 - b. Assure that Design-Builder's subconsultants, Suppliers, and Subcontractors satisfactorily demonstrate and document an adequate system for managing quality to the Design-Builder.
 - c. Provide adequate surveillance of subconsultants, Subcontractors, and Suppliers to assure conformance with the Quality Management System and specification requirements. This surveillance shall include inspection and audit of off-Site activities of Design-Builder's subconsultants, Subcontractors, and Suppliers.
5. Product Identification and Traceability: The Design-Builder's Quality Management System shall include provisions to identify and provide traceability of products and materials where appropriate and as required in the Issued for Construction Specifications.
6. Inspection and Testing/General
 - a. Establish an Inspection and Test Plan that conforms to the Quality Management System and the Issued for Construction Specifications and that allows for tracking of actual performance of inspections and tests.
 - b. The Inspection and Test Plan shall incorporate elements of the Authority furnished Inspection Guidelines, Part 2, as needed to meet the requirements of the Quality Plan.
 - c. Testing laboratories shall be certified as required by the Issued for Construction Specifications.
 - d. The Inspection and Test Plan shall be designed to assure that testing is performed to demonstrate that components and systems perform satisfactorily in service. Testing shall be performed by qualified and experienced personnel, and using certified in accordance with approved test procedures. Tests shall incorporate acceptance limits defined by industry codes and standards or by the Issued for Construction Specifications; the more restrictive standard shall take precedence. All test results shall be documented and submitted to the Authority for review.
 - e. Provide the Authority 14 working days notice of tests except when greater notice is required in these specifications.

- f. Include instructions necessary to implement source inspections; receiving inspections; inspection of work in progress; hold point inspections, and completion inspections.
 - g. Forms for recording test results and authorized approval signatures shall be used for all tests. Each test form shall identify the applicable specification Section, Article, and Paragraph.
 - h. Subcontractors testing their own work shall be supervised and managed by the Design-Builder. The responsibility for testing and Subcontractor performance remains with the Design-Builder.
 - i. If tests or certifications conducted by the Authority disclose that work is not in conformance with the Issued for Construction Specifications, then the Authority will advise the Design-Builder as to the particular defects to be remedied. Upon correction of the defects, provide written notification to the Contracting Officer Representative, and additional testing or certification shall be conducted as necessary to result in a proven and certified system(s). Further, in the case of such non-conformance with the Issued for Construction Drawings and Issued for Construction Specifications, provide details on the preventive action taken to avoid such non-conformance for remaining installations.
- 7. Inspection, Measuring, and Test Equipment: Ensure that test equipment used meets the specified requirements, and that the equipment and instruments are controlled, maintained, and calibrated by a nationally recognized certification entity/agency. Devices used to calibrate measuring and test equipment or other measurement standards shall be traceable to one or more of the following:
 - a. U.S. national standards maintained by the U.S. National Institute of Standards and Technology (NIST) and the U.S. Naval Observatory.
 - b. Fundamental or natural physical constants with values assigned or accepted by the U.S. NIST.
 - c. National standards of other countries, which are correlated, with U.S. national standards.
 - d. Comparison to consensus standards.
- 8. Inspection and Test Status: Require inspection and test schedules for the Authority's use in scheduling test witnessing and other quality assurance functions.
- 9. Review and Disposition of Nonconforming Product: The authority within the Design-Builder organization to review and provide disposition of nonconforming products shall be identified. The disposition of product that does not conform to Issued for Construction Drawings and Issued for Construction Specifications shall be subject to approval by the Contracting Officer Representative.
- 10. Corrective Action: Corrective action shall be established, documented, and maintained. These include the investigation of the root cause of nonconforming work and the corrective action needed to prevent recurrence, and analysis to detect and eliminate potential causes of nonconforming work.
- 11. Control of Quality Records
 - a. Quality records document results achieved (e.g. test data sheets, test reports, electronic test data, mill certifications, measurement verification sheets, batch tickets) or provide evidence of activities performed (e.g. inspection reports, photos or videos, checklists with sign-offs).

- b. Establish and implement measures to identify, collect, index, file, and store. These procedures shall include a database to track and maintain control over all Quality Records generated by the Contract Work.
- c. Quality records shall be legible, reproducible, identifiable with the item involved, and contain the date of origination and identity of the originator, verifier, and responsible supervisor.
- d. Quality records generated by Subcontractors, Suppliers, fabricators, and test laboratories shall be traceable to the product being supplied or fabricated and shall be provided in advance of shipment or shall be shipped with the product.
- e. Retain quality records for the duration required to meet statutory requirements.

12. Quality Audits

- a. Management reviews conducted by Design-Builder:
 - (1) Management reviews shall occur monthly during the first 6 months of the Contract and not less than quarterly thereafter.
 - (2) Written summaries of findings and major corrective actions shall be provided to the Contracting Officer Representative within 5 Days of completion of each review.
- b. Internal quality audits conducted by Design-Builder:
 - (1) Internal audits shall be performed at least quarterly.
 - (2) Deficiencies in the Quality Management System, the causes of deficiencies in the Quality Management System, and the status of corrective action and preventive action, when appropriate shall be recorded in the audit results.
 - (3) Audit results shall be provided to the Contracting Officer Representative within 14 Days of the audit with a plan for corrective and preventative action.
 - (4) Provide notification of completed corrective and preventative action.

13. Training: Establish, maintain and provide the training needs for all personnel performing activities affecting quality.

C. Design Control Plan

- 1. The Design-Builder's design process shall translate the Authority's needs and requirements into an acceptable design.
- 2. Design control shall be defined by the Design Control Plan as described in Section 01 11 20, DESIGN AND PROGRAM REQUIREMENTS.
- 3. Configuration management shall be defined by a Configuration Management Plan developed as a part of the Design Control Plan.

D. Inspection and Test Plans/Specific

- 1. As a minimum, Inspection Plans shall include the following information:
 - a. A matrix of all inspections required by the Issued for Construction Specifications to be performed by Design-Builder, Suppliers, or Subcontractors and their frequency.
 - b. Established hold points that require work stoppage until Authority action relative to that work activity is complete.

- c. Established witness points that identify when Authority notification is required for a Design-Builder work activity.
 - d. Checklists to be utilized.
2. As a minimum, the Test Plans shall include the following information:
- a. A matrix of all tests required by the Issued for Construction Specifications to be performed by Design-Builder, Suppliers, or Subcontractors.
 - b. Samples of test reports: the test reports shall meet the minimum requirements called for in the applicable test standards specified in the Issued for Construction Specifications.
 - c. Provisions for coordinating onsite and offsite testing.
 - d. Provisions for meeting the Authority notification criteria for planned tests and inspections specified to be witnessed by the Authority. Provide the Authority a minimum of 14 Days advance notice.
 - e. Description of test
 - f. Specification Section, Article, and Paragraph related to each test
 - g. Type of test
 - h. Applicable standard
 - i. Test frequency
 - j. Responsibility for test performance
 - k. Completion status
 - l. Means of tracking and recording corrective actions being taken to assure compliance with the Issued for Construction Specifications.
 - m. Means for recording test results.

E. QUALITY REPORTS

1. Design Status Report
- a. Design status report shall track and report the status of design products for Authority review. The report shall be revised, updated, and submitted for approval at least monthly.
 - b. The design status report shall be consistent with and follow from the Design Control Plan and shall specifically track all design and design verification activities included in the approved Design Control Plan.
 - c. The design status report shall be in a format that allows the Design-Builder and the Authority to reasonably understand the means by which the design of the Project is being completed. It shall provide planned versus actual schedule performance and shall be accurate and useful as a means for project personnel to understand how the Design is proceeding throughout the term.
 - d. The Design Status Report shall include subcontracted design work, if appropriate.
2. Daily Quality Reports: Daily quality reports shall summarize the construction activities to the Authority, record the inspections and tests completed and the results, and record deficiencies

identified, during the previous 24 hours of work. These reports shall be provided to the Contracting Officer Representative daily.

3. Test Status Report: Track and report the status of testing. Revisions, updates, and additions the test status report shall be submitted to the Contracting Officer Representative at least monthly.
4. Quality Compliance Certification: As specified in Section 00 74 04, METHOD OF PAYMENT, the Quality Manager's Quality Compliance Certification shall be provided with each Monthly Progress Report stating that application of the Quality Management System has demonstrated that the items requested for payment have been designed or constructed to meet the design requirements and have been inspected and tested as required to comply with Contract Documents, Issued for Construction Drawings and Issued for Construction Specifications. Work for which satisfactory records for design, testing, inspection, or other quality elements are not available, will not qualify for payment.

1.05 AUTHORITY QUALITY OVERSIGHT

- A. The principal role of the Authority in the implementation of the Design-Build Quality Program will be oversight of the effectiveness of the Design-Builder's Quality Management System including quality control and quality assurance activities. The Authority reserves the right to conduct inspection of all phases of design and construction by Authority field staff. Deficiencies discovered will be brought to the immediate attention of the Design-Builder including written follow-up notification.
- B. When the Authority determines that the approved Quality Management System or plans, or any portion or feature thereof, are not controlling work sufficiently for the Work to conform to Contract Documents, Issued for Construction Drawings and Issued for Construction Specifications, Design-Builder shall take appropriate action to correct such deficiencies. The Contracting Officer Representative may stop the Work activities if the Quality Management System is not functioning properly due to lack of Design-Builder's staff or for any other Contract non-compliance.
- C. Notwithstanding the above, Authority inspection, testing, or other actions shall not constitute Acceptance of work, nor shall it relieve the Design-Builder of its contractual responsibilities.
- D. When Authority inspection is required, add to the purchasing document the following statement:

"Authority inspection is required prior to shipment from the plant. Upon receipt of this order, promptly notify the Contracting Officer Representative, in writing, so that appropriate planning for Authority inspection can be accomplished."

1.06 AUTHORITY AUDITS OF THE DESIGN-BUILDER'S QUALITY MANAGEMENT SYSTEM

- A. At its sole discretion, the Authority may conduct audits, tests, and inspections in addition to those performed by the Design-Builder.
- B. There will be an ongoing review and evaluation of implementation of the Design-Builder's Quality Management System to verify that the Design-Builder is effectively controlling the quality of design and construction.
- C. Audits include audits of fabricators, Subcontractors, subconsultants, Suppliers, and third-party audits (i.e., ISO audits, trade organization certification audits, and audits required to maintain laboratory or testing accreditation).
- D. If the implementation of the Design-Builder's Quality Management System is determined to be ineffective by the Authority, the Authority, at its sole discretion, may withhold payment for any and all work it deems to be deficient or non-conforming to the Contract Documents, Issued for Construction Drawings and Issued for Construction Specifications. The Design-Builder will be

expected to make whatever changes are necessary in the organization or in the Quality Management System to provide effective control of the quality of the Work.

- E. The Authority will perform audits to verify that the Design-Builder is effectively controlling the quality of the Work. The basis for the audits will be the Quality Management System and the Issued for Construction Drawings and Issued for Construction Specifications.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01 51 00
TEMPORARY UTILITIES

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section specifies requirements for temporary utilities for use during construction.
- B. Temporary utilities required include but are not limited to:
 - 1. Water service and distribution.
 - 2. Temporary electric power and light.
 - 3. Telephone service.
 - 4. Storm and sanitary sewer.

1.02 REFERENCES

- A. American National Standards Institute (ANSI)
 - 1. ANSI-A10 Series standards for Safety Requirements for Construction and Demolition
- B. National Electrical Contractors Association (NECA)
 - 1. NECA Electrical Design Library, Temporary Electrical Facilities
- C. National Electrical Manufacturers Association (NEMA)
- D. National Fire Protection Association (NFPA)
 - 1. NFPA 70, National Electrical Code
 - 2. NFPA 241, Standard for Safeguarding Construction, Alteration, and Demolition Operations
- E. Occupational Safety and Health Administration (OSHA)
- F. Underwriters Laboratories (UL)

1.03 SUBMITTALS

- A. Submit the following in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, and with additional requirements as specified for each.
 - 1. Reports for tests, inspections, meter readings, and similar procedures performed for temporary utilities.
 - 2. Indicate the schedule for implementation and termination of each temporary utility as appropriate to the Authority as described in Section 01 32 20, CONTRACT PROGRESS REPORTING.

1.04 QUALITY ASSURANCE

- A. Comply with industry standards and applicable laws and regulations of Jurisdictional Authorities including but not limited to:
 - 1. Building Code requirements.

2. Health and safety regulations.
 3. Utility company regulations.
 4. Police, Fire Department, and Rescue Squad rules.
 5. Environmental protection regulations.
- B. Comply with NFPA Code 241, ANSI-A10, and NECA Electrical Design Library, Temporary Electrical Facilities. For electrical service, comply with NEMA, NECA, and UL standards and regulations for temporary electric service. Install service in compliance with NFPA 70.
- C. Arrange for the inspection and testing of each temporary utility before use, and coordinate all requirements for certifications and permits. The Contracting Officer Representative shall be notified sufficiently in advance, but with no less than 24 hours notice, so as to be present at all planned inspections and onsite activities.

1.05 PROJECT CONDITIONS

- A. Incorporate into the Project Schedule dates for implementation and termination of each temporary utility. At the earliest practicable time and when acceptable to the Authority, change over from use of temporary service to use of the permanent service.
- B. Keep temporary services and facilities clean and neat in appearance. Temporary utilities shall operate in a safe and efficient manner. Take all necessary fire prevention measures and shall ensure that utilities are not overloaded or permitted to interfere with progress of the Work. Do not allow hazardous, dangerous, or unsanitary conditions, or public nuisances to develop or persist on the Site.
- C. Determine temporary utility services requirements and shall make arrangements with utility companies and governmental agencies to obtain such services.
- D. Provide temporary electrical service of sufficient capacity to serve the temporary requirements during the life of the Contract. The source of temporary power for testing may be the temporary service, portable generator, or other approved system, which will deliver power at the voltage and other characteristics required to accomplish testing as specified. Circuits and construction for temporary systems shall suit the needs of the Work and comply with NEC and the codes and regulations of the Jurisdictional Authorities.
- E. Temporary services shall be furnished, installed, connected, and maintained by the Design-Builder as approved by the Contracting Officer Representative. Prior to completion of the Work, the Design-Builder shall remove all temporary services and restore affected areas as approved.
- F. Shop drawings for all temporary utility and electrical services shall be submitted for approval. Power supply shall be of such quantity and type required to perform the Work. Maximum primary voltage shall be 600 volts, unless otherwise approved. Lighting equipment shall be of the type and quantity needed to provide illumination of all project areas. Materials for and installation of temporary services shall comply with OSHA requirements.

1.06 ACCESS TO FIRE HYDRANTS AND FIRE ALARM BOXES

- A. Whenever the Work is being carried out, free access must be given to each fire hydrant, fire alarm box and standpipe; when required, hydrants shall be extended by suitable tubes or piping to an accessible point as approved and to the satisfaction of the jurisdictional fire department. Obstructions shall not be piled at any time or placed within 10 feet of any fire hydrant or fire alarm box and, where materials are placed in the vicinity of a fire hydrant or fire alarm box and to such height as to prevent the same from being readily seen, the position of such hydrants or fire alarm boxes shall be indicated by suitable signs and lights, both day and night.

- B. Safeguard, maintain, and protect the wires, cables, ducts, manholes, posts, and poles, signals, and alarm boxes of fire departments. Do not cause interruption to the fire department fire alarm telegraph service, and in case of accident, shall promptly notify the fire department. No fire department wire, cable, duct, manhole, post or pole, signal, or fire alarm box shall be disturbed, except in the presence of a representative of the Bureau of Fire Alarm Telegraph. In case such wire, cable, duct, manhole, post or pole, signal, or fire alarm box is disturbed, the Design-Builder shall immediately notify the Contracting Officer Representative, and it shall be restored immediately to its original condition.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

**SECTION 01 52 00
TEMPORARY CONSTRUCTION FACILITIES GENERAL**

PART 1 – TEMPORARY CONSTRUCTION FACILITIES GENERAL

1.01 SUMMARY

- A. This Section includes requirements for temporary facilities for use during construction.
- B. Temporary facilities required include but are not limited to temporary heating and cooling field offices, Contracting Officer Representative's Project office (co-located with Design-Builder's field office), parking area, on-site plant, sanitary facilities and drinking water, waste disposal services, rodent and pest control, first aid station, storage sheds, storage and laydown areas, and miscellaneous services and facilities.

1.02 REFERENCES

- A. American National Standards Institute (ANSI)
 - 1. ANSI-A10 Series Standards for Safety Requirements for Construction and Demolition
- B. International Building Code (IBC)
- C. National Electrical Contractors Association (NECA)
 - 1. NECA Electrical Design Library, Temporary Electrical Facilities
- D. National Electrical Manufacturers Association (NEMA)
- E. National Fire Protection Association (NFPA)
 - 1. NFPA 70, National Electrical Code
 - 2. NFPA 241, Standard for Safeguarding Construction, Alteration, and Demolition Operations
- F. Occupational Safety and Health Administration (OSHA): 29 CFR § 1910

1.03 SUBMITTALS

- A. Submit the following in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, and with additional requirements as specified for each.
 - 1. Site plans indicating all temporary facilities, utility connections, traffic flows, and working drawings of temporary facilities for approval by Authority and applicable Jurisdictional Authorities within 14 Days of Notice to Proceed.
 - 2. Reports of the results of tests, inspections, meter readings, and similar procedures performed for temporary facilities for the Authority's information and records.
 - 3. A plan of the on-Site plant layout for approval 14 Days prior to the start of construction.
 - 4. A schedule indicating implementation and termination of each temporary facility within 14 Days prior to the start of construction or other period as may be approved by the Contracting Officer Representative.

1.04 QUALITY ASSURANCE

- A. Comply with industry standards and applicable laws and regulations of Jurisdictional Authorities, including but not limited to:
 - 1. Building Code requirements - local and international as applicable.
 - 2. Health and safety regulations.
 - 3. Utility company regulations.
 - 4. Police, Fire Department and Rescue Squad rules.
 - 5. Environmental protection regulations.
 - 6. Governmental Agencies
- B. Comply with NFPA Code 241, ANSI-A10 Construction Package, and NECA Electrical Design Library. For Electrical Service, comply with NEMA, NECA, and UL standards and regulations for temporary electric service. Install service in compliance with NFPA 70. Also comply with the IBC as applicable.
- C. Arrange for the inspection and testing of each temporary facility before use and secure necessary certifications and permits. The Authority shall be kept informed of all planned inspections and onsite activities.

1.05 PROJECT CONDITIONS

- A. Incorporate into the Project Schedule dates for implementation and termination of each temporary facility. At the earliest practicable time and when acceptable to the Authority, the Design-Builder shall change over from use of temporary facilities to use of the permanent facilities if applicable.
- B. Keep temporary facilities clean and neat in appearance. Temporary facilities shall be operated in a safe and efficient manner. Take the necessary fire prevention measures and do not overload facilities, or permit them to interfere with progress of the Work. Hazardous, dangerous, or unsanitary conditions and public nuisances shall not be allowed to develop or persist on the Site.

1.06 DESIGN-BUILDER'S ON-SITE PLANT

- A. All necessary construction in connection with the on-Site plant shall be done in a neat workmanlike manner to the Authority's satisfaction.
- B. Sufficient construction plant shall be provided and maintained at points where work is in progress to adequately meet demands of the Work and with ample margin for emergencies or overload. The plant shall be of sufficient capacity, in the opinion of the Authority, to permit a rate of progress, which will ensure completion of the Work within the time specified in the Contract. The Authority shall have the right to reject or condemn any plant, apparatus, or staging, which in its opinion is unsafe, improper or inadequate. The Design-Builder is not relieved of its responsibility for the safe, proper, lawful construction, maintenance and use of such plant, apparatus, or staging, whether the Authority exercises this authority or not. Condemned plant or equipment shall be brought to acceptable condition or shall be removed from the Site.
- C. The location of stationary equipment and the location of miscellaneous mobile equipment shall be subject to Authority Approval.

1.07 CONTRACTING OFFICER REPRESENTATIVE'S FACILITY

- A. Locate, acquire, fit out facility, and co-locate Design-Builder's Key Staff for management and design activities with the Authority. The facility shall be located on or near the work Site and

- remain operational throughout the Contract closeout phase, which may extend 365 Days beyond Final Completion. The facility shall be maintained by the Design-Builder at its own expense. The facility can be moved once during the lifetime of the Contract to a different location. Full utility hook-ups shall be provided until the facility is decommissioned. Relocation of the facility, if required, shall be coordinated with the Contracting Officer Representative.
- B. The facility shall be complete with parking, and shall hereinafter be called field office. The field office shall be situated in or near the Work area at an approved location. The Design-Builder shall determine its own requirements for office space and parking; the facility as described below includes requirements specifically for the Contracting Officer Representative.
- C. The field office shall be complete as specified and ready for occupancy by the Contracting Officer Representative within 45 Days of Design Builder's Mobilization. It shall be maintained and serviced by the Design-Builder as hereinafter specified until completion of the construction work and throughout the closeout phase as noted in Article 1.07A above. The building shall conform to local building codes, and international building codes as applicable, and shall have the basic features specified herein, with substitute materials allowable, subject to approval. The facility shall be fully winterized.
1. The Design-Builder shall obtain and pay all costs for hauling, building, and connecting permits. The field office shall be substantially constructed satisfactory to the Contracting Officer Representative. All materials shall be good commercial quality. The field office facility shall provide a minimum of 2,800 square feet of usable area to accommodate 16 Authority staff, with furniture, 40 paved parking spaces, and the following additional requirements: Exterior walls, ceilings and floors, shall be insulated; interior walls and ceiling surfaces shall be paneled with finished plywood or gypsum wallboard of not less than 1/2-inch thickness or other suitable materials. Interior layout must be approved by the Contracting Officer Representative. Construction shall be gypsum board on steel studding with lay-in acoustical tile and tile or carpeted flooring or equal. Floors shall be constructed to withstand a live load of 125 psf.
 2. Painting:
 - a. Exterior surfaces of buildings and all interior surfaces, other than factory-finished surfaces, shall be painted with two coats of an approved paint of approved color(s).
 - b. No painting will be required on aluminum or stainless steel surfaces.
 3. Provide offices for 9 staff and 7 open desks. See reference trailer layout for staffing locations.
 4. Four restrooms shall be provided, each with lavatory, toilet, mirror, soap holder, toilet-paper holder, paper-towel dispenser, and hot and cold water supply.
 5. Lighting shall be provided to furnish a minimum of 100 foot-candles at desk height uniformly in all areas except restrooms. Restrooms shall be provided with adequate lighting.
 6. Duplex electrical receptacles shall be provided around interior walls at approximately 10-foot spacing.
 7. Uninterrupted power source (UPS) for all computers.
 8. Two electric water cooler shall be installed and supplied with bottled water.
 9. Heating and air conditioning systems shall have thermostatic control. Systems shall be capable of maintaining office at ambient temperature of 72 degrees F.
 10. Water, sewer, and electrical utility connections shall be provided as necessary.

11. Adequate access from public streets shall be provided to the field office together with adjacent space for 40 parking spaces. The access roadway and parking area shall be graded for drainage and surfaced with concrete, or bituminous pavement in an approved manner.
12. The field office shall be furnished with the following new furniture as approved:
 - a. Desk, 60 inches by 30 inches; with three drawers and one file drawer, all with locks; with armchair: Similar to Office Depot Item #601569: Fourteen; with Armchair similar to Staples Model #18897-cc; Sixteen.
 - a.a Conference Table, 48 in x 216 in (or two 48 in x 96 in tables) similar to Staples Item number BSXBLC96RNN
 - b. Secretary desk, 60 inches by 30 inches, file drawer, and paper rack with secretarial chair: similar to Office Depot Item #601569; One
 - c. Executive Desk, 72 inches by 36 inches with drawer lock and high-back similar to Office Depot Item #283048, armchair similar to Staples Model #21086-cc; One.
 - d. Side chair: Similar to Staples Model #BT5151BK, Fifty-Three
 - e. Side Chair with wheels, Twenty, similar to Staples Model #23559D
 - f. Kitchen Chairs similar to Staples Model #RUTE01BK, Five
 - g. Bookcase, 36 inches by 42 inches, with four shelves: Twelve
 - h. File cabinet, letter size, Five lateral drawers, with lock: similar to Staples Model #HON585LP; Six
 - i. File cabinet, letter size, fireproof, four drawers, with lock: One
 - j. Reference table, 54 inches by 30 inches, similar to Staples Model 21430-cc: Fourteen
 - k. Storage cabinet, 36 inches by 18 inches by 6 feet, with lock similar to Staples Model #TTN1470BK: Two
 - l. Rolling plan storage rack, six-stick: Three
 - m. Two drawer cabinet, 15 inches wide by 29 inches tall by 26 inches deep, with lock: Fourteen
 - n. Coat rack: Single sided, two shelf garment rack similar to Staples Model N3011 - Black - Four
 - o. Dry-Erase board, 60 inches by 36 inches: Two
 - p. Eighteen cubic foot, frost free, top freezer, refrigerator similar to Lowes Model #FRT18L4JW: Two
 - q. 800-watt microwave oven: One
 - r. Toaster Oven, Six Slice, similar to Lowes Model 31331; One
 - s. Coffee Maker, Twelve Cup; One
 - t. First aid kit containing eye and skin protection for emergencies
 - u. Fire extinguishers: As required by code, not less than three
 - v. Boot Brush, similar to Grainger Item #1ETK7; Two
13. All windows shall be provided with shades, blinds or curtains, and security grills.

14. Kitchen Counter with sink. 72" x 24" with hot and cold water. Upper cabinet space, 48" x 24".
15. The field office shall be furnished with the following new equipment as approved by the Contracting Officer Representative:
 - a. Combination Facsimile/printer machine: One
 - b. Copier/Network Color Printer/Scanner with the following functions: One
 - (1) High capacity, 115-volt operation
 - (2) Twenty bin sorter, 50 sheets per bin, at least 11-inch by 17-inch sheet size, with stapler function
 - c. Maintain the equipment for the duration of this Contract. Upon completion of the Work, the equipment shall become the property of the Design-Builder.
 - d. Maintenance and services shall be provided by the Design-Builder as follows:
 - (1) Repair and cleaning, twice weekly, of the field office, parking area and access road, including complete janitorial services and supplies, and snow removal.
 - (2) The furnishing of all utilities except telephone.
 - (3) During other than normal working hours, provide security measures and area protection equivalent to that normally used by the Design-Builder for its job Site shop and office facilities.
 - e. Upon completion of this Contract (Design, Construction, and Closeout phases), the complete facility shall become the property of the Design-Builder, who shall remove it and restore the Site.

1.08 SANITARY PROVISIONS

- A. The OSHA standard for sanitation, 29 CFR § 1910.141 et. seq. shall be used. Prior to starting work, the Design-Builder shall furnish for use of its force on the Work necessary toilet conveniences secluded from public view. They shall be kept in a clean and sanitary condition and comply with the requirements and regulations of the area in which the work is performed. Potable drinking water shall be provided with individual cups, and sanitary conditions for the water dispenser shall be maintained. A common drinking cup or other common utensils shall not be used. Two water Stands with Hot/Cold taps. Eight Bottles maintained.
- B. Provide frost proof angle hose connection with hose at trailer entrance steps.

1.09 WORK AND STORAGE/LAYDOWN AREA

- A. The areas designated by the Authority as the Design-Builder's work and storage area will be provided to the Design-Builder without charge. Additional work and storage space, if required, shall be obtained by the Design-Builder. The Design-Builder's use of laydown areas other than those identified by the Authority must be approved by the Contracting Officer Representative prior to their use. The Design-Builder shall submit a materials storage plan as described in Section 01 33 00, SUBMITTAL PROCEDURES, for approval 60 Days prior to the start of construction.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01 53 00
TEMPORARY DECKING

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section specifies requirements for temporary decking and pedestrian bridges that may be required for the purpose of maintaining the flow of vehicular and pedestrian traffic during the construction period. Temporary decking and pedestrian bridges includes their support system over excavated areas.
- B. Decking and temporary grade crossing for vehicular traffic as applicable shall be constructed of suitable materials in accordance with Jurisdictional Authority requirements.
- C. Bridges for pedestrians shall be constructed of suitable materials in accordance with Jurisdictional Authority and ADAAG requirements.
- D. When the deck beams or other members supporting such deck are required to carry the support of excavation loads, these members shall also be in compliance with the requirements of Section 31 50 00, SUPPORT OF EXCAVATION.

1.02 RELATED SECTIONS

- A. Section 31 50 00, SUPPORT OF EXCAVATION
- B. Section 34 41 16, TRAFFIC CONTROL EQUIPMENT

1.03 REFERENCES

- A. Americans with Disabilities Act Accessible Guidelines (ADAAG)
 - 1. Standards for Accessible Design
- B. American Association of State Highway and Transportation Officials (AASHTO):
 - 1. AASHTO Standard Specification for Highway Bridges.
- C. American Welding Society (AWS):
 - 1. AWS D1.1 Structural Welding Code - Steel
- D. ASTM International (ASTM):
 - 1. ASTM D2555 Standard Practice for Establishing Clear Wood Strength Values
 - 2. ASTM E274 Standard Test Method for Skid Resistance of Paved Surfaces Using a Full Scale Tire.

1.04 DESIGN CRITERIA

- A. Base designs on WMATA Manual of Design Criteria as a minimum.
- B. Design temporary decking and support system for AASHTO HS20 loading and impact, earth pressures, utility loads, and other applicable live impact and dead loads, including the Design-Builder's equipment, whether the temporary decking is intended for support of vehicular or pedestrian traffic.

- C. When excavation or construction equipment is to be operated from decking, design decking using actual maximum loads in accordance with design criteria of referenced AASHTO specification, unless otherwise shown.
- D. Design supporting members to allow clearance for existing and relocated utilities.
- E. Provide suitable openings for access for servicing utilities and fire fighting. Provide flush covers for openings.
- F. Bridges for pedestrians shall be constructed of approved suitable materials in accordance with local requirements, be provided with handrails or with sides tightly boarded in accordance with such requirements and shall have a minimum width of 6 feet or such greater minimum width as will accommodate the normal traffic flow at the particular location.
- G. All designs shall comply with ADAAG regulations.

1.05 SUBMITTALS

- A. Submit the following no less than 60 Days prior to the start of construction to the Authority for Approval as specified in Section 01 33 00, SUBMITTAL PROCEDURES, and obtain Jurisdictional Authority approval for:
 - 1. Working Drawings:
 - a. Prior to installation of elements for support of excavation, submit Working Drawings and design calculations for temporary decking and pedestrian bridges.
 - ~~b.~~ Show proposed procedures and methods of constructing temporary structures including support system and necessary construction details.
 - 2. Certifications:
 - a. If previously used materials are utilized, submit certified information concerning each previous use, such information shall include, but not be limited to, the following:
 - (1) Purpose
 - (2) Duration
 - (3) Type of loading
- B. Submit to the Jurisdictional Authority of the area where the Work is to be performed, for its approval, Working Drawings including maintenance of traffic comprehensive staging and decking plans prior to the time public traffic pattern closures and changes are proposed as specified in Section 01 55 00, MAINTENANCE OF TRAFFIC, ACCESS AND PARKING. Jurisdictional Authority approval must be obtained at least 30 Days prior to installation of temporary decking.

1.06 JOB CONDITIONS:

- A. Responsibilities:
 - 1. Design, construction, maintenance, and removal of temporary construction including decking and support systems are the responsibility of the Design-Builder.
 - 2. Perform work in accordance with construction sequence and maintenance of traffic schedules acceptable to the Authority and requirements of the Jurisdictional Authorities as specified in Section 01 55 00, MAINTENANCE OF TRAFFIC, ACCESS AND PARKING.

3. Provide access to Authority personnel for inspections of temporary decking as requested by the Contracting Officer Representative.
4. Maintain vehicular and pedestrian access to buildings at levels existing prior to start of Contract work. Maintain persons with disabilities access in accordance with ADAAG.
5. Perform work in accordance with specified safety requirements as described in Section 01 11 40, SAFETY/ENVIRONMENTAL REQUIREMENTS.

PART 2 – PRODUCTS

2.01 MATERIALS

A. Timber, Steel, Concrete, and Other Materials:

1. Used materials are permitted in lieu of new materials provided they are sound and free from defects, which might impair their strength.
2. Timber: Structural lumber, visually graded in accordance ASTM D2555, minimum working stress 1,100 psi.

B. Welding: Have welding performed by certified welders and in accordance with the requirements of the AWS D1.1.

PART 3 – EXECUTION

3.01 INSTALLATION

- A. Comply with the requirements of Section 31 50 00, SUPPORT OF EXCAVATION. Install and maintain decking at design elevations. Accessibility and decking surfaces and slopes shall be in accordance with ADAAG regulations.
- B. Mechanically laminate decking elements in panels not less than 5 feet wide.
- C. Fabricate, install, and maintain pedestrian bridges at design elevations and as shown on the approved Working Drawings and in accordance with local requirements. All profile grades and cross-slopes or other features required in an accessible path shall be provided and maintained to ADAAG requirements.
- D. Provide and maintain skid-resistant surface.
- E. If asphalt or asphaltic concrete is used on decking, mechanically bond asphalt or asphaltic concrete to decking.
- F. Maintain decking free of snow, ice, water, mud, and debris.
- G. Place premixed asphaltic patching material to provide smooth transitions between existing pavement surfaces and decking and between existing pavement surfaces and pedestrian bridges, and elsewhere as required to provide proper drainage and prevent ponding of water.
- H. As removal of pavement and sidewalk progress, furnish and install barricades in accordance with Section 01 56 00, TEMPORARY BARRIERS AND ENCLOSURES, and requirements of the Jurisdictional Authorities.
- I. Along sides of decked areas for pedestrian walkways where such walkways are adjacent to vehicular traffic, install concrete barriers as specified in Section 01 56 00, TEMPORARY BARRIERS AND ENCLOSURES, and Section 34 41 16, TRAFFIC CONTROL EQUIPMENT, as shown on approved maintenance of traffic plan as specified in Section 01 55 00, MAINTENANCE OF TRAFFIC, ACCESS AND PARKING.

- J. Install wooden fence as specified in Section 01 56 00, TEMPORARY BARRIERS AND ENCLOSURES, along sides of decked areas for pedestrian walkways where such walkways are adjacent to open areas, staging/storage areas, and other areas used by the Design-Builder. Paint barricades and fences and maintain in good repair as specified in Section 01 56 00, TEMPORARY BARRIERS AND ENCLOSURES.
- K. Erect and maintain load limit and other signs as specified in Section 01 58 00, PROJECT SIGNS, to restrict loading on decking so that it does not exceed maximum design loading.
- L. Remove temporary decking along with support systems when no longer required. Comply with the requirements of Section 31 50 00, SUPPORT OF EXCAVATION, when removing support system.

3.02 FIELD QUALITY CONTROL

- A. Allowable tolerances:
 - 1. Maintain surface elevations at abutting elements within plus or minus 1/4 inch.
 - 2. Do not allow horizontal gaps to exceed 3/8 inch or ADAAG requirements whichever is more stringent.
 - 3. All profile grades and cross-slopes, curb ramps, ramps, or other features required in an accessible path shall be provided and maintained to ADAAG requirements
- B. Skid-Resistant Surface. Provide skid-resistant surface having a Skid Number at 30 mph (SN 30) of no less than 35 when measured in accordance with ASTM E274, and skid resistance shall be in accordance with ADAAG regulations.
- C. Protect existing vegetation, structures, utilities and improvements.

3.03 VENTILATION

- A. When excavations are decked, provide ventilation as required by the applicable code requirements and Jurisdictional Authorities. Provide ventilation, which meets specified safety requirements as described in Section 01 11 40, SAFETY/ENVIRONMENTAL REQUIREMENTS.

3.04 ILLUMINATION

- A. In areas covered by decking, supply and maintain illumination of sufficient intensity to permit safe and expeditious conduct of all phases of construction and inspection of support system, lagging, bracing, and utilities maintained in place.
- B. Provide illumination, which meets specified safety requirements as described in Section 01 11 40, SAFETY/ENVIRONMENTAL REQUIREMENTS.

END OF SECTION

SECTION 01 55 00
MAINTENANCE OF TRAFFIC, ACCESS, AND PARKING

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes requirements for maintenance of existing pedestrian and vehicular traffic onsite and offsite; construction sequence, and staging; maintaining access to and from the Site including construction areas, haul routes, and temporary roads with traffic control; and for Design-Builder parking.

1.02 REFERENCES

- A. Manual of Uniform Traffic Control Devices (MUTCD)

1.03 SUBMITTALS

- A. Submit the following Working Drawings in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, for Jurisdictional Authority approval such that approval is obtained 30 Days prior to start of the work. Submit to Authority for Approval prior to Jurisdictional Authority review.
 - 1. Maintenance of Traffic Plan
- B. Submit the following shop drawings in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, for Jurisdictional Authority approval such that approval is obtained prior to start of the work. Submit to Authority for Approval prior to Jurisdictional Authority review.
 - 1. Plan showing locations of access points to fire hydrants and fire alarm boxes
 - 2. Plan showing locations of staging, working, storage, and lay down areas

1.04 MAINTENANCE OF TRAFFIC

- A. Maintain traffic and erect and maintain traffic control devices in accordance with the applicable MUTCD, and as required by the Jurisdictional Authority of the area where the Work is to be performed, including, but not limited to, the following for each construction sequence and maintenance of traffic stage:
 - 1. Temporary directional and electrical warning and detour signs
 - 2. Temporary barricades
 - 3. Temporary lighting, overhead warning lights, flashing lights, and lanterns
 - 4. Temporary paving and striping
- B. Traffic control signs: Traffic control signs shall be standard signs of the Jurisdictional Authority. Each change in location of traffic shall be adequately posted with a minimum of two signs mounted on barricades or standard posts. All signing shall be constructed, maintained, and removed in accordance with the requirements of the latest published standard of the Jurisdictional Authority.
- C. Striping: Provide all necessary temporary striping required in connection with all temporary street work. Remove or obliterate existing or temporary pavement markings whenever vehicular traffic is moved to newly available pavement areas or to different traffic patterns.
- D. Redirecting traffic: Obtain approval from Jurisdictional Authority for channeling and shifting of traffic lanes as well as barricading of traffic in connection with this work.

- E. Temporary closing: Prior to the temporary closing to traffic of part of any public street, sidewalk, or other access or prior to changing traffic patterns from those existing, obtain approval from the appropriate Jurisdictional Authority. Deviations from this shall be for a bona fide emergency only and as approved by the Jurisdictional Authority.
- F. Design-Builder's surface operations: Schedule surface operations so as not to be working intermittently throughout the area. Excavation or construction activities shall be carefully scheduled and vigorously pursued to completion as required to permit opening of street areas to traffic as soon as possible without unnecessary delays.
- G. Temporary walkways: In areas where the removal of existing sidewalks is necessary, access to adjacent businesses, entrances and properties shall be maintained by temporary walkways having a width of not less than 6 feet.
- H. Intersections: Intersections shall be excavated and decked in stages as shown on Working Drawings and as approved by the Jurisdictional Authority. Construction shall be so staged that the required number of traffic lanes on each street shall be provided at all times during these operations. Upon completion of decking, traffic in all intersections shall be fully maintained.
- I. Temporary pavement and patching: Construct, maintain, and remove temporary pavement and patching required to safely and expeditiously handle vehicular and pedestrian traffic within or adjacent to the Site. The temporary pavement composition and patch shall conform to the requirements of the Jurisdictional Authority. Construction, maintenance, and removal required by the Design-Builder's operations off the Site shall be included under this Section.
- J. Design-Builder access to Station areas: Pedestrian traffic must be maintained at all times in Station areas. Design-Builder access routes to the platform shall be as directed, and all access to the Work sites shall be arranged through the Contracting Officer Representative. The Design-Builder shall familiarize itself with the Station layout. Use of the Station escalators by Design-Builder personnel is expressly prohibited. The combination of Design-Builder personnel and miscellaneous material loads shall conform to the load restrictions of Station elevators.
- K. The use of staging, working, storage, and lay down areas must be as approved by the Contracting Officer Representative and the Jurisdictional Authority.
- L. Jurisdictional Authority maintenance of traffic approval must be obtained at least 30 Days prior to the time public traffic pattern closures and changes are to be made and Authority maintenance of traffic Approval must be obtained 60 Days prior to start of construction on Authority property.
 - 1. The Design Builder shall provide an MOT Plan to the City of Alexandria for approval and permit prior to the demolition of the existing traffic circle.

The haul route is subject to City approval. Design Builder is required obtain a permit per City requirements, when five (5) or more loads of waste materials of any type, building or construction supplies, materials or equipment of any type, or dirt, debris or fill of any type will be hauled into or out of a site within any consecutive thirty (30) day period. No dirt, mud or debris shall be tracked/spilled onto the public right-of-way. The design Builder shall submit its request for an approved haul route for permit and approval. Permit Application for Hauling Permit is available at:

https://www.formrouter.net/form01@COAVA/TES_hauling_app.pdf

1.05 CONSTRUCTION SEQUENCE AND STAGING

- A. All work under this Contract shall be performed in accordance with the approved detailed plan of the Work following a logical sequence developed by the Design-Builder.

- B. The Design-Builder's particular attention is directed to the fact that both vehicular and pedestrian traffic must be maintained on the existing roads adjacent to the Site at all times for the duration of the Contract.
- C. Structures constructed underground by cut-and-cover methods require the Design-Builder to provide temporary decking as specified in Section 01 53 00, TEMPORARY DECKING, over open excavations for the maintenance of vehicular and pedestrian traffic. In order that disruptions to traffic may be kept to a minimum, perform the decking operations, the utility work, and the subsequent paving and restoration operations in stages.
- D. A method of staging and requirements pertaining to the number of traffic lanes to be provided during rush hours and non-rush hours, shifting of traffic lanes, the use of working, storage and laydown areas, and other requirements pertaining to the maintenance of traffic as previously specified shall be developed by the Design-Builder as part of this Contract.
- E. The sequence in which the various stages are to be performed shall be under the control of the Design-Builder, provided that stage work within the limits of one stage is completed before work in another stage is commenced; and provided that all other requirements pertaining to maintenance of traffic are approved by the Jurisdictional Authority. No work shall be started prior to approval.

1.06 ACCESS TO ADJACENT PROPERTY

- A. Conduct construction operations in such a manner as to cause as little inconvenience as possible to owners of property affected by such operations. Convenient access to all property from roads and highways along line of work shall be maintained. When access to adjacent properties is temporarily cut off due to the Design-Builder's operations, render every assistance to provide access to the property and the transfer of commodities, including refuse, to and from the property.

1.07 ACCESS TO FIRE HYDRANTS AND FIRE ALARM BOXES

- A. Refer to Section 01 51 00, TEMPORARY UTILITIES, for access to fire hydrants and fire alarm boxes.

1.08 DESIGN-BUILDER'S PERSONNEL AND DESIGN-BUILDER'S SUBCONTRACTORS PARKING

- A. Parking facilities for the Design-Builder's personnel and that of Subcontractors shall be the Design-Builder's responsibility, unless space is made available by the Authority. The storage/laydown and work facilities provided by the Authority, if any, shall not be used for parking by the Design-Builder or Design-Builder personnel.
- B. The Authority and/or the City of Alexandria will provide a lot for the use of the Design Builder for employee parking and limited storage. The design builder is responsible for any pavement, fencing, curb cuts, fencing, and security required for approval and use as an employee parking area as well as permits that shall be obtained from the City of Alexandria. The design builder shall provide a shuttle for its employees to access the construction site. Employees will be allowed to enter the construction site via design builder supplied shuttle and other design builder provided vehicles approved by the Authority.
- C. No other employee access will be allowed including walking, taxi, bicycle, or other non-approved mode of transportation.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01 56 00
TEMPORARY BARRIERS AND ENCLOSURES

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes requirements for temporary barriers and enclosures. This Section also includes facilities for protection of occupants entering or exiting spaces during construction.

1.02 GENERAL

- A. Wherever necessary, shown or specified, erect and maintain signs, fences, barricades and pedestrian bridges for the protection of public travel, the work site, adjoining property and adjoining public places.
- B. Take positive measures to prevent entry into the Site of the Work and storage areas by children, animals, and unauthorized adults and vehicles.
- C. Appropriate warning signs and instructional safety signs as specified in Section 01 58 00, PROJECT SIGNS, shall be conspicuously posted in all areas involving construction activities. Furnish signs and attach to, as applicable, the protective devices enclosing the Design-Builder's work, access, operating, and platform storage and site storage/laydown areas as applicable; pedestrian sidewalks, streets, and parking lots adjacent to the work area; and excavations and openings. The storage/laydown areas as designated by the Authority, if any, and as specified in Section 01 52 00, TEMPORARY CONSTRUCTION FACILITIES, shall be fenced and signage shall be provided to prevent unauthorized entry. Stored materials shall be bundled or tied down by the Design-Builder.
- D. Protective devices shall be in accordance with codes and regulations of Jurisdictional Authorities.
- E. All work pertaining to this Section shall meet ADAAG requirements.

1.03 SUBMITTALS

- A. Submit the following Shop Drawings in accordance with Section 01 33 00, SUBMITTAL PROCEDURES.
 - 1. Location and fence material of fencing for pedestrian access areas.

1.04 TEMPORARY FENCES

- A. Provide temporary fencing within the construction area to fence off pedestrian sidewalks, streets and parking areas from operating, access and work areas and Site storage/laydown areas.
- B. Temporary fences shall be substantially constructed in a neat appearance.
- C. Working Area Wooden Fencing
 - 1. Provide 6-foot high temporary working area wooden fencing as shown or as directed and as specified. Working area wooden fencing shall serve two purposes: to protect pedestrian access areas from hazardous construction activities, and to enclose the Design-Builder's work, access, storage, and operating areas.
 - 2. The location of fence for pedestrian access areas adjacent to the Work area and for enclosing Design-Builder's work areas shall be as specified and consistent with the Design-Builder's approved Working Drawings for maintenance of traffic plans.

D. Working Area Chain-link Fencing

1. Provide 6-foot high temporary working area chain-link fencing with privacy slats to fence-off the site from adjacent properties . Standard chain-link to fence off storage area from operating areas, and if necessary, to fence off pedestrian access areas.
2. The location of fence for pedestrian access areas adjacent to the Work area and to the storage areas shall be as specified and consistent with the Design-Builder's approved Working Drawings for maintenance of traffic plans.

E. Plastic Safety Fencing

1. Provide 4-foot high temporary plastic safety fencing between work area and non-work areas to isolate workers from non-work areas.

1.05 TREE AND PLANT PROTECTION

- A. Protect trees and plants not slated to be removed or replaced from construction activities.

1.06 PROTECTION OF UTILITIES

- A. Protect existing utilities.

1.07 PROTECTION OF EXISTING STRUCTURES AND IMPROVEMENTS

- A. Protect Existing Structures and Improvements.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Barricades shall be substantial in character, neat in appearance, and of approved size and arrangement.
- B. Barricade materials shall be as approved. Lumber for barriers as applicable and working area wooden fencing shall be exterior grade, treated to be fire-retardant, pressure impregnated with resin salt as approved. Exterior latex paint for barriers and working area wooden fencing shall be as specified in Section 09 92 00, FIELD PAINTING. Color shall be as approved by the Contracting Officer Representative. Provide necessary fencing hardware, locks, gates and all other incidentals as approved.
- C. All chain-link fencing shall be anti-climbing type, with plastic inserts, barbed wire (where indicated), and as specified in Section 02 82 00, FENCING.
- D. Temporary fencing on Authority property between work areas and non-work areas: Plastic safety fencing, orange in color, supported by oak stakes embedded a minimum of two feet below subgrade.
- E. Warning signage shall be as specified in Section 01 58 00, PROJECT SIGNS.
- F. Structural lumber for decking shall be as specified in Section 01 53 00, TEMPORARY CONSTRUCTION.

PART 3 – EXECUTION

3.01 INSTALLATION

- A. As removal of pavement and sidewalk progresses as applicable and furnish and install barricades in accordance with requirements of the Jurisdictional Authorities. During the prosecution of the

- Work, barricade or close excavations and openings in floors, walls, and other parts of the structures and excavations while such openings are not in regular use as applicable. Barricade or close such openings before Acceptance of the Work. Barricades shall be anchored to the ground on all sides of excavations. Work involving electrical systems or equipment in or near the area to which personnel or the public have access shall be isolated using barricades.
- B. Flashing yellow lights shall be mounted and maintained on barricades at maximum intervals of 25 feet.
 - C. Fabricate and erect in accordance with local requirements pedestrian barriers as applicable and working area wooden fencing with a stud framework and a covering of tightly fitted plywood sheets. Paint with two coats of exterior latex paint. Install hardware, locks, gates, and all other incidentals. Furnish and install wooden fence along sides of decked areas for pedestrian walkways as applicable where such walkways are adjacent to open areas, staging/storage areas, and other areas used by the Design-Builder.
 - D. Erect chain-link fencing consisting of a post-and-rail framework with chain-link fabric; install hardware, locks, gates, and all other incidentals; and insert plastic inserts into the chain link fence.
 - E. Along sides of decked areas for pedestrian walkways as applicable, where such walkways are adjacent to vehicular traffic, install concrete barriers as shown on approved maintenance of traffic plan.
 - F. Erect, fabricate, attach, and maintain safety warning and other signs.
 - G. Protect existing vegetation, structures, utilities, and improvements.
 - H. Provide maintenance for all barricades, barriers, temporary fences, pedestrian bridges, signage, and existing vegetation, structures, utilities, and improvements protection as applicable for the duration of the Contract. Immediately prior to completion of the Contract, completely remove the items and restore the area.

END OF SECTION

SECTION 01 57 00
TEMPORARY CONTROLS

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes security, site, environmental, construction noise, vibration, pollution abatement, use of explosives, controls and management of historical and scientific specimens, required to allow construction to proceed.

1.02 REFERENCES

- A. U.S. Code, Title 42 (The Public Health and Welfare):
 - 1. Chapter 15B (Air Pollution Control), Section 1857, et seq., as amended by Pub. L. 91-604)
 - 2. U.S. Code, Title 33 (Navigation and Navigable Waters):
 - 3. Chapter 26 (Water Pollution Prevention and Control), Section 308 (33 U.S.C. 1251 et seq., as amended by Pub. L. 92-500)
- B. Society of Automotive Engineers, Inc., SAE J366b and SAE J952b

1.03 SUBMITTALS

- A. Submit the following for approval 60 Days prior to start of construction in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, and with the additional requirements as specified for each:
 - 1. All necessary Working Drawings, specifications, permits, and certifications necessary to comply with local Jurisdictional Authority's erosion and sediment control statutes, ordinances, and requirements including, but not limited to current DC Standards and Specifications for Soil Erosion and Sediment Control (DC E&S).
 - 2. Required evidence that the governing air pollution criteria will be met. These criteria and related documents will be retained by the Authority for on-Site examination by FTA as applicable.
 - 3. Program for pollution control prior to beginning operations
 - 4. Proposed haul routes.
 - 5. Plan indicating monitoring locations, including the timing of monitoring measurements to be taken at the construction Site boundaries and at nearby residential, commercial, and industrial property lines.
 - 6. Report articles of historical or scientific value.

1.04 SITE SECURITY

- A. Watchmen: Employ watchmen in adequate numbers to safeguard the Site during non-working hours, night-shift operations, and holidays. If the Authority at any time determines the staff insufficient or incompetent, personnel increases or replacements shall be provided immediately at no additional cost to the Authority.

1.05 EROSION AND SEDIMENT CONTROL

- A. Erosion and sediment materials: No erosion or sediment materials shall be allowed to enter natural or man-made water or sewage removal systems. Erosion materials from excavations, borrow areas, or stockpiled fill shall be contained within the Site. Develop methods to control waste and erosion including such means as filtration, settlement, and manual removal.
- B. Comply with and provide all necessary drawings, specifications, permits, and certifications necessary to comply with local Jurisdictional Authority's erosion and sediment control statutes, ordinances, and requirements including, but not limited to current DC Standards and Specifications for Soil Erosion and Sediment Control (DC E&S).

1.06 POLLUTION ABATEMENT

- A. Conduct operations in a manner to minimize pollution of the environment surrounding the area of work. Specific controls shall be applied as follows:
 - 1. Material transport: Trucks leaving the Site and entering paved public streets shall be cleaned of mud and dirt clinging to the body and wheels of the vehicle. Trucks arriving and leaving the Site with materials shall be loaded so as to prevent dropping materials and debris on the streets. Trucks carrying dirt from the Site shall have their loads covered to minimize fugitive dust. Maintain a suitable vehicle cleaning installation and inspection installation with permanent crew for this purpose. Spills of materials in public areas shall be removed immediately.
 - 2. Waste materials: No waste materials shall be allowed to enter natural or man-made water or sewage removal systems. Develop methods to control waste including such means as filtration, settlement, and manual removal.
 - 3. Burning: No burning of waste will be allowed without written permission from the Authority. When permission is granted, burning shall be conducted in accordance with the regulations of the Jurisdictional Authority. Submit request to the affected jurisdiction for approval.
 - 4. Dust control: By water sprinkling or by other approved methods, continuously control dust generated by construction operations.
 - 5. Noise control: Refer to Article 1.08 below.
 - 6. Submit evidence that the governing air pollution criteria will be met. These criteria and related documents will be retained by the Authority for on-Site examination by FTA as applicable.
 - 7. Submit a program for pollution control that is in compliance with the Air Act and the Water Act prior to beginning operations.
 - 8. Clean air and water:
 - a. The Design-Builder agrees as follows:
 - (1) To comply with all the requirements of Section 114 of the Clean Air Act, as amended (42 U.S.C. 1857, et seq., as amended by Pub. L. 91-604) and Section 308 of the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq., as amended by Pub. L. 92-500), respectively, relating to inspection, monitoring, entry, reports and information, as well as other requirements specified in Section 114 and Section 308 of the Air Act and the Water Act, respectively, and all regulations and guidelines issued there under before the award of this Contract.
 - (2) That no portion of the Work required by this Contract will be performed in a Facility listed on the Environmental Protection Agency List of Violating Facilities on the date

when this Contract was awarded unless and until the EPA eliminates the name of such Facility or Facilities from such listing.

- (3) To use its best management practices to comply with clean air standards and clean water standards at the Facility in which or Site on which the Work is being performed.

b. The terms used in this Article have the following meanings:

- (1) The term Air Act means the Clean Air Act, as amended (42 U.S.C. 1857 et seq., as amended by Pub. L. 91-604).
- (2) The term Water Act means Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq., as amended by Pub. L. 92-500).
- (3) The term Clean Air Standards means any enforceable rules, regulations, guidelines, standards, limitations, orders, controls, prohibitions or other requirements which are contained in, issued under or otherwise adopted pursuant to the Air Act or Executive Order 11738, an applicable implementation plan as described in Section 110(d) of the Clean Air Act (42 U.S.C. 1857c-5(d)), an approved implementation procedure or plan under Section 111(c) or Section 111(d), respectively, of the Air Act (42 U.S.C. 1857c-6(c) or (d)), or an approved implementation procedure under Section 112(d) of the Air Act (42 U.S.C. 1857c-7(d)).
- (4) The term Clean Water Standards means any enforceable limitation, control, condition, prohibition, standard or other requirement, which is promulgated pursuant to the Water Act or contained in a permit issued to a discharger by the EPA or by a State under an approved program, as authorized by Section 402 of the Water Act (33 U.S.C. 1342), or by local government to ensure compliance with pretreatment regulations as required by Section 307 of the Water Act (33 U.S.C. 1317).
- (5) The term compliance means compliance with Clean Air or Water Standards. Compliance shall also mean compliance with a schedule or plan ordered or approved by a court of competent jurisdiction, the EPA or an air or water pollution control agency in accordance with the requirements of the Air Act or Water Act and regulations issued pursuant thereto.
- (6) The term Facility means any building, plant, installation, structure, mine, vessel, or other floating craft, location or site of operations, owned, leased, or supervised by Design-Builder or Subcontractor, to be utilized in the performance of a contract or subcontract. Where a location or site of operations contains or includes more than one building, plant installation, or structure, the entire location or site shall be deemed to be a Facility except where the Director, Office of Federal Activities, Environmental Protection Agency, determines that independent Facilities are co-located in one geographical area.

1.07 ENVIRONMENTAL CONTROL

- A. Maintain temperature and humidity to protect the Work in progress and in place, as well as permanent equipment and materials, stored and installed, against damage from heat, cold, and dampness and take such steps as necessary to protect such work from other adverse conditions.

1.08 CONSTRUCTION NOISE CONTROL

- A. Noise control: Take every action possible to minimize the noise caused by construction operations. When required by Jurisdictional Authorities, noise producing work shall be performed in less sensitive hours of the day or week as directed. Noise produced by the Work shall be maintained at or below the decibel levels specified and within the periods specified.

1. Protection of the public and employees:

- a. Noise abatement measures and precautions shall be taken in order to reduce exposure to noise. Permissible noise exposure shall be calculated in accordance with the procedures established under the Walsh-Healy Public Contracts Act. Sound levels for public noise exposure due to construction will be measured at the property line of adjacent residential, commercial, or industrial property or at the property line of the public right-of-way, or 50 feet from the noise source, whichever is greatest, when work is in progress in the public right-of-way, while construction work is in progress. Employee noise exposure levels shall be measured at the employees' normal workstation. In either case sound levels shall not exceed the following:

Exposure per Day (hours)	Sound Level (dBA)
8	90
6	92
4	95
3	97
2	100
1-1/2	102
1	105
1/2	110
1/4 or less	115

- b. Above-ground, repetitive, high-level impact noise will be permitted only between 8:00 AM and 9:00 PM. Repetitive impact noises in the receiving property shall not exceed the following dB limitations:

Duration of Impact Noise	Commercial or Residential Zone	Industrial Zone
More than 12 minutes in any hour	70	77
Less than 30 seconds in any hour	85	92
Less than 3 minutes in any hour	80	87
Less than 12 minutes of any hour	75	82

- c. In underground or tunnel construction work, where the above requirements may not be obtained, provide individual auditory protection.
2. Noise restrictions at affected property: In addition to the provisions of Article 1.02A.1 above, sound level for noise due to construction activities shall be monitored at the property line of property affected acoustically by the Design-Builder's operations and plant. Sound levels for noise from equipment shall be measured at the property line on the A-weighting network of a General Purpose sound level meter at slow response. To minimize the effect of reflective sound waves at buildings, measurements may be taken 3 to 6 feet in front of any building face.
- a. Construction equipment: Sound levels for unscheduled, intermittent, short-term noise from equipment shall not exceed the following dBA levels:

- (1) Residential Property

- (a) Daily, 7:00 AM to 9:00 PM: 75 dBA
 - (b) Daily, 9:00 PM to 10:00 PM: 55 dBA
 - (c) Daily, 10:00 PM to 7:00 AM: 50 dBA
- (2) Business, Industrial, and Commercial Property:
 - (a) Daily, including Sundays and Legal Holidays, 7:00 AM to 9:00 PM: 82 dBA
 - (b) Daily, including Sundays and Legal Holidays, 9:00 PM to 7:00 AM: 62 dBA
- b. Mobile equipment in the public right-of-way: Truck or other powered equipment, which moves off the Site in the public right-of-way and that produces a maximum sound level exceeding the following limits when moving in the public right-of-way shall not be used on this Contract. The sound level limits specified are referenced to a distance of 50 feet from the equipment. Sound levels shall be measured in conformity with the Standards and Recommended Practices established by the Society of Automotive Engineers, Inc., including the latest revisions to SAE J366b and SAE J952b.
 - (1) Mobile construction and industrial machinery as defined in Article 1.08A.3 below:
 - (a) Sound Level Limits
 - (i) Manufactured before July 1, 1975: 90 dBA
 - (ii) Manufactured after July 1, 1975: 80 dBA
 - (iii) Manufactured after July 1, 1982: 77 dBA
 - (2) Trucks:
 - (a) Sound Level Limits
 - (i) Manufactured before July 1, 1975: 88 dBA
 - (ii) Manufactured after July 1, 1975: 83 dBA
 - (iii) Manufactured after July 1, 1982: 80 dBA
- c. Noise abatement measures: Provide such equipment and sound-deadening devices and take such noise abatement measures that are necessary to comply with the requirements of this Contract, consisting of, but not limited to the following:
 - (1) Shields or other physical barriers to restrict the transmission of noise.
 - (2) Soundproof housings or enclosures for noise-producing machinery.
 - (3) Efficient silencers on air intakes for equipment.
 - (4) Efficient intake and exhaust mufflers on internal combustion engines.
 - (5) Lining of hoppers and storage bins with sound-deadening material.
 - (6) Conducting truck loading, unloading and hauling operations so that noise is kept to a minimum.
 - (7) Routing of construction equipment and vehicles carrying spoil, concrete, or other materials over streets that will cause the least disturbance to residents in the vicinity of the Work. The Contracting Officer Representative shall be informed in writing in

accordance with Section 01 33 00, SUBMITTAL PROCEDURES, of the proposed haul routes prior to the Design-Builder's securing a permit from the local government.

(8) Siting of stationary equipment shall be subject to Approval in accordance with Section 01 52 00, TEMPORARY CONSTRUCTION FACILITIES.

3. Definitions: The following definitions shall be used in differentiating mobile equipment from stationary equipment:

a. Mobile construction equipment: Any motorized vehicle powered by an internal combustion engine or electric drive, which is capable of being operated as a vehicle either on the construction Site or in the public right-of-way.

(1) Construction equipment is mobile equipment any time it is operated in an automotive mode when performing construction tasks. Such equipment includes compactors, paving machines, front-end loaders, back hoes, scrapers, pavers, ditchers, and trucks.

(2) Some construction equipment while in transit may have the characteristic of mobile equipment, but for the purposes of this definition are not to be so considered. Such equipment includes generators, power shovels, cranes, pile drivers, drilling rigs, concrete mixers, pumps, trash compactors, bar benders, and other similar truck-mounted devices.

b. Stationary construction equipment: Any device, tool, or other mechanical system powered by an internal combustion engine, pneumatic engine, or electric motor, which does not employ any of the above power sources for automotive propulsion for more than 10 minutes out of every working hour while engaged in construction tasks. Examples of such equipment include truck-mounted compressors, generators, power shovels, pile drivers, cranes, drilling rigs, concrete mixers, pumps, trash compactors, bar benders, augers, and other similar truck-mounted devices.

1.09 CONSTRUCTION VIBRATION CONTROL

A. Do not cause or permit, beyond the property line of a source, vibration of sufficient intensity to cause another person to be aware of the vibration by such direct means as sensation of touch or visual observation of moving objects. The observer shall be located at or within the property line of the receiving property when vibration determinations are made. Prepare and submit in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, a plan indicating monitoring locations, including the timing of monitoring measurements to be taken at the construction Site boundaries and at nearby residential, commercial, and industrial property lines. Comply with vibration limitation requirements of environmental reports, if provided.

1.10 EXPLOSIVES

A. The use of explosives for the performance of Contract work will not be permitted.

1.11 HISTORICAL AND SCIENTIFIC SPECIMENS

A. Articles of historical or scientific value, including, but not limited to, coins, fossils, and articles of antiquity, which may be uncovered by the Design-Builder during the progress of the Work, shall become the property of the Authority. Work in the area where discovered shall cease, and such findings shall be reported immediately to the Contracting Officer Representative in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, who will determine the method of removal, where necessary, and the final disposition thereof.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01 58 00
PROJECT SIGNS

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes the requirements for Project signs that will be required at the Site during the construction of the Project.

1.02 PROJECT IDENTIFICATION SIGNS

- A. Furnish Authority Project identification signs in the locations at the Site selected by the Contracting Officer Representative.
 - 1. The Design Builder shall provide one sign near Potomac Greens Park along Carpenter Drive, and one sign near Potomac Yard Park along Potomac Avenue.
- B. Sign size, content, lettering, and format for the large permanent-mount WMATA sign shall be as directed by the Authority and shall be shown on the Design-Builder's Working Drawings.
 - 1. Refer to WMATA Standard Drawings.
- C. Signs shall be installed 20 Days after Notice to Proceed is given, shall be maintained during the Work, and shall be removed upon the completion of the Project.

1.03 WARNING SIGNS AND INSTRUCTIONAL SAFETY SIGNS

- A. Provide "No Trespassing" signs, load limit on decking, and other warning and instructional safety aluminum signs with minimum 2-inch high Helvetica Medium style lettering and mount at locations on fencing/barriers/barricades/pedestrian bridges and on other areas as directed. Sign panel size and thickness shall be as directed. Mount the signs with stainless-steel cap screws with hex nuts and lock washers.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01 61 00
BASIC PRODUCT REQUIREMENTS

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes administrative and procedural requirements governing the Design-Builder's selection of products for use in construction of the Project.
- B. Administrative procedures for handling requests for substitutions made after award of the Contract are included under Section 01 63 00, PRODUCT SUBSTITUTION PROCEDURES.

1.02 DEFINITIONS

- A. As used herein, the term brand name includes identification of products by make and model. If items called for in the Contract Documents have been identified by a brand name or equal description, such identification is intended to be descriptive, but not restrictive, and is to indicate the quality and characteristics of products that will be satisfactory. Design Specifications identifying equal products including products of the brand name manufacturer other than the one described by brand name as specified in Section 01 63 00, PRODUCT SUBSTITUTION PROCEDURES, will be considered if such products are clearly identified and are determined by the Designer and the Authority to meet fully the salient characteristics of the products specified in the Contract Documents.

1.03 SUBMITTALS

- A. Submit for review an initial product list with the Preliminary Design in accordance with Section 01 33 00, SUBMITTAL PROCEDURES. A written explanation for omissions of data and for known variations from Contract requirements shall be included.
- B. Submit for review and Approval a completed product list including a written explanation for omissions of data and for variations from Contract requirements within 30 Days after date of commencement of the construction work. Authority will notify Design-Builder of acceptance or rejection of the documentation within 21 Days of receipt of the submittal.
- C. Authority Acceptance of the product list does not constitute a waiver of the requirement that products comply with the Contract Documents and the Design Drawings and Design Specifications.

1.04 QUALITY ASSURANCE

- A. Provide products of the same kind from a single source.
- B. Except for required labels and operating data, the manufacturer's or producer's nameplates or trademarks shall not be attached or imprinted on exposed surfaces.
 - 1. Labels: Locate required product labels and stamps on a concealed surface or, where required for observation after installation, on an accessible surface that is not conspicuous.
 - 2. Equipment Nameplates: Provide a permanent nameplate on each item of service connected or power-operated equipment. The nameplate shall contain the following information and other essential operating data:
 - a. Name of product and manufacturer
 - b. Model and serial number

- c. Capacity
- d. Speed
- e. Ratings

1.05 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. All products shall be delivered, stored, and handled in accordance with the manufacturer's recommendations so as to prevent damage, deterioration, loss, or invalidation of the manufacturer's warranty.
- B. Schedule delivery to minimize long-term storage at the Site and to prevent overcrowding of construction storage and staging areas.
- C. Coordinate the time of delivery with the installation schedule to ensure that hazardous, easily damaged, or those items sensitive to deterioration, theft, and other losses are stored for a minimum holding period.
- D. Products shall be delivered to the Site in the manufacturer's original sealed container or other appropriate packaging, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
- E. Products shall be inspected upon delivery by the Design-Builder to ensure compliance with the Design Drawings and Design Specifications, and to ensure that products are undamaged and properly protected. Documentation noting the time, date, and manner of delivery shall be maintained by the Design-Builder. A statement attesting to the inspection of the products at time of delivery shall be included in the documentation signed by the Design-Builder's authorized representative.
- F. Products shall be stored at the Site in a manner that will facilitate inspection and measurement of quantity or counting of units. Heavy materials shall be stored in a manner that will not damage supporting construction. Products subject to damage by the elements shall be stored under cover in weather-tight enclosures with ventilation adequate to prevent condensation. Temperature and humidity shall be maintained within range required by manufacturer's instructions.

PART 2 – PRODUCTS

2.01 PRODUCT SELECTION

- A. Provide products that comply with the Issued for Construction Drawings and Issued for Construction Specifications. All products to be installed in the Work shall be undamaged and, unless otherwise permitted, unused at the time of installation. Products shall include all accessories, trim, finish, safety guards, and other devices and details needed for a complete installation and suitable for the intended use.
- B. Unless otherwise specified, provide standard products of the type that have been produced and used successfully in similar situations on other Authority projects of a similar nature.
- C. Procedures governing product selection include:
 - 1. Where only a single product or manufacturer is named and the notation "no substitution is permitted" is included in the specification, provide the product indicated. No substitutions will be permitted.
 - 2. Where two or more products or manufacturers are named followed by the notation "no substitutions are permitted" is included in the specification, provide one of the products indicated. No substitutions will be permitted.

3. Where the Issued for Construction Drawings and Issued for Construction Specifications list products or manufacturers that are available and acceptable for incorporation into the Work, accompanied by the term ...or equal or ...or approved equal, the Design-Builder may propose any available product that complies with Contract requirements. Comply with the requirement of Section 01 63 00, PRODUCT SUBSTITUTION PROCEDURES, to obtain approval for use of an unnamed product.
4. Where the Issued for Construction Drawings and Issued for Construction Specifications list the salient features that explicitly describe a product or assembly and a brand name is not included, provide a product or assembly that provides the listed features and otherwise complies with the Contract requirements.
5. Where the Issued for Construction Drawings and Issued for Construction Specifications explicitly require compliance with performance requirements, and the product complies with those requirements based on the manufacturer's recommended use of the product for the application indicated in the Design Drawings and Design Specifications (as evidenced in published product literature, or by the manufacturer's certification of performance), the Design-Builder may submit the product for incorporation into the Work.
6. Where the Issued for Construction Drawings and Issued for Construction Specifications require only compliance with an imposed code, standard, or regulation, the Design-Builder may select a product that complies with the standards, codes, or regulations specified.
7. Visual Matching: Where specifications require matching an established item, the Authority's decision will be final on whether a proposed product matches satisfactorily. Where no product is available that adequately matches adjacent products or complies with the other specified requirements, comply with provisions of Section 01 63 00, PRODUCT SUBSTITUTION PROCEDURES, for selection of an alternate product.
8. Where specified product requirements include the phrase ...as selected from manufacturer's standard colors, patterns, textures..., select a manufacturer that provides a range of colors in a product that meets all other Design Drawings and Design Specifications requirements. In this situation, standard shall imply regularly or routinely produced.

PART 3 – EXECUTION

3.01 PRODUCT LIST

- A. Prepare a product list in tabular form acceptable to the Authority showing products specified in the Design Drawings and Design Specifications. Coordinate the timing of delivery of products on the product list with the Design-Builder's Project Schedule as specified in Section 01 32 20, CONTRACT PROGRESS REPORTING, and Contract Document Submittal Log as specified in Section 01 33 00, SUBMITTAL PROCEDURES. At a minimum, provide the following information for each product:
 1. Related specification Section number.
 2. Generic name used in the Design Drawings and Design Specifications.
 3. Proprietary name, model number, and similar designation.
 4. Manufacturer's name and address.
 5. Supplier's name and address.
 6. Installer's name and address.
 7. Projected delivery date and length of delivery period.

- B. Within 14 Days of receipt of product list submittals, Contracting Officer Representative will notify the Design-Builder of Authority acceptance or rejection of the product list. If rejected, product list shall be corrected by the Design-Builder and resubmitted for review.

3.02 INSTALLATION OF PRODUCTS

- A. Comply with the manufacturer's instructions and recommendations for installation of all products installed under this Contract unless otherwise specified. Products shall be accurately located, aligned with other elements of the Work, and securely installed in place. All exposed surfaces shall be clean as specified in Section 01 74 00, CLEANING, and protected as necessary to prevent damage and deterioration as specified in Section 01 72 30, PROTECTION OF ADJACENT CONSTRUCTION.

END OF SECTION

SECTION 01 63 00
PRODUCT SUBSTITUTION PROCEDURES

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes administrative and procedural requirements for handling requests for substitutions made after award of the Contract.
- B. Other requirements governing the Design-Builder's selection of products and product options are included under Section 01 61 00, BASIC PRODUCT REQUIREMENTS.

1.02 DEFINITIONS

- A. Definitions used in the Section are not intended to change the meaning of other terms used in the approved Issued for Construction Drawings and Issued for Construction Specifications.
- B. Design-Builder requests for changes in products, materials, equipment, and methods of construction as required or specified by Contract Documents or in approved Issued for Construction Drawings and Issued for Construction Specifications are considered requests for substitutions. The following are not considered substitutions:
 - 1. Revisions to Contract Documents or approved Issued for Construction Drawings and Issued for Construction Specifications requested by the Authority.
 - 2. Specified options of products and construction methods included in Contract Documents or in approved Issued for Construction Drawings and Issued for Construction Specifications. Note that products submitted under an or equal or not limited to provision are considered to be substitutions as specified in Section 00 21 00, SUPPLEMENTARY INSTRUCTIONS TO PROPOSERS.
 - 3. The Design-Builder's determination of and compliance with governing regulations and orders issued by governing authorities.

1.03 SUBMITTALS

- A. Requests for substitution from the Design-Builder during design work will be considered by the Authority. Requests for substitution from the Design-Builder during construction will be considered by the Authority if received with adequate time to allow for Authority review and Approval without delaying the Project Schedule. Requests received that may delay the Project Schedule will be considered or rejected at the sole discretion of the Authority.
 - 1. Submit one electronic copy in Adobe (.PDF) file format of the Brand Name or Equal Form, Section 00 43 30, BRAND NAME OR EQUAL FORM, for each request for substitution to the Contracting Officer Representative for consideration of the form and in accordance with procedures required for Change Order proposals as specified in Section 00 74 08, CHANGES, as deemed appropriate by the Contracting Officer Representative.
 - 2. In each substitution request, identify the product and fabrication or installation method to be replaced. The related WMATA Standard Specification Section, Standard or RFP Drawing numbers, or approved Issued for Construction Drawing numbers shall be referenced in the submittal. Complete documentation showing compliance with the requirements for substitutions shall also be submitted including the following information as appropriate:
 - a. Product Data, including drawings, fabrication, and installation procedures.
 - b. Samples, where samples of the specified product are requested.

- c. A detailed comparison of significant qualities/salient features of the proposed substitution with those of the material or work specified. Significant qualities shall include elements such as size, weight, durability, performance, visual effect, code compliance, maintenance requirements, energy usage, and environmental considerations.
- d. Coordination information, including a list of changes or modifications made necessary to other parts of the Work and to construction performed by the Authority or separate contractors.
- e. A statement indicating the substitution's effect on the Design-Builder's Construction Schedule. Indicate the effect of the proposed substitution on overall Project Schedule.
- f. Cost comparison between the product specified and the requested substitution, including a proposal of the net change, if any in the Contract Price.
- g. Certification by the Design-Builder that the substitution proposed is equal to or better in every respect to that required under the Contract, and that the product will perform as intended. Include a waiver of rights to additional payment or time that may subsequently become necessary should the product fail to perform adequately, or because of changes to other work were required as a consequence of the substitution.
- h. Failure by the Design-Builder to include the above requirements in the submittal may be cause for rejection of the submittal in its entirety.

1.04 If deemed necessary and within 14 Days of receipt of the submittal, the Contracting Officer Representative may request additional information or documentation that, in its sole judgment is required for the evaluation of the substitution request. Within 21 Days of receipt of the original substitution request or of requested additional information or documentation, the Design-Builder will be notified of acceptance or rejection of the proposed substitution. If a decision on the use of a proposed substitute cannot be made or obtained within the time allocated, the product specified by name in the Contract Documents or approved Issued for Construction Drawings and Issued for Construction Specifications shall be used.

1.05 SUBSTITUTION PROCEDURE

- A. The Design-Builder's request for substitution may be rejected by the Contracting Officer Representative if the substitution would involve:
- 1. Extensive revisions to Contract Documents.
 - 2. A proposed change not in keeping with the general intent of Contract Documents.
 - 3. An untimely request, not fully documented when submitted.
 - 4. A request that is directly related to an or equal clause or similar language in the Contract Documents.
 - 5. A product or method of construction that could not be provided within the Project Schedule.
 - 6. A product or method of construction that could not be approved by a governing authority.
 - 7. Additional responsibilities or expense to the Authority (including additional expenses for redesign and evaluation services, increased cost of related construction, and other similar considerations) that outweighs any advantage that is being offered to the Authority as a result of the substitution.
 - 8. A method of construction that cannot be provided in a manner that is compatible with other materials, the product cannot be coordinated with other materials, and a warranty cannot be provided for the product in accordance with the requirements of the Contract even though the

Design-Builder expresses a willingness to certify that the apparent deficiencies can be corrected.

- B. Neither the Design-Builder's submittal nor the Authority's review or Approval of Shop Drawings, product data, or samples that relate to a substitution constitutes an Approval of the requested substitution. Submission of Shop Drawing, product data, or sample submittals does not relieve the Design-Builder from fulfilling Contract requirements for substitutions.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01 71 10
ACCEPTANCE OF CONDITIONS

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section specifies basic requirements for determining acceptable conditions for installation.

1.02 SUBMITTALS

- A. One electronic copy of the preconstruction inspection records.

1.03 PRECONSTRUCTION INSPECTION REQUIREMENTS

- A. Prior to beginning construction work, the Design-Builder shall inform the Authority of buildings or structures on which it intends to perform work or which performance of the Project Work will affect.
- B. Conditional inspection of buildings or structures in the immediate vicinity of the Project, which may reasonably be expected to be affected by the Work, will be performed jointly by the Authority and the Design-Builder. This inspection will be conducted prior to the commencement of construction work to determine pre-existing conditions. After this inspection, the Authority will not assume any responsibility for damages arising from the Work performed and it shall be the responsibility of the Design-Builder to correct all damages caused by performance of the Contract Work.
- C. Examine substrates, areas, and conditions, with Authority personnel present, for compliance with requirements for installed tolerance and other conditions affecting performance. Record observations from the required preconstruction inspection.
- D. Where a written inspection report requires listing conditions detrimental to performance of the Work, include the following:
 - 1. Description of the Work.
 - 2. List of detrimental conditions, including substrates.
 - 3. List of unacceptable installation tolerances.
 - 4. Recommended corrections.

1.04 EXAMINATION

- A. General: Verify dimensions shown on existing work and dimensions required for work that is to connect with work not in place in accordance with Section 01 72 10, LAYOUT OF WORK AND FIELD ENGINEERING.
- B. Existing Conditions
 - 1. The existence and location of Site improvements, above and below-ground utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of above and below-ground utilities, mechanical and electrical systems, and other construction affecting the Work. Verify the location and point of connection of utility services.
 - 2. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, water service pipes, and electrical services.
 - 3. Furnish location data for work related to the Project that must be performed by public utilities serving the Project Site.

- C. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
- D. Examine rough-in for mechanical and electrical systems to verify actual location of connections before equipment and fixture installation.
- E. Examine new and existing facilities for suitable conditions where products and systems are to be installed.

1.05 ACCEPTANCE OF CONDITIONS

- A. Examine substrates, areas, and conditions, with contract personnel present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
 - 1. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
 - a. Description of the Work.
 - b. List of detrimental conditions, including substrates.
 - c. List of unacceptable installation tolerances.
 - d. Recommended corrections.
 - 2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 - 3. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
 - 4. Examine new and existing facilities for suitable conditions where products and systems are to be installed.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. Proceeding with work indicates acceptance of surfaces and conditions.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01 72 10
LAYOUT OF WORK AND FIELD ENGINEERING

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes general procedural requirements for layout of work and field engineering including, examination, preparation, construction layout, installation, survey personnel, equipment and calibration requirements, survey standards, surveys procedures, and formats for figures and reports.

1.02 RELATED SECTIONS

- A. Section 01 71 10 – ACCEPTANCE OF CONDITIONS

1.03 REFERENCES

- A. DIN (Deutsches Institut für Normung) 18723 – Specification for Theodolite Accuracy
- B. Federal Geodetic Control Committee (FGCC):
 - 1. Standards and Specifications for Geodetic Control Networks
- C. National Oceanic and Atmospheric Administration (NOAA):
 - 1. Manual National Ocean Survey (NOS), National Geodetic Survey (NGS) 3 Geodetic Leveling
- D. National Society of Professional Surveyors (NSPS)
 - 1. American Congress on Surveying and Mapping (ACSM).

1.04 SUBMITTALS

- A. Survey personnel qualification data: Résumé and proof of certification or registration for all project surveyors. Resumés shall include information to demonstrate their capabilities and experience. Include lists of three completed projects with owner, project names, project duration, project description, project addresses, and phone numbers for the Survey Manager and survey crew chiefs.
- B. Survey equipment: List of equipment and instruments to be used on the Project and include manufacturer specifications, date of purchase and last date of service for all instruments. Notify the Contracting Officer Representative when changes to equipment are made and submit an updated list of equipment and instruments.
- C. Electronic distance measuring instruments: All measurements, computations, and results from the required calibration exercise.
- D. Procedures for Control Surveys, Structural As-built Surveys, Movement Detection Surveys, Early Alignment As-built Surveys, and Hi-Lo Surveys, Post Construction Alignment As-built Surveys and Final Trackway Monumentation Surveys.
- E. Horizontal and vertical trackway alignment revisions with supporting calculations and data.
- F. Supporting documents, calculations, and data for required remedial actions.
- G. Numbering sequence for trackway vertical control monumentation.
- H. Log of layout control work. Record deviations from required lines and levels.

I. Survey data reduction and calculations for Bid Schedule items of work.

J. Post construction Monument Record Sheets.

1.05 QUALITY ASSURANCE

A. Verify and maintain records to document personnel certification; equipment maintenance, calibration and adjustment; and use of required procedures for field work and office computations. These records shall be maintained by the surveyor in responsible charge of the Work. Verification of compliance shall be included in the Design-Builder's overall Quality Assurance program and provided to the Contracting Officer Representative quarterly or upon request.

B. Survey Personnel

1. Ensure that all personnel are qualified to perform the Work.
2. Provide a Survey Manager to plan, execute, and verify all survey work (or survey work as established by the Contracting Officer Representative).
3. The Authority may choose to withhold payment for all construction work if the Design-Builder fails to provide qualified survey personnel.
4. All personnel performing or assisting in survey activities, including construction layout, shall be Certified Survey Technicians (CST) by and through the National Society of Professional Surveyors (NSPS) - American Congress on Surveying and Mapping (ACSM).
 - a. Each member of the Design-Builder's survey staff shall be certified in one or more of the Certified Survey Technician levels when assigned to a WMATA project. There are four levels of certification in the CST program. Certification is by experience and examination. Refer to NSPS Figure 1.05-1 for the levels of the CST Program.
 - b. The Authority will accept registration as a Land Surveyor or Property Line Surveyor, in Virginia, Maryland, or the District of Columbia in lieu of CST certification.
 - c. Survey consultants hired by the Design-Builder to provide survey services are bound by the same CST requirements contained in the Contract.
 - d. Surveyors working under the direction of a Licensed Surveyor or Property Line Surveyor are not exempt from the CST requirement.
 - e. Use of craft personnel as substitute for temporary survey staff is not acceptable unless they are a Certified Survey Technician.
 - f. With concurrence by the Contracting Officer Representative and WMATA Quality Assurance Manager, a Design-Builder's surveyor without CST certification may temporarily work on a WMATA contract prior to taking the CST exam, if the surveyor:
 - (1) Fulfills the minimum education and or experience requirements for the position held as described in the CST Program Book.
 - (2) Submits a copy of the CST application to the Contracting Officer Representative along with other documentation of education and or work experience.
 - (3) Is scheduled to take the next available CST exam.
 - (4) Requests in writing, a temporary waiver of the CST requirement pending the outcome of the results of the CST exam with the understanding that failure to pass the CST exam will result in said surveyor's removal from the WMATA Contract.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION

3.01 GENERAL REQUIREMENTS

- A. The Authority has established, or will establish, such general reference points including horizontal control points and vertical benchmarks as will enable the Design-Builder to proceed with the Work. If the Design-Builder finds that previously established reference points have been destroyed or displaced, or that none have been established, it shall promptly notify the Contracting Officer Representative.
- B. The Design-Builder shall lay out its work from reference points established by previous construction or from established reference points shown in the Contract and shall be responsible for all measurements in connection therewith. The Design-Builder shall furnish stakes, templates, platforms, equipment, tools, materials, and labor as may be required in laying out any part of the Work from the reference points established by previous construction or by the Authority. The Design-Builder will be held responsible for the execution of the Work to such lines and grades as directed.
- C. Protect and preserve the established reference points and shall make no changes in locations without approval by the Authority. Reference points lost, disturbed by construction, destroyed, or which require shifting because of necessary changes in grades or locations shall, subject to prior approval, be replaced and accurately located at the Design-Builder's expense by a registered surveyor in the area where the Work is to be performed or a qualified certified survey technician (CST Level IV). Reference points replaced by the Design-Builder's surveyor shall be done in accordance with the FGCC Standards and Specifications for Geodetic Control Networks using First Order, Class 1 specifications for horizontal control work and Second Order, Class 1 specifications for vertical control work.
- D. For the purpose of this Section, the Design-Builder shall provide competent engineering services as necessary to execute the Work. It shall verify the dimensions shown before undertaking construction work and shall be responsible for the accuracy of the finished Work.

3.02 EXAMINATION

- A. General: Dimensions shown on existing work and dimensions required for work that is to connect with work not in place shall be verified by the Design-Builder by actual measurement of the existing work. Discrepancies between the Contract Documents and the existing conditions shall be referred to the Contracting Officer Representative before work affected thereby has been performed.
 - 1. The Design-Builder shall compare drawings and verify the dimensions before laying out the Work and shall be responsible for errors, which might have been avoided thereby.
 - 2. Dimensions and descriptions given on the Contract Documents for adjacent work shall be verified by the Design-Builder. It is the responsibility of the Design-Builder to verify all as-built conditions and interface information by actual field measurement.

- B. Existing Conditions: The existence and location of site improvements, utilities, both underground and above ground, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work. Call Miss Utility at 1-(800) 257-7777 before beginning any excavation or demolition project.
 - 1. Before construction, verify the location and points of connection of utility services and the locations and invert elevations at points of connection of sanitary sewer, storm sewer, and water-service piping; and underground electrical services.
 - 2. Furnish location data for work related to Project that must be performed by public utilities serving Project Site.
- C. Acceptance of Conditions: In accordance with Section 01 77 50, CLOSEOUT.

3.03 PREPARATION

- A. Existing Utility Information: Furnish information to local Utility and the Contracting Officer Representative that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate and obtain approval from authorities having jurisdiction.
- B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Authority or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 - 1. Notify the Contracting Officer Representative and Utility representative not less than five working days in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without written permission from the Utility and the Authority.
- C. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- D. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Design Drawings.
- E. Review of Contract Documents and Field Conditions: Immediately upon discovery of the need for clarification of the Contract Documents, submit a Request for Information to the Contracting Officer Representative. Include a detailed description of the problem encountered, together with recommendations for changing the Contract Documents.

3.04 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on the Issue for Construction Drawings. If discrepancies are discovered, notify Contracting Officer Representative promptly.
- B. General: Engage qualified Certified Survey Technician(s) to lay out the Work using accepted surveying practices.
 - 1. Establish benchmarks and control points to set lines and levels at each stage of construction and elsewhere as needed to locate each element of the Project.

2. Establish dimensions within tolerances indicated. Do not scale Issue for Construction Drawings to obtain required dimensions.
 3. Inform installers of lines and levels to which they must comply.
 4. Check the location, level, and plumb, of every major element as the Work progresses.
 5. Notify the Contracting Officer Representative when deviations from required lines and levels exceed allowable tolerances.
 6. Close Site surveys with an error of closure equal to or less than the standard established or referenced herein.
- C. The tolerances generally applicable in setting survey stakes or marks shall be as set forth below. These tolerances shall not supersede stricter tolerances required by the Issue for Construction Drawings or Specifications, and shall not otherwise relieve the Design-Builder of responsibility for measurements in compliance therewith. The tolerances listed below are not to be used for setting or re-establishing primary and secondary control markers or final alignment monumentation.
1. Tolerances: Tolerances in setting survey stakes or markers shall not exceed the following:

Horizontal Survey Stakes or Markers	Distance	Tangent
Horizontal marks on hubs on centerline and offset centerlines.	1:35,000	0.02 ft.
Intermediate stakes or hubs on centerlines and offset centerlines.	1:35,000	0.02 ft.
Rough excavation and embankment for roads and other work not otherwise provided.	1:10,000	0.50 ft.
Trimming of excavation and embankment unless otherwise provided.	1:10,000	0.50 ft.
Structures-Building construction.	1:35,000	0.02 ft.
Trimming or preparation of earth subgrade for trackbeds, roadways, and concrete pipes.	1:20,000	0.04 ft.
Trackbed and roadway sub-base and base, steel pipe and other work not otherwise provided for.	1:20,000	0.04 ft.
Track invert and roadway surfacing, steel reinforcement, concrete pipe and other formed concrete.	1:35,000	0.02 ft.

Vertical Grade Stakes or Markers	Elevation (Plus/Minus)
Rough excavation and embankment for roads and other work not otherwise provided.	0.20 ft.
Trimming of excavation and embankment unless otherwise provided.	0.20 ft.
Structures-Building construction.	0.01 ft.
Trimming or preparation of earth sub-grade for trackbeds, roadways, concrete pipe and other concrete structures.	0.05 ft.
Trackbed and roadway sub-base and base, steel pipe and other work not otherwise provided for.	0.05 ft.
Track invert and roadway surfacing, steel reinforcement, concrete pipe and other formed concrete.	0.02 ft. (Track invert only minus 0.00 ft. high, plus 0.04 ft. low)
Equipment Installation.	As required by manufacturer.

- D. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and invert elevations.
- E. Building Lines and Levels: Locate and lay out control lines and grades for structures, building foundations, column grids, and floor grades, including those required for mechanical and electrical work. Transfer survey reference line markings and elevations for use with control lines and grades. Level foundations and piers from two or more locations.
- F. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available to the Contracting Officer Representative upon request.

3.05 FIELD ENGINEERING

- A. Identification: Authority will provide and identify existing benchmarks and control points to be used for the duration of the Contract.
- B. Reference Points: Locate existing and verify by field traverse permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent primary benchmarks, deep benchmarks, and control points during construction operations.
 - 1. Do not change or relocate existing benchmarks or control points without prior written approval by the Contracting Officer Representative. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to the Contracting Officer Representative before proceeding.
 - 2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.
- C. Benchmarks: Establish and maintain permanent secondary control points on Project Site, referenced to data established by survey control points. Comply with WMATA Standard Drawing for Survey Monuments.

1. Record benchmark locations, with horizontal and vertical data, on record copy of Issued for Construction Drawings.
 2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
 3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.
- D. When the Contract Specifications require Price Proposal Schedule items of work to be measured by surveying methods, perform all such surveys, including control surveys run for establishing the measurement reference lines. Perform all survey data reduction and calculations and supply the reduced survey data in an understandable and readable format.

3.06 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
1. Make vertical work plumb and make horizontal work level unless otherwise specified.
- B. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for uniform spacing.
- C. The Design-Builder's surveys are a part of the Work and may be checked by the Authority at any time. The Design-Builder shall be responsible for lines, grades, or measurements which do not comply with specified or proper tolerances, or which are otherwise defective, and for any resultant defects in the Work. The Design-Builder will be required to conduct re-surveys or check surveys to correct errors indicated by review of the Work.

3.07 SURVEY EQUIPMENT AND CALIBRATION REQUIREMENTS

- A. Survey Equipment: All electronic distance measuring instruments (or total station theodolites) shall be checked by the Design-Builder against a National Geodetic Survey (NGS) range of known distances at least once every 6 months.
1. All distance measurements shall be computed using the procedures in NOS NGS-10, Use of Calibration Base Lines. The actual measurements shall be recorded, atmospheric corrections applied, and then adjusted by least squares to compute a constant, as well as, a relative correction factor (scale correction).
 2. National Geodetic Survey has established specific calibration baselines for the purpose of comparing survey equipment to known monumentation to verify the instruments vertical angles, horizontal angles, and difference in elevation for compliance with the manufacturer's specifications. Verification of angle measurement and difference in elevation shall only be done by the Design-Builder if all other methods of verification acceptable to the Authority have been exhausted.
 3. Bring each electronic distance meter (EDM) or total station theodolite to the Corbin, VA Geomagnetic observatory (phone 703-373-7605) or similar NGS facility and compare their instrument(s) to known NGS values whenever there is any question as to the correct operation, accuracy and functionality of the Design-Builder's survey equipment. Minimally, this will be done every 6 months or after a damaged instrument has been repaired and before it is put back in service. The Design-Builder shall supply the Contracting Officer Representative with all appropriate documentation from this exercise.
 4. All total station distance measuring devices and prisms shall be serviced every 6 months and checked frequently over lines of known distances. Generally, this exercise shall be conducted in the spring and fall.

5. Results of this calibration exercise shall be forwarded to the Authority. Correction factor's shall be posted in the Design-Builder's office computing area and applied as required to maintain the desired accuracy.
6. Adjustment and certification documents from a supplier or manufacture are not allowed as a substitution for the distance calibration exercise at a NGS or similar facility.
7. Records of instrument calibration and adjustment shall be maintained as a part of the Design-Builder's quality control program.
8. Use of the NGS baseline for checking distances is not intended to take the place of normal maintenance, cleaning, and adjustment of the Design-Builder's instruments.
9. Every 6 months, or whenever the difference between direct and reverse readings of the theodolite depart from 180 degrees by more than 30 seconds, the instrument shall be adjusted for collimation error. Readjustment of the crosshairs and level bubble shall be done whenever their misadjustments affect the instrument reading by the amount of the least count.
10. Instruments found to be in disrepair or out of adjustment shall be removed and repaired or replaced.
11. All steel tapes shall be compared with the Design-Builder's EDM at least every 6 months. The Design-Builder shall number all tapes and measuring chains, record comparisons, compute correction factors, and forward to the Authority upon request or whenever equipment is changed. In addition, tape correction information shall be posted in the Design-Builder's office computing area and applied as required to maintain the desired accuracy.
12. Provide and maintain the ability in-house to check and adjust all tribrachs for eccentricity. Adjustment checks shall be made weekly or as necessary. A record of adjustments to all tribrachs shall be kept current and made available to the Authority monthly or upon request. Each tribrach shall be numbered and tagged with the date of the last adjustment.

3.08 SURVEY STANDARDS

- A. Maintain accuracy standards for all control surveys performed under the terms of this Contract in accordance with the following table:

Primary horizontal control surveys	First order
Primary vertical control surveys	Second order, Class I
Secondary horizontal control surveys	Second order, Class I
Secondary vertical control surveys	Second order, Class II

1. Primary control is defined as the original control provided to the Design-Builder at the start of the Contract. Secondary control is defined as the control established and used by the Design-Builder during construction. All secondary control traverse stations shall be set with permanent markers.
2. Control surveys and computations including surveys of main control lines to determine alignment of major structure components shall be performed in accordance with Second Order Class I requirements.
3. Unless specified, the Design-Builder will not be required to perform First-Order survey work unless Design-Builder destroys primary control points included in the Contract Documents or set by WMATA after Contract NTP. GPS shall not be used by the Design-Builder to re-establish destroyed primary control unless approved by the Contracting Officer Representative.

4. The Design-Builder should expect all primary or secondary horizontal control traverses they perform to meet a 1:50,000 distance accuracy closure. All vertical control traverses shall have a closure accuracy that does not fall below that specified for Second Order, Class II surveys.
5. Survey procedures and accuracy are a function of the types of survey that is being performed. The Design-Builder is responsible for ensuring the use of proper procedures to maintain accuracy requirements contained in the Contract.
6. Use the closed traverse method in setting controls by starting at and ending at known or previously established traverse stations and benchmarks.
7. All distances over 100 feet shall be measured by the use of electronic distance measuring instrument (EDMI). Critical distances under 100 feet shall be checked with a distance meter.

B. Horizontal Traverse

1. Conventional traverse work shall be performed in accordance with the requirements defined in the FGCC Standards and Specifications for Geodetic Control Networks, Federal Geodetic Control Committee.
2. All survey field data shall be provided to the Authority upon request in a Star*Net digital input file format.
 - a. All reduced horizontal traverse measurements shall be provided in a set reduction report in an ASCII text file format which clearly lists the following data:
 - (1) Individual observations in an orderly format along with the mean angle from each direct and reverse observation.
 - (2) Horizontal angle mean, vertical angle mean and slope distance mean for each set of observations.
 - (3) Standard deviation of the observations, and maximum, minimum, range and collimation error for each set of observations. Refer to Figure 3.08-1 for a sample set reduction report.
3. Accuracy requirements:
 - a. First Order control surveys:
 - (1) Horizontal and vertical angle circle reading observation accuracy (standard deviation) of 0.5 seconds (DIN 18723) and read to 0.1 of a second.
 - (2) Occupied station centering (eccentricity) accuracy of 1 mm.
 - (3) Electronic distances measuring accuracy (standard deviation) of 1 mm plus or minus 1 ppm and read to 0.001 feet.
 - b. Second Order control surveys:
 - (1) Horizontal and vertical angle circle reading observation accuracy (standard deviation) of 1.0 second (DIN 18723) and read to 1.0 second or less if possible.
 - (2) Occupied station centering (eccentricity) accuracy of 1 mm.
 - (3) Electronic distances measuring accuracy (standard deviation) of 2 mm plus or minus 2 ppm and read to 0.001 feet.
 - (4) All horizontal traverse adjustments shall be performed using a minimally constrained Least Squares adjustment method which will produce the following output:

- (a) Summary of unadjusted input observations
 - (b) Statistical summary
 - (c) Chi Square test
 - (d) Adjusted observations and residuals
 - (e) Residual summary
 - (f) Adjusted bearings and horizontal distances (grid and ground)
 - (g) Horizontal unadjusted traverse closures
 - (h) Adjusted coordinates
 - (i) Convergence angles and grid factors at stations
 - (j) Standard deviations, error propagation and error ellipses
- (5) All horizontal traverse adjustment results shall be provided to the Authority upon request.

C. Vertical Traverse

1. Differential leveling shall be performed in accordance with the requirements for Second-Order, Class I geodetic leveling surveys as defined in the Standards and Specifications for Geodetic Control Networks, Federal Geodetic Control Committee (FGCC), and NOAA Manual NOS NGS 3 Geodetic Leveling, National Geodetic Survey (NGS).
 - a. The survey Subcontractor shall provide documentation of staff calibration, which includes certificates for expansion coefficient and length calibration.
2. All reduced vertical traverse data shall be provided to the Authority upon request in a Star*Net-Lev digital input file format.
 - a. All vertical traverse data shall be provided as a data reduction report in an ASCII text file format, which clearly lists the following data:
 - (1) Individual observations with the point identifier,
 - (2) Distance from instrument to staff (rod) for each observation,
 - (3) Backsight staff (rod) reading and foresight staff (rod) reading,
 - (4) Number of measurements taken and standard deviation per staff (rod) reading.
 - (5) Cumulative station differences.
3. Accuracy Requirements:
 - a. Differential leveling observation accuracy (standard deviation) of 0.4 mm and read to 0.0001 feet.
4. The Design-Builder may use electronic digital levels and bar coded leveling staffs. The use of leveling staffs with ground plate (turning turtle) is required.
5. Use calibrated invar staffs (level rods) for all control work including final vertical monumentation installation.

6. Use semi-precise level rods or equal equipment for level work.
7. All vertical traverse adjustments shall be performed using a minimally constrained Least Squares adjustment method after a vertical traverse meets the minimum closure requirements referenced herein.
8. All vertical traverse adjustment results shall be provided to the Authority upon request.

3.09 SURVEYS AND PROCEDURES

A. Control Surveys

1. Verify Project primary control monumentation and provide adjustment computations to the Contracting Officer Representative.
2. Replace primary control monuments that have been destroyed or damaged and provide adjustment computations to the Contracting Officer Representative.
 - a. Provide Monument Record Sheets to the Contracting Officer Representative.
3. Establish secondary control monumentation along the Authority's construction project and provide adjustment computations to the Contracting Officer Representative.
 - a. Horizontal and vertical control discs shall be installed in accordance with WMATA Standards.
 - b. Horizontal and vertical control discs set on direct fixation trackways shall be recessed to protect them from disturbance.
 - c. Provide Monument Record Sheets to the Contracting Officer Representative.

B. Structural As-Builts

1. General Requirements: Structural as-builts are required to check for out-of-tolerance construction, which may impact other structures or compromise train clearances along the trackway.
 - a. All methods, equipment and procedures used by the Design-Builder to perform structural checks shall be approved by the Contracting Officer Representative prior to commencement of the Work.
 - b. This survey data must be analyzed by the Design-Builder and the Authority for compliance with construction and rail tolerances.
 - c. This survey data must be analyzed by the Design-Builder and the Authority to determine what remedial action, if any, may be required to address out-of-tolerance construction and the impact of structural misalignment on the final placement of other structures and rail.
 - (1) If the survey data reveals out-of-tolerance construction, which will impact the placement of other structures along the trackway, the Design-Builder shall take appropriate remedial action to comply with the Issued for Construction Drawings and Specifications.
 - (a) If minimally out-of-tolerance, perform horizontal and vertical alignment revisions to minimize the impact of the misalignment on the future placement of adjoining structures and rail along the trackway.
 - (b) If significantly out-of-tolerance and an acceptable alignment revision cannot be used to compensate for out-of-tolerance construction, then demolish and remove the structure and re-install.

- (2) All alignment revisions and remedial actions shall be approved by the Contracting Officer Representative prior to commencement of the Work.
2. Verify existing primary horizontal and vertical controls and re-establish, if destroyed or disturbed, and provide adjustment computations to the Contracting Officer Representative.
3. Provide Monument Record Sheets to the Contracting Officer Representative.
4. Establish a secondary horizontal and vertical control system on the Authority's structures and reference to the approved project primary horizontal and vertical control system. The secondary control system established on or within trackway structures shall be used for detailed cross sections, Hi-Lo surveys and placement of final trackway monumentation. The secondary control system shall be adequately referenced so it can be readily recovered. Horizontal and vertical control discs shall be installed in accordance with WMATA standard.
 - a. Horizontal and vertical control discs set on direct fixation trackways shall be recessed to protect them from disturbance.
 - b. Provide Monument Record Sheets to the Contracting Officer Representative.
5. Verify structural concrete placement for compliance with Issued for Construction Drawings and Specifications, and provide the final results to the Contracting Officer Representative when requested.

C. Post Construction Alignment As-built Surveys

1. General Requirements: Post construction alignment as-built surveys are required to check trackway structures for compliance with Issue for Construction Drawings and Specifications and to check for out-of-tolerance construction, which may impact train clearance tolerances.
2. All methods, equipment, and procedures used by the Design-Builder to perform post construction alignment as-built surveys shall be approved by the Contracting Officer Representative prior to commencement of the Work.
 - a. This survey data must be analyzed by the Design-Builder and the Authority for compliance with construction and rail tolerances.
 - b. This survey data must be analyzed by the Design-Builder and the Authority to determine what remedial action, if any, may be required to address out-of-tolerance construction and the impact of structural misalignment on the final placement of the rail.
 - (1) If the survey data reveals out-of-tolerance construction, which will impact the placement of other structures along the trackway, the Design-Builder shall take appropriate remedial action to comply with the plans and specifications.
 - (a) If minimally out-of-tolerance, perform horizontal and vertical alignment revisions to minimize the impact of the misalignment on the future placement of adjoining structures and rail along the trackway.
 - (b) If significantly out-of-tolerance and an acceptable alignment revision cannot be used to compensate for out-of-tolerance construction, then demolish and remove the structure and re-install.
 - (2) All alignment revisions and remedial actions shall be approved by the Contracting Officer Representative prior to commencement of the Work.

3. Verify existing primary horizontal and vertical controls and re-establish, if destroyed or disturbed, and provide adjustment computations to the Contracting Officer Representative for approval. Provide Monument Record Sheets to the Contracting Officer Representative.
4. Establish a secondary horizontal and vertical control system on the Authority's structures and reference to the approved project primary horizontal and vertical control system. The secondary control system established on or within trackway structures shall be used for detailed as-built cross sections, hi-lo surveys, and placement of final trackway monumentation. The secondary control system shall be adequately referenced so it can be readily recovered.
 - a. Horizontal and vertical control discs shall be installed in accordance with WMATA Standards.
 - b. Horizontal and vertical control discs set on direct fixation trackways shall be recessed to protect them from disturbance.
 - c. Provide Monument Record Sheets to the Contracting Officer Representative.
5. Provide a report to the Contracting Officer Representative comparing the as-built location of the structure to the plan location as well as the theoretical dynamic outline of the train along the tunnels, retained areas, and aerial structures.
 - a. These cross sections must show computed clearances between the as-built location of the structure as well as the theoretical dynamic outline of the train.
 - b. This data must be analyzed by the Design-Builder and the Authority for compliance with construction and train clearance tolerances.
 - c. This data must be analyzed by the Design-Builder and the Authority to determine what remedial action, if any, may be required to address out-of-tolerance construction and the impact of structural misalignment on the final placement of the tracks.
6. Install and reference all permanent, secondary, and final monumentation required for construction, trackwork, and other systemwide facilities.
 - a. Provide Monument Record Sheets to the Contracting Officer Representative.
7. Coordinate the post construction alignment as-built survey work with the Contracting Officer Representative.

3.10 FIGURES AND REPORT FORMATS

Figure 1.05-1

Levels of the Certified Survey Technician Program

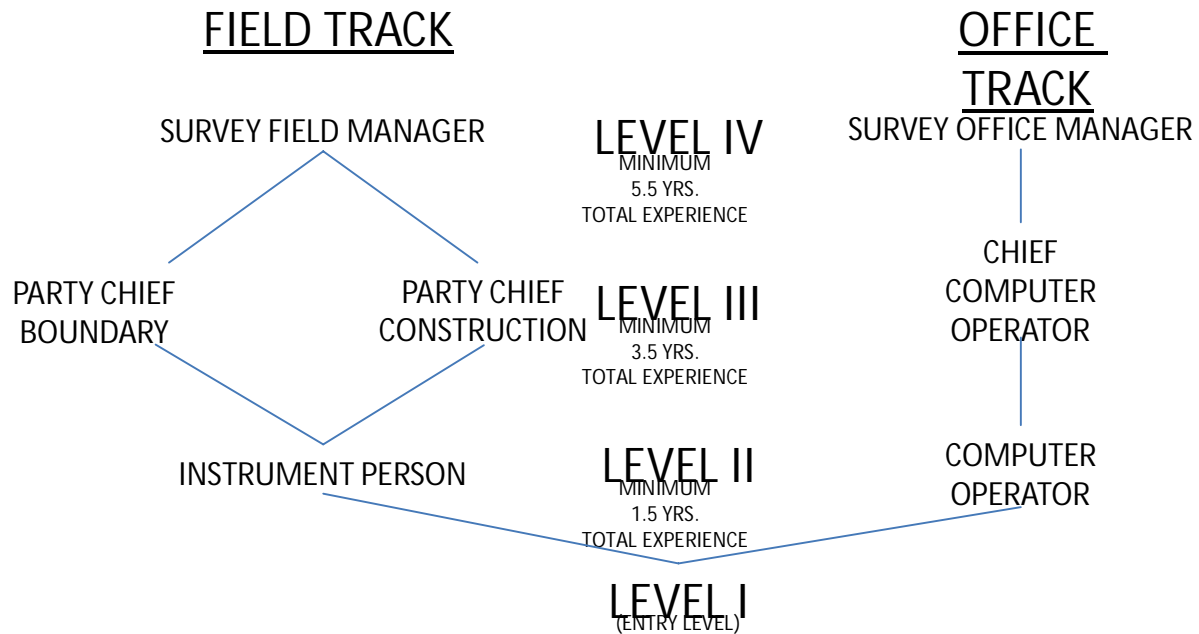


Figure 3.08-1

TRAVERSE SET REDUCTION

PR:METRO2.PRJ DT:05/01/01 ID:METRO CENTER NM:TRAVERSE

Occupied Station: Pt. No. 101, A-101 METRO B/D
Backsight: Pt. No. 100, A-100 METRO B/D
Foresight: Pt. No. 102, A-102 METRO B/D

HORIZONTAL ANGLE REDUCTION

Set Rejection Criterion: Deviation from Mean greater than 3 inches

Set No.	Face	Backsight	Foresight	Horiz. Angle	Mean Dev.
1	1	0-00-00.0	191-05-13.0		
	2	180-00-01.0	11-05-12.4		
	Mean	0-00-00.50	191-05-12.70	191-05-12.20	0-00-01.03
2	1	359-59-59.6	191-05-14.0		
	2	180-00-01.0	11-05-12.1		
	Mean	0-00-00.30	191-05-13.05	191-05-12.75	0-00-00.48
3	1	359-59-59.5	191-05-13.0		
	2	179-59-59.8	11-05-12.2		
	Mean	359-59-59.65	191-05-12.60	191-05-12.95	0-00-00.27
4	1	359-59-57.2	191-05-13.1		
	2	179-59-59.7	11-05-13.8		
	Mean	359-59-58.45	191-05-13.45	191-05-15.00	- 0-00-01.78

Mean Horiz. Angle: 191-05-13.23

Std. Deviation (obs): 0-00-01.23

Std. Deviation (mean): 0-00-00.61

Maximum: 191-05-15.00

Minimum: 191-05-12.20

Range: 0-00-02.80

Collimation Error: 0-00-02.5

BACKSIGHT ZENITH/SLOPE DISTANCE REDUCTION

Zenith Rejection Criterion: Deviation from Mean greater than 5 inches
Slope Distance Rejection Criterion: Deviation from Mean greater than 0.01 feet

Set No.	Face	Zenith	Mean Dev.	Slope Distance	Mean Dev.
5	1	90-27-40.6		215.316	
	2	269-32-20.3		215.316	
	Mean	90-27-40.15	0-00-00.08	215.316	0.00
6	1	90-27-41.7		215.316	
	2	269-32-20.5		215.316	
	Mean	90-27-40.60	0-00-00.53	215.316	0.00
7	1	90-27-40.4		215.316	
	2	269-32-21.5		215.316	
	Mean	90-27-39.45	0-00-00.61	215.316	0.00

Mean Zenith Angle: 90-27-40.07 Mean Slope Distance : 215.316

Std. Deviation (obs): 0-00-00.57 Std. Deviation (obs): 0.000

Std. Deviation (mean): 0-00-00.33 Std. Deviation (mean): 0.000

Maximum: 90-27-40.60

Minimum: 90-27-39.45

Range: 0-00-01.15

Collimation Error: 0-00-02.2

FORESIGHT ZENITH/SLOPE DISTANCE REDUCTION

Zenith Rejection Criterion: Deviation from Mean greater than 5 inches
Slope Distance Rejection Criterion: Deviation from Mean greater than 0.01 feet

Set No.	Face	Zenith	Mean Dev.	Slope Distance	Mean Dev.
5	1	89-29-50.9		275.692	
	2	270-30-10.5		275.691	
	Mean	89-29-50.20	0-00-01.01	275.692	0.00
6	1	89-29-52.1		275.692	
	2	270-30-09.3		275.691	
	Mean	89-29-51.40	0-00-00.18	275.692	0.00
7	1	89-29-52.6		275.692	
	2	270-30-08.5		275.691	
	Mean	89-29-52.05	0-00-00.83	275.692	0.00

END OF SECTION

SECTION 01 72 20
MOBILIZATION

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes specifications for the following:
 - 1. Organization and mobilization of Contractor's forces;
 - 2. Design, fabrication, and transportation of construction plant and equipment to the Site and setting up of same;
 - 3. Transporting various tools, materials, and equipment to the Site; and
 - 4. Erection of temporary buildings and facilities required for staging and construction operations.
- B. Mobilization shall include mobilization of all construction equipment, temporary facilities, materials, supplies, appurtenances, staffed and ready for commencing and prosecuting the Work; and the subsequent demobilization and removal from the Site of said equipment, appurtenances, and the like upon completion of the Work.
- C. Mobilization shall also include assembly and delivery to the Site of plant, equipment, materials, and supplies necessary for the prosecution of work, which are not intended to be incorporated in the Work; the clearing of and preparation of the Design-Builder's work area; the complete assembly, in working order, of equipment necessary to perform the required work; personnel services preparatory to commencing actual work; and all other preparatory work required to permit commencement of the actual work on construction items for which payment is provided under the Contract.

1.02 SUBMITTALS

- A. Refer to Section 01 33 00, SUBMITTAL PROCEDURES, for submittal requirements and procedures for the following submittals:
 - 1. A layout of the construction sites including fences, roads, parking, buildings, staging, and storage areas, within 7 Days after the Notice to Proceed.
 - 2. Schedule for mobilization of field office within 7 Days after Notice to Proceed.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION

3.01 DELIVERY

- A. Delivery to the jobsite of construction tools, equipment, materials, and supplies shall be accomplished in conformance with local governing ordinances and regulations.

3.02 TOOLS AND SUPPLIES

- A. Provide construction tools, equipment, materials, and supplies of the types and quantities that will facilitate the timely execution of the Work.
- B. Provide personnel, products, construction materials, equipment, tools, and supplies at the jobsite at the time they are scheduled to be installed or utilized.

3.03 PLANT LOCATION

- A. Locate plant or plants appropriately close to the portion of the Work for which it will be used.

3.04 DEMOBILIZATION

- A. Upon completion of the Work, remove construction tools, apparatus, equipment, unused materials, and supplies, plant, temporary facilities, and personnel from the jobsite.
- B. Restore all areas utilized for the Design-Builder's temporary facilities and staging purposes to their original, natural state or, when called for in the Contract Documents, complete such areas as indicated.

END OF SECTION

SECTION 01 72 30
PROTECTION OF ADJACENT CONSTRUCTION

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section specifies the appropriate methods for protection of adjacent construction when performing installations and improvements in and around existing facilities.

1.02 PROTECTION OF EXISTING SURFACES

- A. Existing surfaces shall be carefully protected during construction operations under this Contract to avoid damaging existing surfaces.
 - 1. Existing surfaces shall be protected by the Design-Builder from all possible damages including chipping, staining, and corroding during performance of the Work.
 - 2. If damage occurs, the Design-Builder shall repair or replace to match original undisturbed conditions.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01 73 10
CUTTING AND PATCHING

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section specifies the appropriate methods for performing cutting and patching when installations occur in existing facilities or for improvements including selective demolition, salvaging of materials and equipment, and restoring of pavement and other surfaces and improved areas from damage caused by the Design-Builder's operations.

1.02 SUBMITTALS

- A. Written Request: Submit a written request for approval by the Contracting Officer Representative prior to cutting and patching. A written request is required for any cutting or alteration, which affects:
 - 1. The work of the Authority or any separate contractor,
 - 2. The structural value or integrity of any element of the Project,
 - 3. The integrity or effectiveness of weather exposed or moisture-resistant elements or systems,
 - 4. Building aesthetic qualities for exterior areas or in occupied spaces, or
 - 5. The efficiency, operation life, maintenance, or safety of operational systems.
- B. Cutting and Patching Proposal: Include in written request the following:
 - 1. Describe the extent of cutting and patching required. Show how it will be performed and indicate why it cannot be avoided.
 - 2. Describe anticipated results in terms of changes to existing construction. Include changes to structural elements and operating components as well as changes in the building's appearance and other significant visual elements.
 - 3. List utilities that will be disturbed or affected, including those that will be relocated and those that will be temporarily out-of-service. Indicate how long service will be disrupted.
- C. Structural Elements: Where cutting and patching involves addition of reinforcement to structural elements, submit details and engineering calculations to show how reinforcement is integrated with the original structure to satisfy requirements.
- D. Should conditions of work or schedule indicate change of materials or methods, submit written recommendations to the Contracting Officer Representative, including:
 - 1. Conditions indicating change,
 - 2. Recommendations for alternative materials or methods, and
 - 3. Resubmittal as required for substitution.
- E. Approval by the Contracting Officer Representative to proceed with cutting and patching work does not waive the Authority's right to later require complete removal and replacement of any part of the Work found to be unsatisfactory.

1.03 QUALITY ASSURANCE

- A. Requirements for Structural Work: Do not cut and patch structural elements in a manner that would change their load carrying capacity or load deflection ratio. Obtain prior approval from the Contracting Officer Representative of the cutting and patching procedures proposed.
- B. Operational Limitations: Do not cut and patch operating elements or related components in a manner that would result in reducing their capacity to perform as intended. Do not cut and patch operating elements or related components in a manner that would result in increased maintenance or decreased operational life or safety. Obtain prior approval from the Contracting Officer Representative of the cutting and patching procedures proposed.
- C. Visual Requirements: Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in the Contracting Officer Representative's opinion, reduce the building's aesthetic qualities. Do not cut and patch construction in a manner that would result in visual evidence of cutting and patching.
 - 1. If possible, retain the original installer or fabricator to cut and patch exposed Work. If it is impossible to engage the original installer or fabricator, engage another recognized experienced and specialized firm.
 - 2. Remove and replace construction cut and patched in a visually unsatisfactory manner.

1.04 EMBEDDED ITEMS

- A. When reinforcing steel, conduit or other items embedded in the concrete are encountered in a drilling or coring operation, the operation shall be stopped and the Contracting Officer Representative immediately notified. Determine whether the embedded item may be cut through and if determined to be permissible, obtain Contracting Officer Representative's concurrence before doing so. If it is not permissible to cut through the embedded item, holes shall be drilled in another location and the original holes patched as directed by Contracting Officer Representative.

1.05 PAVEMENT AND IMPROVED AREAS RESTORATION

- A. As applicable, secure permits from the Jurisdictional Authority for all pavement restoration within the limits of said Jurisdictional Authority. Submit Working Drawings of such pavement restoration prepared in accordance with the requirements of the Issued for Construction Drawings, Issued for Construction Specifications, and the Jurisdictional Authority to the Jurisdictional Authority for approval.
- B. During construction operations on this Contract, certain areas currently grassed, landscaped, or otherwise improved may be disturbed or damaged. Restore such areas as specified in Section 00 73 06, PROTECTION OF EXISTING VEGETATION, STRUCTURES, UTILITIES AND IMPROVEMENTS.
- C. Existing surfaces marred or damaged by operations under this Contract shall be repaired or replaced by the Design-Builder to the condition prior to being marred or damaged as approved by the Contracting Officer Representative.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. General: Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible if identical materials are unavailable or cannot be used, use materials whose installed performance will equal or surpass that of existing materials.

PART 3 – EXECUTION

3.01 INSPECTION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed before cutting. If unsafe or unsatisfactory conditions are encountered, take corrective action before proceeding.
- B. After uncovering work, inspect conditions affecting installation of new products.
- C. Report unsatisfactory or questionable conditions to the Contracting Officer Representative in writing, and do not proceed with the Work until the Contracting Officer Representative has provided further instruction.

3.02 PREPARATION PRIOR TO CUTTING AND PATCHING

- A. Temporary Support: Provide shoring, bracing, and support as required to maintain structural integrity of the affected portion of the Work.
- B. Protection: Protect existing equipment during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.
- C. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

3.03 PERFORMANCE

- A. General: Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay. Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent patching required to restore surfaces to their original condition.
- B. Cutting: Cut existing construction using methods least likely to damage elements to be retained or elements adjoining construction. Where possible review proposed procedures with the original installer; comply with the original installer's recommendations.
 - 1. In general, where cutting is required, use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut holes and slots neatly to size required with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 - 2. To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.
 - 3. Cut through concrete and masonry using a cutting machine such as a carborundum saw or diamond core drill.
 - 4. By-pass utility services such as pipe or conduit, before cutting, where services are shown or required to be removed, relocated, or abandoned. Cut off pipe or conduit in walls or partitions to be removed. Cap, valve or plug and seal the remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after bypassing and cutting.
- C. Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.
 - 1. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.
 - 2. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.

3. Where removal of walls or partitions extends from one finished area into another, patch and repair floor and wall surfaces in the new space to provide an even surface of uniform color and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary to achieve uniform color and appearance.
4. Where patching occurs within a smooth painted surface, apply a primer and second coat over the patched area and extend the final coat over the entire unbroken area containing the patch.
5. Patch, repair, or rehang existing ceilings as necessary to provide an even plane surface of uniform appearance.

3.04 CLEANING

- A. General: Thoroughly clean areas and spaces where cutting and patching is performed or used as access. Completely remove paint, mortar, oils, putty and items of similar nature. Thoroughly clean piping, conduit and similar features before painting or other finishing is applied. Restore damaged pipe covering to its original condition.

END OF SECTION

SECTION 01 74 00
CLEANING

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes specifications for furnishing all labor, materials, equipment, and services, and performing all operations necessary for, and properly incidental to, cleanup during construction and final cleaning of the facilities and site prior to Acceptance by the Authority.

1.02 RELATED SECTIONS

- A. Division 16, Electrical, for conduit cleaning.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION

3.01 CLEANUP DURING CONSTRUCTION

- A. Keep the entire Site in a neat and orderly condition at all times during construction. Conduct a general cleanup of the Site daily as a part of the Work. Provide general daily cleanup and disposal service for removal of waste and rubbish from the jobsite. Clean material as necessary prior to incorporating into the Work.
- B. Dispose and recycle waste, trash, and debris in a safe, acceptable manner, in accordance with applicable laws and ordinances and as prescribed by Jurisdictional Authorities. Bury no waste material and debris on the Site. Burning of trash and debris on the Site is prohibited.
- C. Provide daily litter pickup within Project limits. Provide adequate number of trash receptacles for worker's lunches, cigarette butts, and other miscellaneous garbage.

3.02 FINAL CLEANING OF FACILITIES

- A. Prior to final inspection by the Contracting Officer Representative, and after all construction work is essentially complete, thoroughly clean facilities utilizing professional facility cleaners.
- B. Items to be cleaned include, but are not limited to, all glass, doors, opening frames, grilles, trim, exposed non-ferrous metal surfaces, floor coverings, light fixtures and plates, plumbing fixtures and trim, and all finish surfaces throughout the construction.
- C. Vacuum-clean where appropriate and remove all spots, smears, dust, debris, hand prints, and defacements of every sort, including those of vandals. Use commercial cleaning compounds where necessary.
- D. Follow the recommendations of the manufacturers of the materials and items to be cleaned for all cleaning, polishing, and treatment such as waxing or sealing.

3.03 FINAL SITE CLEANUP

- A. Prior to final inspection, thoroughly clean the entire Site so it is in a neat, acceptable condition. Remove from the entire Site all construction equipment and facilities, construction waste and unused materials, dunnage, loose rock and stones, excess earth, and debris of any description resulting from the Work.
- B. Hose down and scrub clean where necessary all pavement and paved walks.

- C. Thoroughly remove mortar droppings from concrete slabs and pavement. Hose down and scrub clean all concrete flatwork and exposed vertical surfaces of concrete and masonry. Clean all rail surfaces, special trackwork, track drains, handholes, and manholes.
- D. All drainage systems shall be free and clear. All drainage systems and sewers shall be pressure cleaned and inspected, and all catch basins and sumps shall be cleaned.
- E. All conduits shall be cleaned and openings protected as specified in Division 16, Electrical.
- F. All spare material shall be delivered to the Authority.

END OF SECTION

SECTION 01 77 50
CLOSEOUT

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes specifications for performing all operations necessary for and incidental to closing out a Contract and assisting in the Authority's final inspection.
- B. This Section includes procedures for closeout submittals including the following:
 - 1. operation and maintenance manuals;
 - 2. As-Built Drawings and Specifications;
 - 3. spare parts list, delivery information, and distribution of spare parts;
 - 4. configuration management system;
 - 5. training manual, lesson plans, and student's training manual and electronic media of such, as applicable;
 - 6. survey record log;
 - 7. correspondence file;
 - 8. releases;
 - 9. vouchers;
 - 10. records for design, inspection, testing or other quality elements;
 - 11. request for final payment;
 - 12. certifications, affidavits, and warranties and guarantees; and
 - 13. correction of deficiencies submittals as applicable.
- C. This Section establishes required actions by the Design-Builder for facility systems and subsystems commissioning that include the preparation of an asset database, the preparation of preventive maintenance instructions, and labeling and packaging of spare parts.

1.02 REFERENCES

- A. U.S. Green Building Council LEED for New Construction and Major Renovations

1.03 CLOSEOUT SCHEDULE AND PROCEDURE

- A. Changes from Original Conditions:
 - 1. Upon completion of the Work and prior to Substantial Completion, the Design-Builder shall examine each property to determine changes from the original conditions established by the preconstruction inspection, and Section 01 71 10, ACCEPTANCE OF CONDITIONS, and shall furnish a written description to the Contracting Officer Representative of measures taken to correct damage that may have resulted from performance of this Contract, and shall obtain a written release from each owner accepting condition of the building or structure, corrections, or both, thereby relinquishing any claim against the Design-Builder. In the event any owner

refuses to furnish a release of claims, the Design-Builder shall notify the Contracting Officer Representative in writing.

2. The Authority will not assume responsibility for alleged damages arising from the Work performed under this Contract.

B. Requirements Preparatory to Final Inspection by the Authority:

1. Notify the Contracting Officer Representative to perform a preliminary final inspection for the purpose of determining the state of completion of the Work. Notify the Contracting Officer Representative at least 14 Days in advance of requested inspection. The Contracting Officer Representative will perform the inspection within 3 working days of the requested date. From the information gathered from this inspection, the Contracting Officer Representative will prepare a Punch List of work to be performed, corrected, or completed before the Work will be accepted. All work on the Punch List shall be completed by the Design-Builder prior to final inspection.
2. Temporary facilities, except as may be required during Punch List work, shall be removed from the Site.
3. Clean the Site and all applicable appurtenances and improvements as specified in Section 01 74 00, CLEANING.
4. Properly mount operating instructions for equipment and post as specified or required.

C. Final Inspection by the Authority:

1. After all requirements preparatory to the final inspection have been completed as hereinbefore specified, notify the Contracting Officer Representative to perform the final inspection. Notice shall be given at least 14 Days in advance of the time the Work will be available for final inspection. The Contracting Officer Representative will perform the inspection within 3 working days of the requested date.
2. Design-Builder or its principal superintendent, authorized to act on behalf of the Design-Builder, shall accompany the Contracting Officer Representative on the final inspection, as well as any principal Subcontractors that the Contracting Officer Representative may request to be present.
3. If the Work has been completed in accordance with the Contract and Issued for Construction Documents, and no further corrective measures are required, the Contracting Officer Representative will accept the Work and will issue a Certificate of Completion as evidence of acceptance.
4. If the Work has been substantially completed in accordance with the Contract and "Issued for Construction" Documents, and the Work can be used for its intended purpose with only minor corrective measures required, the Contracting Officer Representative will conditionally accept the Work and will issue a Certificate of Substantial Completion based upon the Design-Builder's assurance that corrective measures will be completed within the shortest practicable time. A fixed schedule for such corrective measures shall be submitted to the Contracting Officer Representative for approval.
5. If the Work has not been substantially completed in accordance with the Contract and Issued for Construction Documents, and several or many corrective measures are still required, the Contracting Officer Representative will not issue a Certificate of Substantial Completion. Instead, a new Punch List will be prepared based on the information gathered from the final inspection, and the Design-Builder will be required to complete this work and then call for another final inspection, following the procedure outlined above.

D. Asset Database:

1. Prepare a database listing each system and subsystem asset with attribute data to include asset name, asset location, manufacturer name and contact information, model number, serial number, expected useful life, warranty period with start and end date, digital link to warranty documentation, digital link to Operation and Maintenance Manual, spare parts provided for the asset, and special tools required to perform asset maintenance.
2. Sample asset tables are attached at the end of this Section for the Design-Builder's guidance in preparing the asset database.

E. Preventive Maintenance Instructions:

1. Prepare preventive maintenance instructions for each asset, including asset name, asset location, manufacturer name, model number, serial number, maintenance instructions for each asset and each scheduled maintenance based on requirements of the associated Operations and Maintenance Manual, and identification of special test equipment required to test the asset subsequent to performing maintenance.
2. Sample preventive maintenance instructions are attached at the end of this Section for the Design-Builder's guidance in preparing the preventive maintenance instructions.

1.04 SUBMITTALS

A. Make all submittals in accordance with Section 01 33 00, SUBMITTAL PROCEDURES and as specified below.

B. Operation and Maintenance:

1. Furnish manuals for equipment and systems as required by the Issued for Construction Specifications.
2. Data copy included from standard catalogs shall be edited to reflect only conditions pertinent to this Contract.
3. Data copy shall be suitable for dry-copy reproduction on standard office copy machines.
4. Hard copy manuals shall be prepared using the following materials:

a. Binder:

(1) One of following:

- (a) Loose-leaf; three-ring with elliptical rings; stiff cover with covering resistant to oil, water, and wear; reinforced hinges; label holder on spine; mechanical device to open, close and lock rings; and sheet lifters. Size for 8-1/2-inch by 11-inch paper, 3-inch maximum capacity.
- (b) Loose-leaf three-post binder conforming to FS UU-B-320, Type II, Class 2, with covering resistant to oil, water, and wear; label holder on spine; size for 8-1/2-inch by 11-inch paper; capacity as required, 4-inch maximum thickness.

(2) When the assembled data exceeds the capacity of one binder, provide additional binders as necessary.

b. Pages:

- (1) Originals: White, 60-pound bond with plastic-reinforced binding edge.
- (2) Catalog data: Offset-printed copy on white paper, with plastic-reinforced edge.

- (3) Standard: 8-1/2 inches by 11 inches.
 - (4) Fold-out: 11 inches by 8-1/2 inches for binding portion of page plus 7-1/2 inches for each additional portion of folded page; title and page number visible without unfolding. Provide a filler at the binding edge of fold-out pages, equal in thickness to the folded portion.
 - (5) Holes punched for standard three-ring binder.
 - (6) Consecutively numbered.
5. Electronic Copies shall accompany the paper copies of all submittals of all manuals. These electronic copies shall be submitted in an editable, non-copyrighted Microsoft Office format. There shall be two electronic copies per submitted manual delivered one each to the programs office and to the applicable training department.
6. Manuals shall include the following data:
- a. Table of contents.
 - b. Design-Builder's name, address and telephone number, with similar data for its 24-hour service organization.
 - c. Manufacturer's name, address and telephone number, with similar data for its local representative, distributor, and service agency.
 - d. Catalog, model, and serial number of equipment installed. Include WMATA unit numbers where applicable.
 - e. Description of equipment.
 - f. Detailed Theory of Operation of each system and subsystem to LRU
 - g. Troubleshooting and Diagnostic Procedures for each piece of equipment delivered to LRU
 - h. Block Diagrams and Schematics of equipment as installed
 - i. Software administrative procedures for data input, failure diagnosis and system restoration
 - j. Statement of warranty as specified.
 - k. Description of modification, servicing and repairs performed prior to start of warranty.
 - l. Dates warranty begins and expires.
 - m. Standard starting, stopping and operating procedures.
 - n. Emergency and special operating procedures.
 - o. Routine maintenance procedures.
 - p. Servicing and lubrication schedule.
 - q. Manufacturer's printed operating and maintenance instructions, manufacturer's parts list, illustrations, and diagrams.
 - r. O&M data as required to meet LEED required design goals.
 - s. One copy of each wiring diagram.

- t. List of spare parts, prices and recommended stock quantities for routine maintenance of the equipment for 1 year and list of spare parts that are considered critical and for which extended time frames for acquisition would create undesirable down-time for equipment.
- u. List of special tools required to perform inspection, adjustment, maintenance, and repair. Special tools are those developed to perform a unique function related to the particular equipment and not available from commercial sources.
- v. Copy of each approved Shop Drawing of equipment and system. Include drawings which show outline dimensions, weights, and assembly data. Do not include drawings which show manufacturing details.

7. Manuals submittal schedule:

- a. Four copies of sample formats and outlines of contents in draft form 120 Days prior to the time scheduled for operation inspection, testing, or acceptance of the equipment.
- b. Four copies of complete manual in final form 45 Days prior to the time scheduled for operation inspection, testing, or acceptance of the equipment.
- c. Four bound sets and electronic media of approved manual before the time scheduled for operation inspection, testing, or acceptance of the equipment.
 - (1) Electronic copy files shall be in latest version of Adobe (.PDF) file format. Files shall be submitted in accordance with Section 01 33 00, SUBMITTAL PROCEDURES.
 - (2) Shop Drawings submitted with manuals shall be in AutoCAD (.DWG) file format. Line work shall be shown on designated layers in accordance with standard CAD layering guidelines as specified in the WMATA CAD Manual. Images shall be clear, sharp, and readily legible.
 - (3) The Authority reserves the right to have any images, illustrations, diagrams, and drawings resubmitted until the Contracting Officer Representative approves their legibility.
- d. In addition to the other requirements of this Section, if manufacturer's hardcopy illustrations, diagrams, and drawings are also used in the preparation of Operation and Maintenance manual illustrations, diagrams, and drawings, they shall also be furnished in Adobe (.PDF) file formats.

8. If operation and maintenance training is included in the Contract, provide to each trainee, hard and electronic copies of approved operation and maintenance manuals for this purpose as specified in Section 01 82 00, DEMONSTRATION AND TRAINING.

9. Furnish additional operation and maintenance manuals required for LEED Silver Certification in accordance with the quantity and documentation requirements for LEED for New Construction and Major Renovation.

C. As-Built Drawings and Specifications:

1. General:

- a. As-Built drawings shall include Shop Drawings, Working Drawings, and field prepared drawings.
- b. Maintain a hard copy drawing and specification record of as-built conditions on a set of Issued for Construction Drawings and Specifications as the Work progresses. The Issued for Construction Drawings and Specifications shall be kept current with all Modifications issued by the Authority. The hard copy drawing and specification record shall be

maintained at the Design-Builder's field office. Periodic review of the completeness of the hard copy record will be conducted by the Authority as deemed necessary to ensure the record is kept up to date.

2. As-Built Drawings:

- a. Draft Deliverable: Submit to the Authority, for review and comment, separate sets of draft As-Built Drawings in both an AutoCAD (.DWG) file format and an Adobe (.PDF) file format (.PDF files shall be capable of printing full-size drawings.), in print quality black and white, with all fonts embedded. The latest versions of both file formats shall be used. All line work shall be shown in accordance with the WMATA CAD Manual. Images shall be clear, sharp, and readily legible. The Authority reserves the right to have drawing(s) resubmitted until the Contracting Officer Representative accepts the legibility of the drawing contained in the file. Submit one set of full-size and two sets of half-size black ink on white paper copies of draft As-Built Drawings for review and comment by the Authority in accordance with Section 01 33 00, SUBMITTAL PROCEDURES.
- b. Upon return of one set of full-size black ink on white paper copy of the draft As-Built Drawings with Authority comments, incorporate additions and corrections resulting from Authority review comments. Design-Builder shall direct specific attention, by annotation on resubmitted As-Built Drawings, to revisions other than the corrections requested by the Contracting Officer Representative on previous submittals.
- c. Final Deliverable: By the date scheduled for receipt of final approved As-Built Drawing deliverables in the Contract Schedule, separate sets of As-Built Drawings in both an AutoCAD (.DWG) file format and an Adobe (.PDF) file format, in print quality black and white, with all fonts embedded. Submit one set of full-size and two sets of half-size black ink on white paper copies, produced from the Adobe file, to the Contracting Officer Representative for review and Approval. If this submittal is found to be incomplete it will be returned to the Design-Builder with comments for re-submittal.
- d. The completed As-Built Drawings do not require the signature of the Engineer or Architect of Record. Each completed As-Built Drawing produced in Adobe (.PDF) electronic format shall have the signature of an officer of the Design-Builder's organization, certifying compliance with as-built conditions, using a stamp as follows:

AS-BUILT

I CERTIFY THAT THIS DRAWING
ACCURATELY DEPICTS THE WORK
CONSTRUCTED AS OF

(date)

(an officer of the Design-Builder)

Design-Builder's Name

3. As-Built Specifications:

- a. By the date scheduled for receipt of final approved As-Built Specification deliverables in the Contract Schedule, submit As-Built Specifications in both latest version of Word (.DOCX) file format and an Adobe (.PDF) file format, in print quality black and white. Submit two bound sets of black ink on white paper copies produced from the Adobe (.PDF) format to the Contracting Officer Representative for review and acceptance in

accordance with Section 01 33 00, SUBMITTAL PROCEDURES. The Word file format (.DOCX) does not require the professional seal or signature of the Engineer or Architect of Record. The Adobe (.PDF) file format will require the professional seal and signature of the Engineer or Architect of Record for all disciplines on the cover page. If this submittal is found to be incomplete it will be returned to the Design-Builder with comments for re-submittal.

- b. The Authority's Standard Specifications are not to be edited, however specifications prepared by the Design Builder as part of the development of the Issued for Construction Specifications shall be edited to be Project specific.

D. As-Built Project Schedule:

1. Submit one electronic copy of the approved As-Built Project Schedule as required.

E. Spare Parts:

1. This Contract includes the requirement for spare parts, either specifically identified in the price schedule or to be identified later during the term of the Contract. Ensure that all spare parts required by this Contract are provided and delivered in accordance with the following paragraphs.
2. Submit to the Authority the one electronic copy of the list of required spare parts either specifically identified in the unit price schedule or later identified by the Authority in accordance with the Issued for Construction Specifications. The list provided by the Design-Builder shall include part name, model number, part number, serial number, stock number, component name, location for use, manufacturer's name and contact information, unit cost, quantity, available packaging, special storage and handling instructions, replacement schedule, and anticipated annual usage. In addition, the spare parts listing shall include the following additional information as appropriate:
 - a. Group the list by system and subsystem for inventory system identification. Include order and procurement information for subassemblies and components.
 - b. Correlate the required quantities with the reliability requirements and lead time considering the following classifications:
 - (1) Wear: Components which may be expected to require regular replacement under normal maintenance schedule and operations, such as mechanical parts subject to continuous operation within projected mean time between failure levels.
 - (2) Consumables or expendables: Components which are consumed, used up, destroyed, or upon failure, are otherwise made unusable for their intended purpose and are economically unrecoverable except for inherent scrap value.
 - (3) Recoverable or repairable: Components, which upon failure are capable of being repaired or remanufactured to a serviceable, operational condition and maintained available for use within their initial intended purpose. Such items shall be accounted for via appropriate asset records.
 - (4) Long lead: Components, which are not available on short notice from commercial distributors or within 48 hours from the manufacturer, such as specially made or selected components.
 - (5) Cross referencing: Where replacement components are common to more than one system or subsystem, include a cross reference and indexing system in the replacement components list.

- (6) Non-unique parts: In all components lists, items which are not unique to the system and have been manufactured by others shall be identified by the manufacturer's name and part number, as well as by the Design-Builder's component number, if any.
3. Within 30 Days after the Design-Builder submits the required spare parts listing, the Authority will provide the Design-Builder with shipping instructions and with WMATA stock numbers for each item the Design-Builder is required to furnish. Spare parts shall be packaged such that parts for a particular asset or a particular facility are grouped together. The Design-Builder shall ship, within a 25-mile radius of the Project, the required parts to the designated points specified by the Authority and shall include the Contract number, manufacturer part number, quantity, unit price, and WMATA part number on the shipping document.
4. The identification of the individual manufacturer's part numbers shall be cross referenced to the assigned WMATA stock numbers by including a column with appropriate heading adjacent to the manufacturer's part numbers in any parts manual or listing provided in accordance with Article 1.04E.2 above.
5. Parts furnished in accordance with this provision shall not be used to satisfy replacement needs under any warranty provision of this Contract.
6. Spare parts shall be the same in all respects as their counterparts furnished as part of the assembled equipment to be delivered under the terms of this Contract.
7. Unless otherwise specified in this Contract, the spare parts shall be delivered at the same time as the counterpart equipment delivery. The spare parts shall be properly packaged or crated so as to prevent damage during shipment and long-term storage. The spare parts shall be labeled in accordance with the instructions contained in Article 1.04E.3 above.

F. Asset Database

G. Preventive Maintenance Instructions

H. Survey Field Notes in accordance with Section 01 33 00, SUBMITTAL PROCEDURES:

1. As applicable, submit electronic media of the following as specified in Section 01 72 10, LAYOUT OF WORK AND FIELD ENGINEERING:
 - a. Survey Record Log.

I. Releases and Vouchers:

1. As applicable, submit one original hard copy and electronic media, in Adobe (.PDF) file format, of releases and vouchers.

J. Records for Design, Inspection, Testing and Other Quality Elements:

1. Submit one original hard copy and electronic media, in Adobe (.PDF) file format, of records for design, inspection, testing or other quality elements as more fully specified in Section 01 47 00, QUALITY MANAGEMENT SYSTEM.

K. Request for Final Payment:

1. Submit one original hard copy and electronic media, in Adobe (.PDF) file format, of final payment request. Final Settlement will be made in accordance with Section 00 74 04, METHOD OF PAYMENT.

L. Correction of Deficiencies Submittals:

1. As applicable, submit original hard copy and electronic media, in Adobe (.PDF) file format, of Schedule of Deficiency Corrections, Recommendation for Corrective Actions, together with supporting information, Data and Reports applicable to any correction, and a Technical and Cost Proposal to amend the Contract to permit acceptance of the affected materials, equipment, systems, or subsystems as specified in Section 00 75 08, CORRECTION OF DEFICIENCIES.

M. Certifications, Affidavits, and Warranties and Guarantees:

1. Required Affidavits, Certificates, Written Descriptions and Releases and Warranties and Guarantees provided by the Design-Builder; i.e., Certificates of Acceptance and Compliance, Certification that all facilities were constructed in conformance with ADAAG regulations (Form attached at end of Section), of System Safety and Security, of Substantial Completion, and of Final Payment; Written Description of measures taken to correct damage that may have resulted from performance of this Contract; Written Releases; Design-Builder's executed Affidavit of Payment of All Applicable Taxes and License Fees in connection with the Contract and Affidavit of Payment of Debts and Claims; Consent of Surety Company to Final Payment; Warranties and Guarantees as specified in Section 00 75 07, WARRANTY/GUARANTEE OF CONSTRUCTION, and Section 00 75 08, CORRECTION OF DEFICIENCIES, and various Sections of the specifications as applicable: Submit the original hard copy and one electronic copy in Adobe (.PDF) file format.

N. LEED Silver Certification:

1. At completion of construction and prior to the Contract closeout period, the Design-Builder shall deliver to WMATA, the LEED Silver Report and Plaque certifying that the Project has been designed and constructed employing sustainable materials and methods pursuant to the U.S. Green Building Council's LEED Certification process.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01 82 00
DEMONSTRATION AND TRAINING

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes the general requirements for operation and maintenance training for equipment and systems provided by the Design-Builder and the general requirements for a Project performance demonstration.

1.02 SUBMITTALS

- A. Submit in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, the following at the times stated:
 - 1. Training plan preliminary submittal: One electronic copy and one printed paper copy not later than 60 Days after commencement of construction work. Submittal shall include at a minimum:
 - a. Instructional outline: A complete, accurate, and detailed listing of topics to be addressed in the instructional program using the specified content list.
 - b. Specimens of instructional material to be used.
 - c. Descriptions of audio-visual material and equipment to be used.
 - 2. Training plan intermediate submittal: One electronic copy and one printed paper copy not later than 60 Days after approval of preliminary submittal.
 - a. All material submitted for preliminary submittal incorporating or resolving comments.
 - b. Complete instructional plans including audio-visual aids and descriptions of instructional techniques and procedures.
 - 3. Training plan final submittal: One electronic copy and one printed paper copy not later than 30 Days prior to scheduled date for operation inspection, testing, or acceptance of the equipment.
 - a. All material submitted for intermediate submittal incorporating or resolving comments.
 - 4. Training contract closeout submittal: As specified in Section 01 77 50, CLOSEOUT.
 - 5. Training instructor's qualifications.
 - 6. A complete set of all training manuals, handouts, aides and presentations, for instructor and student, shall be provided at the end of the vendor's first training class to each of the audience's training groups (two sets when there are two supporting training groups, etc.) in an approved, editable electronic format, and free from copyright restrictions.
 - 7. Printed copies of each student guide and student-learning materials (schematics, books of plans, etc., as determined useful) shall be prepared and bound by equipment's training provider. Provide one printed copy for each student to use during training and to keep after class completion
 - 8. Printed copies of the instructor's guide, student guide, presentation, and all supplemental training materials for each of the audience group's training instructors (not to exceed five copies), free from copyright restrictions, shall be provided at the end of the first vendor training session.
 - 9. Performance demonstration plan and procedures: submit for Approval as part of the final design review package but no later than 90 Days prior to first performance demonstration.

10. Provide video documentation of demonstration and training classes to satisfy LEED requirements.

1.03 OPERATION AND MAINTENANCE TRAINING

A. General:

1. Where specified, develop and conduct a program to train selected Authority personnel in the operation and maintenance of equipment and systems furnished.
2. Furnish instructors, instructional materials, and audio-visual aids and equipment.
3. The Authority will furnish physical facilities.

B. Operations training:

1. Operations training shall be tailored specifically to the WMATA equipment being purchased and training shall be designed to teach all trainees the functional use of all of the major modes of equipment operation.
2. The training shall be sufficient in quality and scope to bring personnel to a level of operating proficiency such that vendor support is not needed during routine equipment operation in any mode or capacity.

C. Maintenance training:

1. Maintenance training shall be tailored specifically to the WMATA equipment being purchased and shall be designed to develop the knowledge and skills required to maintain and repair all item(s) delivered under the Contract. Maintenance training shall address the detailed theory of operation, maintenance, testing, repair, overhaul, replacement, alignment, and troubleshooting of the delivered equipment (hardware and software).

D. Other Training:

1. Preventive Maintenance Instructions (PMI):
 - a. The Operations and Maintenance (O&M) Manual provided for contractually furnished or installed equipment shall include a "Preventive Maintenance Instruction" (PMI) section, to ensure the continued safe and reliable operation of the specific system or equipment. Training on these procedures shall be included in the contractor-provided maintainer training curriculum. If a section contains more than one PMI procedure then the section shall begin with a Table of Contents.
 - b. PMI procedures shall be written in language easily understood by every maintainer skill level of the responsible WMATA maintenance discipline. Prior to acceptance, clarity and effectiveness of each PMI procedure shall be demonstrated in coordination with the maintenance discipline using the recommended minimum number of the lowest skill level maintainers. The maintenance team or individual must be able to understand and successfully perform the draft PMI without coaching from contractors or engineers. Each procedure shall be formatted similar to standard PMI formatting as currently approved by the WMATA maintenance discipline responsible for future maintenance of the equipment, including a standard approval signature cover sheet. Sample PMI's, as formatting examples, may be obtained from the appropriate maintenance discipline after contract award. Each procedure shall contain:
 - 1) A recommended performance frequency (interval) that is adjusted to the installed environment and expected level of use.
 - 2) The maintenance crew size and average time for performance of the PMI
 - 3) The system-specific and/or equipment-specific objectives of the PMI
 - 4) Lists of:
 - a) Prerequisites

- b) Required reference documents
- c) Industry standards or regulations governing the performance of the maintenance action
- d) Necessary tools and test equipment
- 5) Definitions and graphics, as much as practical to clarify the instructions
- 6) Warnings, Cautions, and Safety Notices, plentifully and prominently interspersed to prevent injury, damage, or unsafe operating conditions before any procedure step to which they apply
- 7) Data sheets and checklists, for data collection regarding conditions that are measured and to ensure that important steps are not skipped
- 8) Step-by-step instructions:
 - a) to verify and document that the tested mechanism or circuit or subsystem functions within design parameters;
 - b) for types of solvents, cleansers, and lubricants with intervals for lubrication and cleaning of mechanisms to prevent or minimize grime, corrosion, and wear;
 - c) to verify the adjustment of the system, equipment, or circuit which will allow it to operate properly (safely, reliably, and without causing excessive wear) until the next scheduled PMI;
 - d) to verify the integrity of all fasteners, couplings, electrical connections, etc. which may fail or loosen between scheduled maintenance intervals;
 - e) to document the measured condition of the equipment or circuit, to be used for abatement of deterioration, future failure analysis, and in case of catastrophe.
- 9) Step-by-step detailed adjustment instructions for any mechanism or circuit found to be out-of-adjustment

E. Training Plan:

- 1. Training plan shall contain an organized summary of the events, and associated times, necessary for the completion of all materials necessary to successfully perform the required training. The plan shall be submitted to the applicable end user's training group(s) (TTDC, TSMT, or ROQT currently) within a Contract specified period after NTP has been issued. The training plan must address all deliverables using a timeline that includes periods for review, feedback, resubmission, approval, and delivery accomplishing all by a Contract-determined date related to the equipment being placed into service. The training plan shall include the following:
 - a. Course list including course title, duration, audience, audience size, and purpose
 - b. Instructor qualifications: A description of the instructor's qualifications for each class must be submitted to the end user's training group(s) (TTDC, TSMT, or ROQT currently) for approval as part of the training plan. The description (resume, curriculum vitae, or other description of instructional qualifications) shall document a thorough knowledge of the subject equipment, an understanding of the adult learning process, and demonstrated experience in vocational instruction.
 - c. Audience qualifications and prerequisites: For the purpose of course development and presentation, vendors shall assume all WMATA students are high school graduates (or equivalent)
 - d. Instruction and testing methods to be utilized
 - e. Summary of the strategies to be employed in the accomplishment of the training
 - f. Proposed schedule of delivery of materials and training

F. Instructor's Guide:

- 1. The instructor's guide for each course shall contain all the information and direction necessary for the instructor to make an effective presentation. The instructor's guides shall include adequate guidelines to conduct a comprehensive training program. Individual lessons within the course shall be organized as separate blocks (or modules), which may be taught as a unit. In some instances, the same standard operating procedures could be used for train operators, transportation supervisors, and central control supervisors. The instructor's guide shall contain, at a minimum:

- a. Program overview stating the overall program goals
 - b. Training syllabus
 - c. Lesson plans arranged as a session by session outline containing the following:
 - (1) Overview of each lesson
 - (2) Outline of major topics to be covered including timelines for each course, lesson, and topic
 - (3) Outline of learning objectives for each major topic
 - (4) Information regarding important subjects and terms to be emphasized during each section of the training
 - (5) References to the associated Student Guide pages and presentation slides
 - d. Suggested instructional methods/learning activities
 - e. Required equipment or resources needed for effective instruction
 - f. Test question pool(s) with each question referenced to the respective learning objective(s) and student guide or other instructional materials
 2. A guide (FAQ) providing questions/problems and answers as related to course content
- G. Student's Guides:
1. Student guides for each course that shall contain all the information and direction necessary the student to interact effectively in the learning environment. The student guides shall be written in a fully developed prose format, developed in the same modular format as the instructor's guides. The student's guides should contain, at a minimum:
 - a. Program overview/introduction
 - b. Statement of overall program goals
 - c. All major topics to be covered
 - d. Student learning objectives associated with each of the major topics stated in quantifiable terms
 - e. All illustrations, block diagrams, charts, schematics, wiring diagrams, logic flow diagrams, troubleshooting guides, graphics, and visual aids that may be used during course presentation to enhance presentation content and provide a seamless facilitation of instruction
 - f. Supplemental materials that may be necessary to facilitate theoretical discussions
- H. Training Presentations:
1. Training Presentations shall be matched to the instructor guides and student guides and shall facilitate seamless, effective communication of the course information to the target audience.
 2. Training Presentation format(s) shall be agreed upon by the target audience's training group(s) (TTDC, TSMT, ROQT, currently).
- I. Training Aides:
1. Dependent upon the equipment and/or system(s), a functional mockup or a functional representation may be required. These may be in the form of animated illustrations, animated schematics, model(s) of the equipment, actual device(s), interactive video training, or any accepted media format as determined by the audience's training group.
 2. All mockups become the property of audience's training group after completion of the final scheduled training class. Supplemental materials shall be demonstrated as fully operable during the first training class. All necessary repairs to the supplemental materials are the responsibility of the vendor for the duration of vendor training sessions.
- J. OEM Operator's Manual(s) describing the equipment's or system's operation in each mode and capacity of use.
1. OEM Technical Manuals describing the detailed theory of operation, maintenance, testing, repair, overhaul, replacement, alignment, and troubleshooting shall be delivered to the appropriate training groups.

1.04 MATERIALS AND INSTRUCTION

- A. Training materials shall be provided and approved by audience's training groups (TTDC, TSMT or ROQT) prior to the final acceptance of training schedule or training date(s).
- B. Training materials updates are required when, in the scope of the Contract, changes or Modifications are made that affect the operation or maintenance of the contracted item(s).
- C. Instruction shall include material covered in the operation and maintenance manuals as well as the following:
 - 1. Detailed theory of operation to one level below LRU
 - 2. Practical aspects of operation
 - 3. Description of system, equipment, and components
 - 4. Functional characteristics of system, equipment, and components
 - 5. Emergency operating procedures
 - 6. Location, removal, and reinstallation of components
 - 7. Maintenance procedures
 - 8. Servicing intervals and schedules
 - 9. Block diagrams of equipment hardware and software functionality as installed
 - 10. Schematics of equipment hardware as installed
 - 11. Diagnosis and problem solving (troubleshooting)
 - 12. Repair
 - 13. Overhaul
- D. Daily class duration shall be a nominal 7-1/2-hour shift, with advantageous combinations of theoretical/classroom instruction and hands-on practice, utilizing operational equipment, presentations, mockups, and test equipment as applicable. For on-the-job training (OJT) at work locations as applicable, training shall include participation in installation activities, fault diagnosis, and equipment alignment / adjustment exercises.
- E. Operating and maintenance training shall be completed prior to the time scheduled for operation inspection, testing, or acceptance of the equipment. In addition to the retainage specified in Section 00 74 04, METHOD OF PAYMENT, payment will be withheld until training is complete and accepted.
- F. Furnish to applicable training group, a minimum of four O&M Manuals as described in Section 01 77 50, CLOSEOUT, for each piece of equipment and system, unless otherwise specified, and a minimum of one editable, non-copyrighted electronic copy in a Microsoft Office format, as specified.

1.05 PROJECT PERFORMANCE DEMONSTRATION

- A. Integrated system testing shall culminate in a project performance demonstration that shall simulate all operations and shall exercise all systems and system elements. Prepare performance demonstration plan and procedures. Include testing of anticipated normal and abnormal operations, in addition to simulations of emergency operations. Performance demonstration plan shall delineate the following:
 - 1. Tests to be performed

2. Date and time when each test is to be performed
 3. An outline of the test parameters
 4. Pass/fail criteria, which must be quantified and measurable
- B. The project performance demonstration shall include those static and dynamic tests used to demonstrate that the Design-Builder designed the systems and subsystems according to the specification and the performance specified, and shall include:
1. All necessary functional and performance testing conducted during construction and manufacture of the system elements; and
 2. Operational tests, which include integrated testing of system interfaces to assure that the Project as a whole is capable of operating as specified.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION