

Project 512-22-700

EHRM Infrastructure Upgrades – Baltimore MD

Project Design Scope of Work

1. GENERAL INTENT: The Contractor (herein referred to as “A/E”) shall provide Architect/Engineer (A/E) services to design a construction project at Baltimore VAMC in accordance with this design scope of work.

2. STATEMENT OF WORK: A/E Part One Services (also known as Design Phase) for this design project includes site visits, field investigation, conduct of studies and user interviews to prepare drawings, specifications, and cost estimates for all facets of work and disciplines/trades to facilitate a construction project to upgrade the facilities electric and IT to allow for the new Electronic Health Record Modernization (EHRM) system. The project shall include, but is not limited to the following at Bldg 1 and site. Electrical (electrical panel upgrade, power (normal, emergency)), Bonding, UPS, Building Management System interfaces, replace existing HVAC, reconfiguration, expansion and renovation of existing space (demo, new construction, finishes), elevator replacement, communication infrastructure (new Data outlets, patch panels, upgrade to Cat 6A cable) in the building, physical security upgrades, assess and upgrade fiber infrastructure backbone, hazardous material abatement, and utilities to exterior for future connection of trailers. The A/E shall stringently design per the Government requirements for a system which will support the Electronic Health Record equipment provided by Cerner. The AE shall provide drawing, specification and IGE submissions at 30% (SD), 60% (DD), 90% (CD) and 100% (Bid) to the VA.

A/E Part Two Services of this design project (also known as Construction Period Services) includes responding to construction contractor Requests For Information (RFIs) during the solicitation and construction phases of the construction project, attendance at pre-bid, post-award and commissioning kick off construction project conferences, review of construction material submittals and shop drawings, approximately 10 site visits (minimum) during construction (both scheduled and emergent) to ensure compliance with the design drawings and specifications, preparation of site visit reports, coordination with project commissioning requirements, review of any construction project modifications for cost and technical acceptability, attendance in the final acceptance inspection, preparation of the punch list and preparation of record drawings of the completed construction project based on the construction contractor’s as-built drawings. The A/E shall prepare a submittal log to be utilized by VA during construction period services and are required to review and comment on submittals and RFI’s on a web based electronic construction document management system such as Submittal Exchange. The AE shall provide meeting minutes for weekly construction meetings throughout the duration of construction. All Part Two Services are optional line items and will not be exercised at the time of award.

The above paragraphs constitute a basic outline of the work to be accomplished and in no way comprises all the details for design of this project. The A/E shall initiate detailed inspection of the project site to determine the needs and conditions for the design of this project. Copies of Baltimore Medical Center’s record drawings and the EHRM infrastructure readiness assessment documents will be made available after award for A/E use; the A/E will verify the validity of the record drawings prior to the start of design work and conduct site investigations as necessary throughout the design.

The A/E shall be solely responsible for the management, including all associated labor, equipment, materials, mailing costs, and inspection, to meet the requirements of the design project. The A/E shall further provide meeting minutes for all meetings held under this design project.

3. DESIGN WITHIN FUNDING LIMITATIONS: The design shall be prepared by the A/E so as to permit the award of a construction contract, using Federal Acquisition Regulation procedures for the construction of the facilities, at a cost that does not exceed the project’s estimated construction contract price of \$14,110,000. (If this is a design only project, the 6% A/E limitation must apply).

4. DESIGN INDEPENDENCE, FURNITURE AND EQUIPMENT: Designs for construction must produce a “complete and usable” facility or improvement when constructed. VA policy (VHA Office of Capital Assets Management, Engineering and Support memo *Updated Construction Guidance and Expectations* dated Sep 12, 2016) requires the A/E to certify that their design (including all bid alternates/bid deducts) is independent of any future construction project. In addition, the A/E must certify that it has produced a design that does not include furniture and equipment that will be procured separately. Equipment that can be part of the design in the includes those items to meet code requirements for building occupancy, items covered in the VA’s Master Construction Specifications (PG-18-1) Divisions 1 through 10, 13 through 26 or 28 through 48, non-IT equipment items covered by Division 27 and items covered by Division Numbers 12 31 00, 12 32 00, 12 34 00 and 12 36 00.

The A/E shall submit as part of the Final Bid Documents submittal a signed letter on company letterhead stating the design’s independence.

5. DESIGN CRITERIA: The VA Technical Information Library (TIL) available at <http://www.cfm.va.gov/til/index.asp> is managed by the VA Office of Construction and Facility Management and is the master repository for all VA Numbered Standards for Construction to include design and construction specifications, procedures, standard details, BIM/CAD standards, equipment guides, space planning and design guides. The documents of the TIL shall be the minimum design criteria for all VA projects performed in the construction of new facilities and the modernization, alteration, addition, or improvement of its real property. All design documents shall be developed in accordance with the following listed Department of Veterans Affairs References, with special emphasis on items in bold:

PG-18-1	Master Construction Specifications
PG-18-3	Design and Construction Procedures <i>[Including but not limited to: Codes, Standards, and Executive Orders]</i>
SOW Attachment 1	EHRM Master Specs
PG-18-4	Standard Details and CAD Standards
PG-18-5	Equipment Guide List
H-18-8	Seismic Design Handbook
PG-18-9	Space Planning Criteria
PG-18-10	Design Manuals (by discipline) <i>[Including but not limited to: Guiding Principles checklists as indicated for Minor Projects in Sustainable Design Manual, Life Cycle Cost Analysis]</i>
PG-18-12	Design Guides (graphical, by function)
PG-18-13	Barrier Free Design Guides
PG-18-14	Room Finishes, Door, and Hardware Schedules
PG-18-15	Minimum Requirements for A/E Submissions
PG-18-17	Environmental Compliance Manual
H-7545	VA Cultural Resource Management Procedures

The following references should also be used to complete the design documents:

- VA Standards Alert 017 – Infrastructure Standards for Telecommunications Spaces and all standards, guides, and manuals incorporated by reference (<https://www.cfm.va.gov/til/sAlert/sAlert017.pdf>)
- SOW Attachment 2 - 00 VA OEHRM Site Infrastructure Requirements v2.0 (SOW Attachment 2)
- SOW Attachment 3 - SOCAMES 6 Design Alert 1
- SOW Attachment 3 - SOCAMES 6 Design Alert 2
- SOW Attachment 3 - SOCAMES 6 Design Alert 3
- SOW Attachment 3 - SOCAMES 6 Design Alert 4
- SOW Attachment 3 - SOCAMES 6 Design Alert 5
- SOW Attachment 3 - SOCAMES 6 Design Alert 6
- SOW Attachment 3 - SOCAMES 6 Design Alert 7
- SOW Attachment 3 - SOCAMES 6 Design Alert 8

Where conflicts exist between VA adopted codes and standards and the documents on the TIL, the A/E shall bring this to the attention of the VA. The resolution of the conflict shall be made by the authority having jurisdiction for VA to ensure consistency department wide.

6. DESIGN COLLABORATION: The A/E during this design project shall collaborate with the VHA Office of Healthcare Environment and Facilities Programs Special Engineering Program (HEFP/SEP) staff, VISN 15 and the Independent Life Safety Review Agent (LS Agent) for the project. Design submittal comments from these contractors, if concurred with by VA, shall be incorporated into the design. HEFP/SEP and/or VISN deliverables shall be coordinated with the A/E's design submittals to ensure compliance with all requirements are met. The A/E is required to ensure all elements of the design adhere to the Life Safety Code, including recommendations for temporary construction barriers, prior to the Independent Life Safety review.

7. INDEPENDENT LIFE SAFETY REVIEW: The A/E shall incorporate any comments from the VISN 5 Safety Manager - life safety review.

8. ENVIRONMENTAL PROTECTION: The A/E shall assist the VA with completion of a National Environmental Policy Act (NEPA) assessment as required by the Baltimore VAMC. If the NEPA assessment results in potential environmental impacts, the A/E shall be responsible for completing any auxiliary documentation required per PG-18-17 NEPA Interim Guidance for Projects located on the TIL (<http://www.cfm.va.gov/til/etc/NEPAGuidance.pdf>). Additional requirements may include, but are not limited to, Environmental Assessment, Environmental Impact Statement, and Record of Decision. The NEPA analysis and concluding documentation must be completed by the Final Bid Documents submittal.

9. PHYSICAL SECURITY: The A/E must include a certified physical security specialist. The specialists must be involved with the design beginning with the concept phase and the qualifications must be submitted to the COR for review and approval prior to the concept/basis of design phase. The specialists shall meet the specific requirements listed in the Physical Security Design Manual for Mission Critical Facilities located on the TIL (<http://www.cfm.va.gov/til/PhysicalSecurity/dmPhySecMC.pdf>). The A/E shall ensure that all aspects of the applicable VA Physical Security Design Manual (Mission Critical Facilities) are incorporated into the design and shall prepare a written report acknowledging compliance as required by the VOC. The A/E must inform the COR of any physical security items that will be difficult to achieve during the concept/basis of design phase of the design and assist the VA with waiver requests as necessary.

10. SUBMITTAL REQUIREMENTS: Design submittals shall follow the requirements of *Program Guide, PG-18-15, Volume C - A/E Submission Instructions for Minor and NRM Construction Program* dated November 2008 (SOW Attachment 3). This document is available on the TIL at <http://www.cfm.va.gov/til/aeDesSubReq.asp>. Submittal documents shall be prominently marked "For Official Use Only (FOUO)" if they contain qualifying data as defined in VHA Memorandum 2019-11-13 *Sensitive Infrastructure Data Classification – For Official Use Only (FOUO)* (SOW Attachment 4). This memo is attached to this SOW as it is hosted on a non-public VHA site (https://vaww.va.gov/vhapublications/ViewPublication.asp?pub_ID=8949).

The A/E shall deliver design submittal documents that follow the iterative phase breakdown for design work in PG-18-15 and as additionally specified below. Specific requirements for each discipline/work product listed under each phase can be found in PG-18-15; it is expected for the phase of design that each of the checked items in the SD/DD/CD columns will be completed for the submittal. The A/E shall attend a review meeting following each design submittal as indicated under the Project Schedule section of this Scope of Work. Each new submittal will incorporate all VA comments from the previous submittal.

The A/E shall utilize a Submittal Exchange Service or establish a Share Point Site and provide station personnel and PCAC with access for all required submittals. If a Share Point Site is non-accessible for any reason by VA personnel, the contractor must establish a Submittal Exchange Service instead that is accessible by VA personnel.

All questions arising out of the performance of this contract shall be sent to the COR via a Request for Information (RFI) with a cc to the Post-Award Contracting Officer/Contracting Specialist. The A/E is responsible for maintaining a log of all RFI's and submittals.

The following submittals will be required for this project:

- Quality Assurance/Quality Control (QA/QC) Plan
- Basis of Design (BD) - 10% - In addition to the requirements in PG-18-15, a Basis of Design is required. Basis of Design is a narrative presentation of facts, sufficiently complete, to demonstrate that the project concept is fully understood, and that subsequent design details, and their ultimate presentation in the final drawings and specifications, will be based on sound architectural and engineering decisions. Conceptual drawings of the planned design and the initial cost estimate will additionally be included.
- Schematic Design (SD)- 30%
- Design Development One (DD) – 60%
- Construction Documents (CD)- 90%
- Final Bid Documents (Bid)

11. DRAWING FORMAT: All drawings shall adhere to VA project software requirements for Building Information Modeling (BIM) and Computer Aided Design (CAD) available at <http://www.cfm.va.gov/til/projReq.asp>. BIM software shall be Revit 2019 or the latest version available to Baltimore VAMC.

The A/E shall provide a computer 3D model and prepare various 3D renderings to present to VA throughout the design phase to adequately represent architectural, mechanical/electrical/plumbing (MEP), site conditions and other items in the design to aid with facility visualization and contractor coordination.

The project BIM model minimum requirements shall be developed to include the systems described below as they would be built, the processes of installing them and to reflect record drawing conditions (possibly incorporating into the Baltimore VAMC Master Record Drawing – pending facility expertise).

The deliverable model at the SD, DD and CD design phases shall be developed to include as many of the systems described below (but not limited to) as are necessary and appropriate at that design phase.

- Architectural/Interior Design
- Square Footage/Volume
- Room Names and Numbers
- Architectural Schedules
- Architectural Specialties and Woodwork
- Doors
- Windows
- Louvers
- Roof
- Floors
- Ceilings
- Vertical Circulation
- Walls/Curtain Wall Sizes, Shapes, & Material Data
- General Signage
- Schedules
- Furniture
- Equipment
- Structural
- Foundations
- Shafts and Pits
- Mechanical
- HVAC
- Plumbing
- Electrical/Telecommunications
- Power and Lighting
- Steam Distribution
- Other Engineering Data as Required
- Exterior Building Information
- Nurse Call System
- Asbestos/Hazardous Material Info
- Security System Information (Access Control, SecurityCameras, Panic Alarms, Overhead Paging)
- Life Safety Information (Fire Extinguishers, WallRatings, Door Ratings, Fire Protection/Alarms)
- Departmental Ownership (By Common Name, Capital Asset Inventory Department Definition and Strategic Capital Investment Program DepartmentDefinition)

12. SUBMITTAL FORMATS: Submittals shall be submitted in electronic format and hard copy formats as listed below. Portable Document Format (.pdf), Microsoft Office Suite formats (.doc, .xls, and .ppt), Microsoft Project (.mpp) and Autodesk Revit Project (.rvt) files are acceptable. Submittals shall additionally be compliant with Section 508 of the Rehabilitation Act (29 U.S.C. '794 d); information on the requirements for accessible media can be found at <http://www.section508.gov/>. The A/E shall be responsible for providing:

Meeting/Conference Minutes

The frequency of Status Update Meetings will be established at the initial Status Update Meeting as mutually agreed to by the contractor, VA Station personnel and the Post-Award Contracting Officer/Contracting Specialist. Agendas and other required documents for all subsequent Status Update Meetings will be provided to the Post-Award Contracting Officer/Contracting Specialist and COR a minimum of 24-hours in advance of the meeting. Meeting minutes for all formal meetings and conferences held with the VA shall be submitted within seven (7) calendar days of the meeting or conference and at a minimum shall include the following:

- a. Project name, project number, Meeting Name
- b. A summary of the meeting including all participants
- c. A Submittal Log of all submissions (i.e. QA/QC, BD-10%, SD-30%, etc.) - updated for each meeting.
- d. A RFI log that shall be updated for each meeting.
- e. A current, updated list of Action Items and responsible party for each action listed.
- f. List any actions, events or concerns that may potentially delay the completion date of the project. If any are present, the contractor shall notify the Post-Award CO/CS and COR prior to the meeting via email.
- g. Three week look ahead schedule.
- h. Documents in any of the electronic formats listed above.

Construction Cost Estimates

Construction cost estimates shall comply with *Manual for Preparation of Cost Estimates & Related Documents for VA Facilities* dated March 8, 2011. This document is available on the TIL at <http://www.cfm.va.gov/cost/index.asp>. All estimates in any of the electronic formats listed above.

Quality Assurance/Quality Control (QA/QC) Plan

- All documents in any of the electronic formats listed above.

Basis of Design (BD)

- All documents in any of the electronic formats listed above.
- Three (3) sets of AutoCAD and PDF conceptual/preliminary drawings – 3 to VA
- Three (3) sets of full size conceptual/preliminary layout plans/details – 30 inches by 42 inches
- Three (3) sets of reduced size conceptual/preliminary layout plans
- Three (3) sets of Preliminary Investigation Report with Recommendations
- Three (3) sets of conceptual/preliminary estimates

Schematic Design (SD)

- All documents in any of the electronic formats listed above.
- Three (3) sets of AutoCAD and PDF schematic drawings with phasing plans
- Three (3) sets of full size bound schematic layout plans/details with phasing plans – 30 inches by 42 inches

- Three (3) sets of reduced size bound schematic layout plans/details with phasing plans
- Three (3) sets of design analysis
- Three (3) sets of MS Word draft specifications
- Three (3) sets of schematic estimates with proposed alternate

Design Development (DD), and Construction Documents (CD)

- All documents in any of the electronic formats listed above.
- Memo annotating what was not upgraded and corresponding justifications.
- Three (3) sets of AutoCAD and PDF design drawings
- Three (3) sets of full size bound design development layout plans/details with phasing plans – 30 inches by 42 inches
- Three (3) sets of reduced size bound design development layout plans/details with phasing plans
- Three (3) sets of design analysis
- Three (3) sets of MS Word design development specifications
- Three (3) sets of design development estimates

Final Bid Documents (Bid)

- PDF files of drawings, specifications, and any miscellaneous design analysis documents such as submittal log and physical security compliance report.
- Certified memo annotating what areas/times were not upgraded and the corresponding justifications.
- Certified memo that the A/E design is independent of future projects and includes all equipment required for the project to be activated/full functional.
- Word and PDF files of specifications.
- Revit and AutoCAD files of drawings.
- Three (3) full size paper bond sets of drawings - 2 to VA
- Three (3) half-size paper bond sets of drawings – 2 to VA
- Three (3) paper bond sets of specifications – 2 to VA
- One (1) paper bond sets of investigation reports, design calculations, space planning data, construction schedule, construction SOW and cost estimate - 1 to VA

Requests For Information (RFI)

Requests For Information shall be submitted within three (3) calendar days of submittal to the A/E.

Submittal Reviews

Submittal reviews shall be submitted within seven (7) calendar days of submittal to the A/E.

Site Visit Reports

Site visit reports shall be submitted within seven (7) calendar days of the visit. All documents in any of the electronic formats listed above.

Modification/Change Order Requests

Modification requests shall be submitted within seven (7) calendar days of submittal to the A/E. This includes the review of the contractor's change order/modification proposal for construction change orders, as well as the formulation of an IGCE for the modification, as requested. The A/E's reply regarding his/her review of cost proposals and his/her recommendations shall include an independent

breakdown of costs in detail, quantities, and unit prices and shall cover both additions and deductions of labor, materials, and equipment. The A/E shall also supply cost estimates as requested by the COR for Request for Proposals for anticipated changes.” All documents in any of the electronic formats listed above. Note - If major modification, VA will provide additional time and document format guidance.

Punch List

Punch list shall be submitted within seven (7) calendar days of the final acceptance inspection. All documents in any of the electronic formats listed above.

Record Drawings

Record drawings shall be delivered to the VA within thirty (30) calendar days after VA acceptance of the construction project. Autodesk Revit Project (.rvt) format and AutoCAD (.dwg) format.

13. PROJECT SCHEDULE/PERIOD OF PERFORMANCE: The A/E shall perform Part One Services/Design Phase work according to the schedule shown below. The A/E is also responsible for following specification Section 01 32 16.10 Architectural and Engineering CPM Schedules, which is located in **SOW ATTACHMENT 5 - EHRM Design Schedule (CPM)**. If a due date on the timeline below falls on a Holiday or Weekend, the submittal shall be due the following business day. The remaining timeline will not be shifted to accommodate Holidays or Weekends.

Administrative Time	12 calendar days after receipt of Notice of Award	DD MO YR
QA/QC Submittal & Basis of Design (BD) 10% Submittal	25 calendar days after end of Administrative Time	DD MO YR - A
QA/QC and BD 10% Submittal Review Meeting	18 calendar days after VA receipt of QA/QC & BD 10% Submittals on DD MO YR - A	DD MO YR – B
30% SD Submittal	90 calendar days after acceptance of QA/QC & BD 10% Submittals on DD MO YR – B	DD MO YR - C
30% SD Review Meeting	30 calendar days after receipt of 30% SD Submittal on DD MO YR - C	DD MO YR - D
60% DD Submittal	30 calendar days after VA acceptance of 30% SD Submittal on DD MO YR - D	DD MO YR - E
60% DD Review Meeting	30 calendar days after VA receipt of 60% DD Submittal on DD MO YR - E	DD MO YR - F
90% CD Submittal	30 calendar days after VA acceptance of 60% DD Submittal on DD MO YR - F	DD MO YR - G
90% CD Review Meeting	30 calendar days after VA receipt of 90% CD Submittal on DD MO YR - G	DD MO YR - H
Final Bid Documents Submittal	60 calendar days after VA acceptance of 90% CD Submittal on DD MO YR - H	DD MO YR - I
Final Bid Documents Acceptance Meeting	10 calendar days after VA receipt of Final Bid Documents Submittal on DD MO YR - I	DD MO YR
Total Part One Services/Design Phase Schedule	365 calendar days	

The 365 days listed in part one project schedule may fluctuate based on when 90% CD submittal meets all VA guidelines and acceptance is issued. If 90% CD submittal is not accepted due to insufficient design requirements throughout the design period and additional time is deemed necessary. It is the responsibility of the AE firm to cover all costs associated with such delays.

Part Two Services/Construction Period Services (optional Line Items) shall be performed for the length of time between the time the option(s) are exercised and acceptance of Construction Completion. The VA has 365 calendar days from final acceptance of the design to exercise the option(s) for Construction Period Services.

14. CONTRACT OVERSIGHT: All contracts for this project (shall be awarded by Program Contracting Activity Central - PCAC); only a warranted VA Contracting Officer shall have authority to change the terms and conditions of a contract. These changes may involve the contract award amount, contract period of performance, issuance of stop work orders and changes to the statement of work.

The PCAC shall designate a Contracting Officer's Representative (COR) to monitor and manage the A/E's performance under the design project contract. The COR shall be a representative of the Dwight D. Eisenhower VAMC Engineering Service Project Section and have the technical knowledge required to monitor and oversee the project.

A COR from the Baltimore VAMC Engineering Service shall also be designated for the construction project contract to monitor and manage the construction contractor's performance under the construction project contract. This designation under the construction contract shall be considered equivalent to the industry standard of "Owner's Representative" and does not supersede or eliminate the A/E's responsibility for Part Two Services/Construction Period Services. The A/E ultimately shall be responsible for any errors and omissions with the design discovered during and after the construction phase.

15. OI&T Infrastructure Standard for Telecommunications Specs: The current version for this standard is version 3.0, dated August 21, 2020 (<https://www.cfm.va.gov/til/dguide/OIT-InfrastrucStdTelecomSpaces.pdf>). The design for this project at Baltimore VAMC must meet the Campus Support Center (CSC) requirements of the Infrastructure Standard for Telecommunications Spaces.

The Infrastructure Standard for Telecommunications Spaces (The Standards) serves as the master reference document of criteria for Department of Veterans Affairs (VA) facility Information Technology (IT) support infrastructure. It defines the technical requirements necessary to maintain optimum reliability and efficiency within VA facilities and computing centers. IT Support Infrastructure is defined as all passive telecommunications and information technology equipment and supporting physical space and equipment.

This standard is owned and maintained by Solution Delivery (SD) Data Center and Infrastructure Engineering and questions or concerns should be directed to the following email group: OIT ITOPS SD Data Center and Infrastructure Engineering.

Users must ensure their use of this technology/standard is consistent with VA policies and standards, including, but not limited to, VA Handbooks 6102 and 6500; VA Directives 6004, 6513, and 6517; and National Institute of Standards and Technology (NIST) standards, including Federal Information

Processing Standards (FIPS). Users must ensure sensitive data is properly protected in compliance with all VA regulations. Prior to use of this technology, users should check with their supervisor, Information Security Officer (ISO), Facility Chief Information Officer (CIO), or local Office of Information and Technology (OI&T) representative to ensure that all actions are consistent with current VA policies and procedures prior to implementation.

16. SOW ATTACHMENTS: The following list of documents are attached to this SOW for A/E use and incorporation into the project documents:

- VHA Required Div 01 Specification Sections (See **SOW Attachment 01**)
- VA OEHRM Site Infrastructure Requirements 2.0 (See **SOW Attachment 02**)
- SOCAMES 6 Design Alert 1-8 (See **SOW Attachment 03**)
- Sensitive Infrastructure Data Classification FOUO (See **SOW Attachment 04**)
- 01 32 16.01 EHRM Architecture and Engineering CPM Schedule (See **SOW Attachment 05**)
- Program guide, PG-18-15 Volume C – A/E Submission Instructions for Minor and NRM Construction program dates November 2008 (See **SOW Attachment 06**)
- Seasonal influenza with vaccines (See **SOW Attachment 07**)
- VHA Directive 1061 Prevention of Healthcare Associated Legionella Disease (See **SOW Attachment 08**)
- Campus Map (See **SOW Attachment 09**)
- Environmental Regulatory Requirements for VAMHCS Projects (See **SOW Attachment 10**)
- “Attachment B for Environmental Regulatory Requirements” (See **SOW Attachment 11**)
- EHRM Readiness Infrastructure Self-Assessment. (See **SOW Attachment 12**)

END OF SOW