

STATEMENT OF WORK

ARCHITECTURAL / ENGINEERING (A/E) SERVICES

Date: September 10th, 2014
Project Title: Upgrade Seattle Electrical Distribution from 5KV to 15KV B100
Project No.: 663-15-102
Location: Seattle Division, VA Puget Sound Health Care System (VAPSHCS)

I. SCOPE OF WORK:

- A. Furnish all necessary professional services, equipment, labor, materials, supervision, tools, testing, and specialty services (i.e. Industrial Hygienist, Asbestos Contractor, TAB Contractor, etc.) to perform a design for the NRM Project #663-15-102, Puget Sound VA Health Care System, located at 1660 South Columbian Way, Seattle, WA 98108. The work includes, but is not limited to, site investigation, designing and preparing drawings, phase planning, specifications, cost estimates, and construction period services primarily for the electrical discipline. The A/E, to include subcontractors performing professional services under this contract, shall perform its services consistent with the professional skill and care ordinarily provided by A/Es practicing in the same or similar locality under the same or similar circumstances. The A/E shall perform these services as expeditiously as is consistent with such professional skill and care and the orderly progress of the project.

The design development (DD) (preliminary drawings) design phases will take the design to 35% completion. It does not include editing of specifications.

The contract document (working drawing) design phases will include 65%, 95% and 100% review stages. If the documents do not meet all of the requirements of each submission, then the portions of the documents that are not acceptable by the VA according to the design standards and criteria must be updated by the A/E and approved by the VA prior to moving on to the next scheduled submission.

The VA will provide requested As-Built drawings (in AutoCAD, PDF, and/or JPG form) on a CD-ROM to the A/E for design purposes. The A/E is encouraged to review all drawings with the assigned VA COR (Contracting Officer's Representative) to verify what areas the project entails. The A/E shall coordinate with the VA COR prior to viewing the drawings located at the VA and shall not remove any documents from the files.

The existing drawings on file at the VA may not be 100% accurate and may not exactly reflect the current conditions of the VAPSHCS. It is the responsibility of the A/E to review the existing drawings and verify the existing conditions.

B. Project Description: Provide design services to upgrade the primary electrical service for Building 100. The following items are to be designed:

1. Normal Power System Upgrade

i. Coordination Effort:

1. The A/E shall lead design coordination efforts with Seattle City Light to replace the two Medical Center primary transformers, currently converting 26 kV to 4.16 kV, with new transformers converting to 13.8 kV. These transformers are referred to as North and South bank.
2. The construction project shall include whatever costs are associated with the replacement of these transformers and the general contractor shall be responsible for all coordination with Seattle City Light during construction.

ii. Normal Power Switchgear Replacement:

1. The A/E shall design a full replacement of the existing 4.16 kV switchgear which includes Main Service Switchgear located in the Energy Plant section of Building 100. This switchgear is a double ended setup fed by the North and South bank Seattle City Light transformers. The replacement gear shall be 13.8 kV.
2. The Main Service Switchgear feeds three substations A, B, and C. Additionally; a new substation will be installed shortly by a construction project that will begin in the fall of 2014.
3. Each substation contains separate normal power switchgear and essential power switchgear. The normal power switchgear is a double ended setup with current 4.16 kV feeds that transform down to 480 V for distribution in the building. One side of the normal power switchgear feeds normal power service and the other feeds the normal side of the downstream automatic transfer switches. There is an automatic throwover switch between the two sides of the switchgear. The A/E shall design a replacement of the normal power switchgear to accommodate the new 13.8 kV incoming voltage from the Main Service Switchgear and to output 480 V to the existing ATS's and normal power distribution equipment.
4. The locations of the Main Service Switchgear and substations will remain the same. The A/E shall prepared detailed phasing plans to minimize electrical outages during the switchgear replacement. The phasing may have to include

installing temporary switchgear and feeds to power the Medical Center while the old equipment is removed and the new equipment is installed.

5. The A/E shall install temporary metering equipment on the existing switchgear and shall design for future loads to be fed out of the Main Service switchgear and each substation.
2. Essential Power System Upgrade:
 - i. Emergency Generator Replacement:
 1. The A/E shall design a full replacement of the existing five 440 kW 480 volt output emergency generators that are located in the Energy Plant section of Building 100. The new generators shall output 13.8 kV to new essential power switchgear sections.
 2. Information from temporary metering equipment and future capital planning shall be used to size new generators.
 3. All the existing generator controls and instrumentation shall be replaced with new controls setup to load shed per latest electrical code.
 4. Generators shall be located in the same space as the current generator sets.
 5. A/E shall confirm that the existing fuel storage capacity can supply the new generator set for the required 96 hour VA requirement.
 - ii. Essential Switchgear Replacement:
 1. The A/E design shall replace the essential power switchgear, which is currently fed off five 440 kW 480 volt output emergency generators. The new essential power switchgear shall handle 13.8 kV input voltage from new generators. The current setup has the substation A essential switchgear feeding the substation B and C switchgear. In order to enlarge the capacity of the substation essential switchgear the A/E shall explore running 13.8 kV to each substation essential switchgear versus the existing 480 V feeds coming out of substation A essential switchgear.
 2. The locations of the essential switchgear will remain the same. The A/E shall prepared detailed phasing plans to minimize electrical outages during the switchgear replacement. The phasing may have to include installing temporary emergency switchgear and feeds to power the Medical Center while the old equipment is removed and the new equipment is installed.
 3. Campus Feed Interconnection:
 - i. The current campus electrical system is split between the original 4.16 kV system installed when Building 100 was constructed in 1984 with two feeds from Seattle City Light and a 13.8 kV distribution system feeding multiple out buildings with one feed from Seattle City Light. The 13.8 kV system, which is referred to as the West Campus,

was installed over several projects between 2007 to 2010 and is currently setup with two 2 MW standby generators. The West Campus system used to be fed by a 4.16 kV feed from the Building 100 Main Service Switchgear and the conduit path between the two sides remains.

- ii. The A/E shall design a cross campus normal and emergency power connection that would allow automatic transfer to different feeds if there is a loss of power from Seattle City Light.

4. Building 100 Motor Control Center Replacement:

- i. Building 100 has approximately 23 original motor control centers that are past their useful life and need replacement. The A/E shall design replacement of the existing motor control centers. The VA would prefer new main distribution panels (MDPs) be utilized versus installing new motor control centers. This will require installation of motor soft start equipment if variable speed motor controllers are already not installed.
- ii. The new MDPs shall be sized at 125% of the existing capacity for increased flexibility in future use.
- iii. The A/E shall account for existing systems that currently remotely control motors through the existing motor control centers like the HVAC building control system or fire alarm system. This control will need to be carried over to the new MDPs.

5. Automatic Transfer Switch Replacement:

- i. Building 100 has 14 original automatic transfer switches that are in need of replacement. The A/E shall design a full replacement of these automatic transfer switches. A full phasing plan will be required to minimize shut downs of the essential power system.

Scope of work to include, but is not limited to designing and preparing drawings, phasing planning, specifications, and cost estimates for all disciplines to replace the electrical systems listed above for building 100. The A/E will be required to attend phase meetings at 35%, 65% and 95% to discuss progress with the VA staff. The A/E will be required to take meeting minutes and distribute to the VA for approval and as documentation of what was covered in the meeting.

The A/E shall show a detailed containment plan for infection control and hazmat control for this design. This plan shall be detailed showing locations and what infection and hazmat control requirements are to be used for each area. Construction barriers will be required for the duration of the construction to isolate patients and staff from dust, debris and construction hazards. The A/E will also have to indicate these construction barriers on their drawings.

The A/E shall review the Facility Condition Assessments (FCA) to ensure that the negative line items associated within the scope of work or within the scope area can be added to the scope for mitigation. The Cost Estimate shall include a line item for each item identified for mitigation.

C. Design Tasks:

1. **SITE INVESTIGATION:** The A/E shall review the existing field conditions and conduct a site survey of Building 100 to insure that the design is feasible and without any major obstacles. The A/E shall evaluate this building to determine if utilities or any other objects will need to be relocated or addressed in the design. The A/E shall also review the As-Built drawings and the site drawings for Building 100. Available as-built drawings and related other project drawings will be provided to the A/E upon request, but field verification by the A/E must be completed to verify existing site conditions and to collect data as required for design development work to successful completion of design and construction documents.
2. **DEMOLITION:** The project demolition work may include structural, architectural, plumbing, mechanical and electrical demolition to clear space for the new construction/systems. The minor demolition of existing landscaping and other items shall be included in this project.
3. **CIVIL / STRUCTURAL:** Work may include architectural modification and structural work. Structural engineering services are expected to be completed by a Washington Licensed Structural Engineer. All required borings and structural testing shall be completed by the A/E firm. The A/E firm shall proceed with a structural design that will not impede on pedestrian traffic at the ground level.
4. **ARCHITECTURAL:** Little architectural work is expected for this project, but field verification of elevations and architectural dimensions are still required if needed. The connection of existing and new constructions shall blend together and make sense esthetically and functionally.
5. **INTERIOR DESIGN:** Not applicable.
6. **PLUMBING / PIPING:** Not applicable.
7. **HEATING, VENTILATION AND AIR CONDITIONING (HVAC):** Incidental HVAC design may be required to properly ventilate and condition electrical and generator rooms. The HVAC systems need to be evaluated and updated to meet the latest HVAC Design Criteria.
8. **ELECTRICAL:** The electrical systems need to be evaluated and updated to meet the latest Design Criteria. The A/E must evaluate the electrical systems serving the design scope area, and provide modifications and extensions to the existing electrical systems, security system, communications system, fire / safety system, etc. All panels shall be metered before any planned connection to insure available capacity. This required metering will be the responsibility of the A/E firm to complete. The A/E shall evaluate existing As-Built drawings and any other electrical projects that may affect the design of the project or any other aspect of the project.

9. **INDUSTRIAL HYGIENIST:** A Certified Industrial Hygienist (CIH) may be required as an Asbestos Consultant due to the existence of asbestos containing materials that may be encountered during the construction project.
10. **ASBESTOS:** The A/E shall investigate the construction site to verify the presence of any asbestos containing materials. Such as: Asbestos containing sprayed-on fireproofing, floor tile & mastic, and other asbestos containing / contaminated materials. If asbestos is encountered, it is the A/E and their subcontractor's responsibility to adhere to all VA, OSHA, Federal, and State regulations of ACM procedures. Submittal packages for the CIH and AHERA Project Designer's qualifications shall be provided to the VA. The CIH shall perform duties as necessary by monitoring, inspecting and testing inside / outside the work area in accordance with OSHA requirements. Any Asbestos abatement and specifications must be prepared by an AHERA Project Designer. See attachments for VA provided Asbestos survey report.
 - a. **NOTE:** Some site investigation work may be in asbestos contaminated areas, and **will require** the A/E to have their personnel trained for Class 3 Asbestos Work (Maintenance & Operations within Asbestos Contaminated areas).
11. **EQUIPMENT:** The A/E shall coordinate the design work directly with the suppliers / manufacturers of the new equipment to produce a complete and comprehensive design package. All drawings, schematics, and other data available from the equipment suppliers shall be incorporated in the A/E drawings and specifications. The A/E is to determine the points of connection between old and new equipment and clearly detail these connections on the drawings.
12. The A/E shall provide all documentation (i.e., calculations, reports, recommendations, etc.) that is appropriate to support the design effort and to keep the VA fully informed of all issues or potential problems.
13. The A/E shall also provide computations and sizing calculations for any anticipated new loads, altered loads, and existing loads for electrical, mechanical (HVAC, plumbing, medical gas and steam), sanitary, structural and fire protection designs. For computerized calculations, submit complete and clear documentation of computer programs, interpretation of input / output, and description of program procedures. The A/E shall provide an investigation and explanation of code requirements incorporated into the design. Furnish a copy of each code quoted or used in the design, when necessary to provide additional understanding of design decisions.
14. The A/E shall provide all schedules and tables used on the drawings in Microsoft Project™ and Excel™.

D. Additional Requirements and Information:

1. **LIFE SAFETY:** The A / E shall design the necessary Life Safety and Interim Life Safety provisions for impacted areas, both temporary and permanent measures. The A/E shall provide and coordinate the

review of the Life Safety Provisions of the project design with a third party, independent licensed Fire Protection Engineer. The following areas shall be reviewed, but not limited to, by the third party:

- a. Current NFPA Code Compliance
- b. Environmental / EPA Impacts, Permits, etc.
- c. OSHA Compliance (i.e., Excavation, Demolition, etc.)
- d. Security Property / Infrastructure Management, Homeland Security, etc.
- e. Emergency Preparedness
- f. Disability Accessibility Compliance
- g. National and Local Codes. The A/E shall deliver a letter certifying compliance with all Life Safety Codes and Requirements applicable to this project from the third party.

In addition it is required that the A/E update all Life Safety Drawings associated with the designed space.

2. **CODES, STANDARDS AND EXECUTIVE ORDERS:** The Public Buildings Amendment Act of 1988, Public Law (Pub. L.) 100-678 requires Federal agencies to follow national recognized "model" building codes. The VA has adopted the latest edition of the following codes and standards as a minimum for all projects performed in the modernization, alteration, addition, or improvement of its real property and the construction of new structures. The VA design Manuals and Master Specifications specify other codes and standards that VA follows on its projects:
 - a. VA Directives, Design Manuals, Master Specifications, VA National CAD Standard Application Guide, and other Guidance on the Technical Information Library (TIL) (<http://www.cfm.va.gov/til/>).
 - b. International Building Code (IBC) including International Mechanical and Plumbing Codes
 - c. NFPA 101 Life Safety Code (see notes below)
 - d. NFPA National Fire Codes with the exception of NFPA 5000 and NFPA 900.
 - e. Occupational, Safety and Health Administration (OSHA) Standards
 - f. VA Seismic Design Requirements, H-18-8
 - g. National Electrical Code (NEC)
 - h. National Standard Plumbing Code (NSPC)
 - i. Safety Code for Elevators and Escalators, American Society of Mechanical Engineers (ASME) A 17.1.
 - j. ASME Boiler and Pressure Vessel Code
 - k. ASME Code for Pressure Piping
 - l. Architectural Barriers Act (ABA) including VA Supplement, Barrier Free Design
 - m. Building Code Requirements for Reinforced Concrete, American Concrete Institute and Commentary (ACI 318)
 - n. Manual of Steel Construction, Load and Resistance Factor Design Specifications for Structural Steel Buildings, American Institute of Steel Construction (AISC)

- o. Energy Policy Act of 2005 (EPAct)
 - p. American Society of Heating and Refrigeration Engineers (ASHRAE) 90.1, Energy Standards for Buildings Except Low-Rise Residential Buildings
 - q. Federal Leadership in High Performance and Sustainable Buildings: Memorandum of Understanding (MOU)
 - r. Executive Order 13423: Strengthening Federal Environmental, Energy, and Transportation Management
 - s. Executive Order 13514: Federal Leadership in Environmental, Energy, and Economic Performance
 - t. The Provisions for Construction and Safety Signs. Stated in the General Requirements, Section 01 00 00, of the VA Construction Specifications
 - u. American Society of Heating and Refrigeration Engineers (ASHRAE), Ventilation for Acceptable Indoor Air Quality – ASHRAE Standard 62.1
 - v. Safety Standard for Refrigeration Systems – ASHRAE Standard 15
3. **NOTES:** NFPA 101 primarily addresses life safety and fire protection features while the IBC addresses a wide range of considerations, including, but not limited to, structural strength, stability, sanitation, adequate light and ventilation, and energy conservation. VA buildings must meet the requirements of NFPA 101 and documents referenced by NFPA 101 in order to comply with the accreditation requirements of the Joint Commission. Therefore, designs shall comply with the requirements of the latest edition of NFPA 101 and documents referenced therein. Design features not addressed by NFPA 101 or documents referenced therein shall comply with the requirements of the latest edition of the IBC or as otherwise addressed above in this Program Guide. For design features that are addressed by both the IBC as well as NFPA 101 or a document referenced by NFPA 101, the requirements of NFPA 101 or the document referenced by NFPA 101 shall be used exclusively. This applies even if the IBC requirements are different.
4. **Conflicts between Nationally Recognized Codes and Standards and VA Requirements:** Should a conflict exist between VA requirements and VA adopted nationally recognized codes and standards, the conflict shall be brought to the attention of the VA. The resolution of the conflict shall be made by the authority having jurisdiction for the VA to ensure a consistency system wide.
5. **ENERGY & RESOURCE CONSERVATION:** Any alterations or new equipment (motors, light fixtures, windows, HVAC equipment, pumps, chillers, water faucets, urinals, toilets, insulation, etc.) shall be energy efficient and resource efficient. Light bulbs and other equipment shall have very low mercury content or NOT contain mercury at all.
6. **DRAWINGS:** The A/E shall provide electronic copies of drawings at each review step generated in the latest version of AutoCAD™ and PDF format in individual sheet files on CD-ROM. Include all associated support files (i.e. plot styles, external referenced files, etc.). This facility currently uses AutoCAD™ 2013. The standard drawing sizes shall be ARCH E1 (30" x 42") (Full size) and ARCH

C (18" x 24") (Half size). The format to be used in creating the CAD drawings (i.e. layer / level structure, fonts, font sizing, file naming conventions, etc.) is that of the latest edition of the National CAD Standard (www.nationalcadstandard.org).

- a. The A/E shall follow these level / layer formats, file – naming conventions, and symbol library.
 - b. Drawings are to be drawn from the VA's "As-Built" or construction drawings updated by site verification, not scanned reproductions.
 - c. The final sets of the new construction drawings, shall be sealed (embossed & ink stamps) and signed by each respective licensed Professional Engineer in their discipline, CIH, Architect and other necessary licensed professional consultants.
7. **ESTIMATE SUBMISSION REQUIREMENTS:** The A/E shall submit a construction cost estimate for all trade disciplines at each and every project submission. This estimate shall show the cost of construction, most likely to be reflected by the construction contractors' bids, if the bids were submitted on the same date as the estimate. The level of detail for this estimate shall be consistent with the degree of completeness of the drawings being submitted. Therefore, if it is shown, it must be priced. If it is shown in detail, it must be priced in detail. For detailed elements, "lump sum" or "allowance" figures will not be acceptable. The first page will be a summary page showing deductive bid items, contractor mark-ups, overhead, profit, special insurance, and bonding to reflect true construction costs. The breakdown shall reflect Bid Items 1, 2, and 3 separately; then in aggregate. Provide an electronic copy of cost estimates with each submittal.
8. **SPECIFICATIONS:** The A/E firm may obtain the list of the complete VA Construction Specifications from the VA Facilities Management Technical Information Library (TIL), which is located at <http://www.cfm.va.gov/TIL/spec.asp#02>. Any specifications that are edited by the contractor shall be submitted to the VA for approval. The edited version of the specification shall be in Microsoft Word™ in the editing format and all changes shall be in RED. Contact the project COR to obtain a copy of these specifications on CD-ROM. This facility will provide the specification sections needed based on the master list provided in the first review. The A/E shall provide the final edited specifications on CD-ROM in Microsoft Word™. The VA uses MS Word™ 2010. The format shall be 1.5 spaced, left justified, 2-sided, laser quality, and courier-new size 10 font. Any files submitted electronically (including but not limited to specifications and drawings) shall not have the following characters in their file name: \ / : * ? " < > | # { } % ~ &.
9. **DESIGN SCHEDULES:** Design schedules shall be submitted to the VA COR as a Microsoft Project™ electronic file, with each invoice for payment and shall never be more than 4 weeks old. Approximate time frames are presented below in **calendar days**. Actual timelines submitted for approval should reflect the project complexity and follow the format presented below:

Design Development "DD"

- a. Kick-off meetings and A/E Site visits (Notice to Proceed): **NTP**
- b. Submission of Iterations (DD1): **NTP + 14 Days**
- c. First Submission of Design Development (DD1-15%): **NTP + 28 Days**
- d. First Review Meeting and Return First Submission: **NTP + 42 Days**
- e. Second Submission (Final Design Development) (DD2-35%): **NTP + 70 Days**
- f. Second Review Meeting and Return Second Submission: **NTP + 84 Days**

End of Design Development “DD”

Contract Document Stage “CD”

- a. Begin Contract Document Stage: **NTP + 84 Days**
- b. Begin Contract Drawings (Target date for completion of Service Approval Signatures): **NTP + 84 Days**
- c. Third Submission Contract Documents (CD1-65%): **NTP + 112 Days**
- d. Third Review Meeting and Return Third Submission: **NTP + 126 Days**
- e. Fourth Submission Contract Documents (CD2-95%): **NTP + 154 Days**
- f. Fourth Review Meeting and Return Fourth Submission: **NTP + 168 Days**
- g. Fifth Submission (Deliver Final Contract Documents) (CD3-100%): **NTP + 189 Days**

End of Contract Document Stage “CD”

- 10. **REVIEW MEETINGS:** The A/E is required to attend a design review meeting after each submission during the design process and provide meeting minutes to the VA for approval and distribution.
- 11. The A/E shall design the project in such a manner that the base bid shall include the sum total of the work. However, there must be deducting alternate bid items. **Alternative bid items shall have a goal of equaling 20% of the proposed construction budget.** The resulting project must still be a viable project if all alternatives are deducted from the construction project. No matter which option is selected, the hospital must continue to function during construction.
- 12. The VA mandates that all facilities are to be 100% fire sprinkled. The A/E shall review the existing sprinkler system and design any modifications necessary to the existing system to ensure that all areas are 100% sprinkled. Once the design for the modifications has been completed, a Fire Protection Engineer shall review and stamp those necessary drawings for code compliance.
- 13. Provide a moisture control plan and illustrate the use of an appropriate moisture control strategy to prevent building damage, minimize mold contamination, and reduce health risks related to moisture. For façade renovations, a dew point analysis and a plan for cleanup or infiltration of moisture into the building materials are required.

14. Provide a day lighting and lighting controls plan, including automated lighting controls (occupancy / vacancy sensors with manual-off capability) for appropriate spaces including restrooms, conference and meeting rooms, employee lunch and break rooms, training classrooms, and offices.
15. Storm Water: Per EISA Section 438, where redevelopment affects site hydrology, use site planning, design, construction, and maintenance strategies to maintain hydrologic conditions during development, or to restore hydrologic conditions following development, to the maximum extent that is technically feasible.

II. DESIGN DEVELOPMENT (FOR EACH DESIGN PHASE “DD”):

A. FIRST REVIEW: Design Development (DD1) submission – 15% complete.

1. **Submittals:** Three (3) copies of preliminary plans (1 full size and 2 half size), three (3) copies of cost estimates furnished by an independent firm, the marked up As-Built drawings, three (3) copies of calculations, computations, and engineering data. Provide electronic copies of the entire submission on one (1) CD-ROM.
2. **Specifications:** Submit a cover letter and a list of Specific VA master specifications intended for use on this project.
3. **Drawings:** The A/E shall provide a full list of project drawings showing the scope and plan for each discipline involved.
 - a. **All Disciplines:**
 - 1) Demolition: Show furnishings that will remain during construction. Show means of protection.
 - 2) Provide one drawing to include Interim Life Safety Code Plan, Phasing Plan, Security and environmental barriers.
 - 3) Show and identify existing conditions, sections, elevations, details, dimensions, and capacities. The A/E shall site verify all items.
 - 4) Show extent of asbestos that will be encountered and limits of removal with cost estimate, if applicable.
 - 5) Show items to be removed, all disciplines.
 - 6) Provide symbol sheets and explanation of detail symbols used.
 - 7) Provide a VA Title Sheet for entire set of drawings.
 - 8) Provide layout and equipment options.
 - b. **Architectural:**
 - 1) Show location of existing equipment to be removed, remain, or be relocated.
 - 2) Show location of new equipment.
 - 3) Floor plans that include all rooms, door swing, windows, corridors, closets, mechanical, and other spaces.
 - 4) Show reflected ceiling plan, and architectural details, sections, and finishes.

- 5) Show the structural grid with assumed column sizes, expansion and seismic joint locations, and location of special seismic structural features.
 - 6) Show site survey and connection point locations.
 - 7) All floor to floor heights shall be indicated. Show typical wall sections. Show smoke compartment and fire protection on the Interim Life Safety / Phasing Plan Drawing.
- c. Civil / Structural:
- 1) Show existing conditions and how new work interfaces.
- d. Plumbing / Piping:
- 1) Show basis for design and interface with existing system.
 - 2) Show sizes of pipes and verified locations of valves.
 - 3) Show modifications, old and new.
 - 4) Provide a one-line diagram for all systems.
- e. Heating, Ventilation and Air Conditioning (HVAC):
- 1) Provide preliminary load calculations.
- f. Electrical:
- 1) Show existing including capacities. Furnish preliminary load calculations. Show transformers and panels to scale.
- g. Phasing:
- 1) Present proposed phasing plans that will accomplish the construction work with a minimum amount of disruption to the normal operations of the hospital.
- h. Calculations:
- 1) Submit in triplicate, all preliminary structural, HVAC, electrical, and plumbing calculations.
4. Estimates: Submit six (6) copies of the cost estimate (for all disciplines). See “Estimate Submission Requirements.”
5. Asbestos: Outline area of work expected to disturb asbestos containing fireproofing.
6. Acceptance: If the documents do not meet all of the requirements of this submission, then the portions of the documents that are not acceptable by the VA according to the design standards and criteria must be updated by the A/E and approved by the VA prior to moving on to the next scheduled submission.
- B. **SECOND REVIEW:** Final Design Development (DD2) submission – 35% complete. After material of the 15% review has been reviewed, the A/E shall make necessary changes to incorporate the review comments and furnish the following:
1. Submittals: Three (3) complete sets of 35% drawings (1 full size and 2 half size), the original marked-up drawings, the 15% preliminary review mark-up, three (3) sets of complete cost estimates and three (3) sets of calculations, computations and engineering data. Also, provide one (1) electronic copy of the 35% drawings in accordance with section I.D.6.
 2. Specifications: Submit three (3) sets of revised lists of specifications to be used for this project.

3. Drawings: The drawings shall be 35% complete, and include the following information:
- a. All Disciplines:
 - 1) All demolition work.
 - 2) Environmental controls (dust partitions, signage, etc.).
 - 3) Show and identify existing, verified dimensions, conditions, and interfacing.
 - 4) Show items to be removed.
 - 5) Provide symbol sheets and explanation of symbols used.
 - 6) Provide plans to show Interim Life Safety Plan, Phasing Plan, Security, and Environmental barriers. Submit, as a minimum, a single line layout for all floors and roof areas with double line exterior walls at a scale not less than 1/8" = 1'-0". These drawings should show all rooms, doors, corridors, basic column grid, assumed column sizes, expansion and seismic joint locations, electrical closets and equipment rooms, signal and telephone closets, mechanical shafts and space, and all vertical circulation, e.g., stairs, conveyers, elevators (personnel and service), and automatic conveyances. In schematics, lines between spaces indicate the centerline of the partition. Along the corridor the line represents the corridor side of the partition. Net areas should be clear space and should not include partitions.
 - b. Site:
 - 1) Ensure that the Contractor is aware of the limited parking and material staging areas at this location.
 - 2) Ensure that the Contractor is aware of the limited working spaces of the project site.
 - c. Architectural:
 - 1) Submit floor plans and 35% complete details, schedules, and large-scale plans.
 - 2) Draw elevations at a 1/8" scale. As necessary, show heights, fenestration and materials.
 - 3) Show and identify connections of new work to old work.
 - 4) Show general notes, door schedules, and other schedule data.
 - 5) Indicate fire and smoke partitions.
 - 6) Show the location of new equipment.
 - 7) Show the ceiling mounted equipment.
 - 8) Label each room or space with its name and the required program net area over the designed net area. The area figures will appear in fractional form, e.g., 400/390. The designed net area shall exclude such circulation space within the room as is permitted by the space planning criteria.
 - d. Civil / Structural:
 - 1) Show existing structural and new work, if applicable.
 - 2) Work with the equipment supplier to determine the added floor and ceiling loading, if required. Show structural modifications, if required. Also, show the uni-strut system if required.

- e. Plumbing / Piping:
 - 1) Show existing plumbing that will be affected by renovations and modifications. Through site verification, show shut-off valves. Show all areas that will be affected by a shutdown.
 - 2) Show temporary and permanent relocations.
 - 3) Show points of connection.
 - 4) Show all piping, including sizes.
 - f. Heating, Ventilation and Air Conditioning (HVAC):
 - 1) Provide preliminary load calculations.
 - 2) Provide sketches and schematics and a schedule of points to be monitored by graphic control center.
 - 3) Provide 1/4" scale drawings for equipment, piping, ductwork and other interfacing elements.
 - 4) Show connections between new and old work. Show riser diagrams.
 - 5) Provide demolition drawings and show extent of disruption to areas adjacent to or affected by the modifications.
 - 6) Provide drawings to show the extent that asbestos fireproofing will be encountered.
 - 7) Provide an equipment schedule.
 - 8) Show one-line diagrams of hot, chilled, condenser water, refrigerant and steam piping.
 - 9) Notations for types and sizes of hoods and grease and/or bacteriological filters, when required.
 - 10) Provide a 1/4" scale drawing of equipment and/or fan room arrangement.
 - 11) All heating and steam consuming equipment must be suitably described.
 - g. Electrical:
 - 1) The electrical drawings shall be 35% complete, showing controls, conduits, wire sizes, points of origination and termination, motor sizes, nomenclature, and all other items necessary for a contractor / estimator to do a take-off.
 - 2) Have one lighting print, one power print, and one signal print.
 - 3) Provide computer terminals, extension of stentophone intercom system, local intercom, nurse call (code blue) system, fire alarm system diagrams and other necessary systems.
 - 4) Provide one-line power and noise diagrams, and signal diagrams.
 - 5) Provide a preliminary panel schedule.
 - 6) Provide an equipment schedule for all equipment (including all medical equipment), showing manufacturer or basis of design, voltage, amperage, phase, conduit size, and conductor size.
 - h. Phasing:
 - 1) Present revised phasing plans that will accomplish the construction work with a minimum amount of disruption to the normal operations of the hospital.
4. Estimates: See "Estimate Submission Requirements."

5. Acceptance: If the documents do not meet all of the requirements of this submission, then the portions of the documents that are not acceptable by the VA according to the design standards and criteria must be updated by the A/E and approved by the VA prior to moving on to the next scheduled submission.

End of Design Development "DD"

III. CONTRACT DOCUMENTS STAGE (FOR EACH DESIGN PHASE "CD"):

- A. **THIRD REVIEW: First Contract Document Submission (CD1) submission – 65% complete.**
 1. Submittals: Three (3) copies of calculations, computations, and engineering data, three (3) copies of drawings (1 full size and two half size), two (2) copies of specifications (one in a loose – leaf binder), updated as – built drawings for each discipline, all marked up documents from the previous submissions and three (3) copies of the cost estimate. Also, provide one (1) electronic copy of the 65% drawings in accordance with section I.D.6.
 2. Specifications: Submit two (2) copies of the specification sections to suit the project. All editing and mark - ups shall easily identify modifications, deletions, and insertions through tracking of changes with the Word document. The electronic copy of specifications shall be merged into one document. "Catch-all" terms and generalizations shall be avoided. Items not relative to the project shall be edited out. The specifications shall be substantially complete as to content, checked and coordinated so that only an overall review will be necessary at the final working drawing submission. One copy to be in a loose - leaf binder with one CD electronic copy of the specs.
 3. Drawings: The drawings shall be 65% complete.
 - a. All Disciplines:
 - 1) Demolition work.
 - 2) Environmental controls.
 - 3) Show and identify existing, verified dimensions, conditions, and interfacing.
 - 4) Show items to be removed.
 - 5) Provide symbol sheets and an explanation of the symbols used.
 - 6) Provide plans to show Interim Life Safety Plan, Phasing Plan, Security, and Environmental barriers.
 - b. Site:
 - 1) Ensure that the Contractor is aware of the limited parking and material staging areas at this location.
 - c. Architectural:
 - 1) Submit near complete floor plans and 65% complete details, schedules, and large - scale plans.
 - 2) Draw elevations at 1/8" scale. As necessary, show heights, fenestration and materials.
 - 3) Show and clearly identify connections of new work to old work.
 - 4) Show environmental controls, including dust partitions and appropriate signage.

- 5) Show general notes, door schedules, and other schedule data.
 - 6) Show reflected ceiling plan.
 - 7) Show room finish symbols.
 - 8) Indicate fire and smoke partitions.
 - 9) Show location of new equipment.
 - 10) Show ceiling mounted equipment and mounting details if required.
- d. Civil / Structural:
- 1) Show existing structural and new work, if applicable.
 - 2) Work with the equipment supplier to determine the added floor and ceiling loading, if required. Show structural modifications, if required. Also, show the uni-strut system if required.
- e. Plumbing / Piping:
- 1) Show existing plumbing that will be affected by renovations and modifications. Through site verification, show shut-off valves. Show all areas that will be affected by a shutdown.
 - 2) Show temporary and permanent relocations.
 - 3) Clearly show points of connection.
 - 4) Show all piping, including sizes.
 - 5) The drawings for this submission shall be substantially complete.
- f. Heating, Ventilation and Air Conditioning (HVAC):
- 1) Provide complete load and sizing calculation for all HVAC.
 - 2) Provide drawings and schematics and schedule of points to be monitored by graphic control center.
 - 3) Provide flow and control diagrams for steam and condensate water.
 - 4) Provide a sequence of operations for all HVAC Systems.
 - 5) Provide 1/4" scale drawings for equipment, piping, ductwork and other interfacing elements.
 - 6) Clearly show connections between new and old work. Show riser diagrams.
 - 7) Provide demolition drawings and show extent of disruption to areas adjacent to or affected by the modifications.
 - 8) Provide drawings to show the extent that asbestos fireproofing will be encountered.
 - 9) Show control diagrams.
 - 10) Show equipment schedule.
 - 11) Show major details, elevations, sections and legends, show sections of all critical points.
 - 12) The drawings and calculations for this submission shall be substantially complete.
 - 13) Coordinate with the Controls application system for the facility to show all control points and tie-ins.

- 14) Plan the layout of all equipment, ductwork and piping, including the following: air handling units, including all components, coils, humidifiers, filters, pumps, heat exchangers, tanks and piping specialties, such as PRV, TCV, traps, etc.
- 15) Show exhaust fans.
- 16) Show grill and diffuser locations.
- 17) Show hot, chilled, condenser water, refrigerant and steam piping.
- 18) Notations for types and sizes of hoods and grease and / or bacteriological filters, when required.
- 19) Provide a 1/4" scale drawing of equipment and/or fan room arrangement.
- 20) All heating and steam consuming equipment must be suitably described.
- 21) Submit an elementary diagram of additional controls.
- 22) Provide a one-line diagram of all systems.

g. Electrical:

- 1) The electrical drawings shall be substantially complete, showing all controls, conduits, wire sizes, points of origination and termination, motor sizes, nomenclature, and all other items necessary for a contractor / estimator to do a take-off.
 - 2) Have one lighting print, one power print, and one signal print.
 - 3) Provide computer terminals, extension of existing stentophone intercom system, local intercom, nurse call (code blue) system, fire alarm system diagrams and other necessary systems.
 - 4) Provide one-line power and noise diagrams, and signal diagrams.
 - 5) Provide the panel schedule, complete with circuit breaker sizes and equipment designation.
 - 6) Provide an equipment schedule for all equipment (including all medical) showing manufacturer or basis of design, voltage, amperage, phase, conduit size, conductor size.
 - 7) The drawings shall be substantially complete.
4. Phasing: Present proposed phasing plans that will accomplish the construction work with a minimum amount of disruption to the normal operations of the hospital.
 5. Code: Provide an investigation and explanation of code requirements incorporated into the design. Furnish a copy of each code quoted or used in the design.
 6. Estimate: See "Estimate Submission Requirements."
 7. Acceptance: If the documents do not meet all of the requirements of this submission, then the portions of the documents that are not acceptable by the VA according to the design standards and criteria must be updated by the A/E and approved by the VA prior to moving on to the next scheduled submission.

B. **FOURTH REVIEW:** Second Contract Document Submission (CD2) submission – 95% complete.

1. Submittals: Four (4) copies of drawings (2 full size and 2 half size), the marked-up drawings from the third submission, four (4) copies of the updated cost estimates, two (2) copies of the specifications, and

the marked-up specifications from the third review. Also, provide one (1) electronic copy of the 95% drawings in accordance with section I.D.6.

2. Specifications: The specifications shall be in final draft, completely edited and checked, per earlier description, and two (2) copies, one in a loose-leaf binder.
 3. Drawings: The drawings shall be 95% complete.
 - a. Architectural:
 - 1) Submit completed plans, elevations, details, and schedules.
 - 2) Completed interior finish schedules and color design.
 - b. Civil / Structural:
 - 1) Submit complete plans, elevations, sections, details, schedules, and general notes.
 - c. Plumbing / Piping:
 - 1) Provide complete drawings, elevations, plans, details, and riser diagrams. Show fire sprinkler systems.
 - d. Heating, Ventilation and Air Conditioning (HVAC):
 - 1) Provide complete coordinated HVAC drawings and calculations. Provide all plans, sections, elevations, details, calculations, flow and control diagrams, and schedules. Provide detailed connection to the Central Energy Plant (CEP).
 - e. Electrical:
 - 1) Provide all drawings, elevations, plans, details, and schedules. Indicate all circuiting of all systems on drawings. Show details and sections of all areas where possible conflict with other trades exists.
 - 2) Show final sizes, ratings, feeders, and identification of all electrical equipment and outlets.
 4. Life Safety: The Certified Independent Third Party Safety Professional Review must be completed and a letter with comments submitted with this submission.
 5. Estimate: See "Estimate Submission Requirements." The estimate shall be presented in complete form to reflect quantitative material cost, labor costs, and overhead and profit anticipated on date of bid opening.
 6. Acceptance: If the documents do not meet all of the requirements of this submission, then the portions of the documents that are not acceptable by the VA according to the design standards and criteria must be updated by the A/E and approved by the VA prior to moving on to the next scheduled submission.
- C. FINAL SUBMISSION (100%): After material of the Fourth Review has been reviewed, the A/E shall make necessary changes to incorporate all review comments (VA, CITP Safety Review, etc.) and furnish the following:
1. Specifications: Six (6) copies of the edited specifications double-sided in loose-leaf form ready for photocopying. One copy in a 3-ring binder, labeled. Format to be as stated earlier under

“Specifications.” Provide an electronic file of the specifications in MS Word with all specification files merged into one file.

2. Drawings: The drawings shall be 100% complete in every respect. Provide six (6) complete sets of drawings, three (3) full-size prints and three (3) half-size prints. Also provide two (2) electronic copies of the drawings in accordance with section I.D.6.
3. Provide one sealed set of original film drawings. Each discipline shall be separately sealed.
4. Provide all calculations for the project including, but not limited to, architectural, structural, plumbing, mechanical, and electrical.
5. Provide two (2) CD-ROMs with all project materials, including drawings, specifications, and calculations.

D. CONSTRUCTION PERIOD SERVICES:

The duration of construction period services may is indeterminate. The A/E firm shall review the scope of work during the design process and anticipate what the project timeframe shall be and provide adequate construction period services. The time to award the construction contract after design completion is dependent of many things and cannot be determined exactly.

1. At project completion, the A/E shall incorporate the As-Built drawings from the Contractor and furnish two (2) updated sets of prints / record drawings (one set to be film), and two (2) electronic copies in accordance with section I.D.6.
2. The A/E firm shall review and answer all RFI's related to the design within 10 calendar days and review all submittals for the project within 10 calendar days. The A/E shall review and approve the acceptance testing results provided by the Contractor on behalf of the VA for all building and utility systems.
3. The A/E firm shall review all cost estimates for all Contractor change orders and shall review all change order requests. The VA reserves the right for final approval / disapproval.
4. ASBESTOS – Provide a third party CIH to monitor asbestos abatement work. Provide close out paperwork as required by OSHA, EPA, and VA Policies.
5. The A/E must conduct two site visits per month per campus during the construction period. The A/E must also attend the pre-bid conference prior to construction and the close-out punch list walk through after construction is complete.

VA INFORMATION AND INFORMATION SYSTEM SECURITY/PRIVACY LANGUAGE

VA INFORMATION CUSTODIAL LANGUAGE:

a. If VA determines that the contractor has violated any of the information confidentiality, privacy, and security provisions of the contract, it shall be sufficient grounds for VA to withhold payment to the contractor or third party or terminate the contract for default or terminate for cause under Federal Acquisition Regulation (FAR) part 12.

SECURITY INCIDENT INVESTIGATION:

a. The term "security incident" means an event that has, or could have, resulted in unauthorized access to, loss or damage to VA assets, or sensitive information, or an action that breaches VA security procedures. The contractor/subcontractor shall immediately notify the COR and simultaneously, the designated ISO and Privacy Officer for the contract of any known or suspected security/privacy incidents, or any unauthorized disclosure of sensitive information, including that contained in system(s) to which the contractor/subcontractor has access.

b. To the extent known by the contractor/subcontractor, the contractor/subcontractor's notice to VA shall identify the information involved, the circumstances surrounding the incident (including to whom, how, when, and where the VA information or assets were placed at risk or compromised), and any other information that the contractor/subcontractor considers relevant.

c. With respect to unsecured protected health information, the business associate is deemed to have discovered a data breach when the business associate knew or should have known of a breach of such information. Upon discovery, the business associate must notify the covered entity of the breach. Notifications need to be made in accordance with the executed business associate agreement.

d. In instances of theft or break-in or other criminal activity, the contractor/subcontractor must concurrently report the incident to the appropriate law enforcement entity (or entities) of jurisdiction, including the VA OIG and Security and Law Enforcement. The contractor, its employees, and its subcontractors and their employees shall cooperate with VA and any law enforcement authority responsible for the investigation and prosecution of any possible criminal law violation(s) associated with any incident. The contractor/subcontractor shall cooperate with VA in any civil litigation to recover VA information, obtain monetary or other compensation from a third party for damages arising from any incident, or obtain injunctive relief against any third party arising from, or related to, the incident.

LIQUIDATED DAMAGES FOR DATA BREACH:

a. Consistent with the requirements of 38 U.S.C. §5725, a contract may require access to sensitive personal information. If so, the contractor is liable to VA for liquidated damages in the event of a data breach or privacy incident involving any SPI the contractor/subcontractor processes or maintains under this contract.

b. The contractor/subcontractor shall provide notice to VA of a "security incident" as set forth in the Security Incident Investigation section above. Upon such notification, VA must secure from a non-Department entity or the VA Office of Inspector General an independent risk analysis of the data breach to determine the level of risk associated with the data breach for the potential misuse of any sensitive personal information involved in the data breach. The term 'data breach' means the loss, theft, or other unauthorized access, or any access other than that incidental to the scope of employment, to data containing sensitive personal information, in electronic or printed form, that results in the potential compromise of the confidentiality or integrity of the data. Contractor shall fully cooperate with the entity performing the risk analysis. Failure to cooperate may be deemed a material breach and grounds for contract termination.

SECURITY CONTROLS COMPLIANCE TESTING:

On a periodic basis, VA, including the Office of Inspector General, reserves the right to evaluate any or all of the security controls and privacy practices implemented by the contractor under the clauses contained within the contract. With 10 working-days' notice, at the request of the government, the contractor must fully cooperate and assist in a government-sponsored security controls assessment at each location wherein VA information is processed or stored, or information systems are developed, operated, maintained, or used on behalf of VA, including those

initiated by the Office of Inspector General. The government may conduct a security control assessment on shorter notice (to include unannounced assessments) as determined by VA in the event of a security incident or at any other time.

BADGING:

a. All employees of general contractor and subcontractors shall comply with VA security management program and obtain temporary VA badges. This will require fingerprinting and background checks of each individual. The employees of the general contractor will obtain permission of the VA Human Resources, be identified by project and employer, and restricted from unauthorized access.

TRAINING:

a. All contractor employees and subcontractor employees requiring access to VA information and VA information systems shall complete VA Privacy and Information Security Awareness and Rules of Behavior Training.

(1) Sign and acknowledge (either manually or electronically) understanding of and responsibilities for compliance with the *Rules of Behavior*.

b. The contractor shall provide to the contracting officer and/or the COR a copy of the training certificates and certification of signing the Rules of Behavior for each applicable employee within 1 week of the initiation of the contract and annually thereafter, as required.

c. Failure to complete the mandatory annual training and sign the Rules of Behavior annually, within the timeframe required, is grounds for suspension or termination of all physical or electronic access privileges and removal from work on the contract until such time as the training and documents are complete.

The Certification and Accreditation (C&A) requirements do not apply and a Security Accreditation Package is not required for this SOW.

Privacy Officer Language for Statement of Work (SOW)

1. Information made available to the contractor or subcontractor by VA for the performance or administration of this contract or information developed by the contractor/subcontractor in performance or administration of the contract shall be used only for those purposes and shall not be used in any other way without the prior written agreement of the VA. This clause expressly limits the contractor/subcontractor's rights to use data as described in Rights in Data- General, FAR 52.227-14(d) (1).
2. VA information should not be co-mingled, if possible, with any other data on the contractors/subcontractor's information systems or media storage systems in order to ensure VA requirements related to data protection and media sanitization can be met. If co-mingling must be allowed to meet the requirements of the business need, the contractor must ensure that VA's information is returned to the VA or destroyed in accordance with VA's sanitization requirements. VA reserves the right to conduct on-site inspections of contractor and subcontractor IT resources to ensure data security controls, separation of data and job duties, and destruction/media sanitization procedures are in compliance with VA directive requirements.
3. Prior to termination or completion of this contract, contractor/subcontractor must not destroy information received from VA, or gathered/created by the contractor in the course of performing this contract without prior written approval by the VA. Any data destruction done on behalf of VA by a contractor/subcontractor must be done in accordance with National Archives and Records Administration (NARA) requirements as outlined in VA Directive 6300, Records and Information Management and its Handbook 6300.1 Records Management Procedures, applicable VA Records Control Schedules, and VA Handbook 6500.1, Electronic Media Sanitization. Self-certification by the contractor that the data destruction requirements above have been met must be sent to the VA Contracting Officer within 30 days of termination of the contract.

4. The contractor/subcontractor must receive, gather, store, back up, maintain, use, disclose and dispose of VA information only in compliance with the terms of the contract and applicable Federal and VA information confidentiality and security laws, regulations and policies. If Federal or VA information confidentiality and security laws, regulations and policies become applicable to the VA information or information systems after execution of the contract, or if NIST issues or updates applicable FIPS or Special Publications (SP) after execution of this contract, the parties agree to negotiate in good faith to implement the information confidentiality and security laws, regulations and policies in this contract.
5. The contractor/subcontractor shall not make copies of VA information except as authorized and necessary to perform the terms of the agreement or to preserve electronic information stored on contractor/subcontractor electronic storage media for restoration in case any electronic equipment or data used by the contractor/subcontractor needs to be restored to an operating state. If copies are made for restoration purposes, after the restoration is complete, the copies must be appropriately destroyed.

Records Management Language for Contracts

The following standard items relate to records generated in executing the contract and should be included in a typical Electronic Information Systems (EIS) procurement contract:

1. Citations to pertinent laws, codes and regulations such as 44 U.S.C chapters 21, 29, 31 and 33; Freedom of Information Act (5 U.S.C. 552); Privacy Act (5 U.S.C. 552a); 36 CFR Part 1222 and Part 1228.
2. Contractor shall treat all deliverables under the contract as the property of the U.S. Government for which the Government Agency shall have unlimited rights to use, dispose of, or disclose such data contained therein as it determines to be in the public interest.
3. Contractor shall not create or maintain any records that are not specifically tied to or authorized by the contract using Government IT equipment and/or Government records.
4. Contractor shall not retain, use, sell, or disseminate copies of any deliverable that contains information covered by the Privacy Act of 1974 or that which is generally protected by the Freedom of Information Act.
5. Contractor shall not create or maintain any records containing any Government Agency records that are not specifically tied to or authorized by the contract.
6. The Government Agency owns the rights to all data/records produced as part of this contract.
7. The Government Agency owns the rights to all electronic information (electronic data, electronic information systems, electronic databases, etc.) and all supporting documentation created as part of this contract. Contractor must deliver sufficient technical documentation with all data deliverables to permit the agency to use the data.
8. Contractor agrees to comply with Federal and Agency records management policies, including those policies associated with the safeguarding of records covered by the Privacy Act of 1974. These policies include the preservation of all records created or received regardless of format [paper, electronic, etc.] or mode of transmission [e-mail, fax, etc.] or state of completion [draft, final, etc.].

9. No disposition of documents will be allowed without the prior written consent of the Contracting Officer. The Agency and its contractors are responsible for preventing the alienation or unauthorized destruction of records, including all forms of mutilation. Willful and unlawful destruction, damage or alienation of Federal records is subject to the fines and penalties imposed by 18 U.S.C. 2701. Records may not be removed from the legal custody of the Agency or destroyed without regard to the provisions of the agency records schedules.

10. Contractor is required to obtain the Contracting Officer's approval prior to engaging in any contractual relationship (sub-contractor) in support of this contract requiring the disclosure of information, documentary material and/or records generated under, or relating to, this contract. The Contractor (and any sub-contractor) is required to abide by Government and Agency guidance for protecting sensitive and proprietary information.

*****End of A/E Design Services SOW*****