

**DEPARTMENT OF
VETERAN AFFAIRS**

Poplar Bluff VAMC
PROJECT No. 657-351

(DESIGN / BUILD CONTRACT)

FOR: CONSTRUCT CLINICAL AND URGENT CARE ADDITION

AT: DEPARTMENT OF VETERANS AFFAIRS
JOHN J. PERSHING VA MEDICAL CENTER
1500 N WESTWOOD BLVD
POPLAR BLUFF, MO 63901
ATTN: ENGINEERING SERVICES BUILDING 8

PREPARED BY: LANCE D. CRAVENS

DATE: DECEMBER 27, 2016

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Amendment	
No.	Date

Design / Build

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I. SCOPE OF WORK

1. THE SCOPE OF WORK FOR THIS PROJECT:

1. Definition:

Design-Build (DB) as defined by the Department of Veterans Affairs (VA) is the procurement by the Government, under one contract, with one firm (which may be a joint venture) for both design and construction services for a specific project.

2. Scope of Work:

A. Base Bid (Design) Project No. 657-351, Construct Clinical and Urgent Care Addition, work includes all labor, materials, equipment and supervision for Level II design submission IAW with Program Guide PG-18-15, Vol E. The Design-Build Contractor Team calculations, working drawings, cost estimates, and construction period services necessary for this project, in accordance with items herein specified. Design-Build Architect Engineer (DB A/E) is to provide complete set of construction documents, drawings and specifications reflecting work that the Design-Build contractor is to provide with all labor, material, and technical expertise to design, construct, and commission a single story structure IAW VA Barrier Free Design Guide (approximately 8,000 square foot) at the elevation of the existing south parking lot of the hospital (Building 1) at the John J. Pershing Veteran Affairs Medical Center (JJPVAMC) 1500 N Westwood Blvd Poplar Bluff, Missouri 63901. This shall be designed to withstand future vertical expansion of a minimum of one (1) additional level. **The provided drawings and documents are for reference only and the design build contractor is responsible for the complete design build project including new drawings and specifications.**

B. Alternate Bid Deduct #1 (Design): This item includes everything in paragraph A except: Remove This shall be designed to withstand future vertical expansion of a minimum of one (1) additional level.

C. Base Bid (Build): Work includes all labor, materials, equipment and supervision to construct **a single story structure**, access road, IAW VA Barrier Free Design Guide. Design-Build contractor shall design, construct, and commission a single story structure (approximately 8,000 square foot) at the elevation of the existing south parking lot of the hospital (Building 1). This structure shall be located at the southwest end of the hospital near Building 1 as shown on the existing A/E drawings. This addition is to be an adaptation of the current A/E design that was completed for this project and could not be constructed due to budgetary restraints. **The current A/E drawings are for a two (2) story structure.** **Only the lower level floor plan with the related drawings and the elevator and elevator shaft to allow access to the main hospital**

(Building 1) will be utilized for this project. All bid deductions identified in the current A/E drawings are not part of this project and shall not be utilized in the design and construction of this project. **The provided drawings, specifications, and documents are for reference only and the design build contractor is responsible for the complete design build project including new drawings, specifications, and all other related documents.** This structure shall be designed and constructed to withstand a future vertical expansion of a minimum of one (1) additional level. This structure shall include an elevator and elevator shaft(s) as shown on the existing A/E drawings. This structure shall include the design and construction of elevator shaft(s) that shall include one (1) elevator with the option of adding one (1) elevator in the future. This elevator and elevator shaft(s) shall be designed and constructed to allow adequate room for a patient gurney to be transferred between floors. This structure shall comply with the VA Barrier Free Design Guide and all applicable codes and shall have a covered pick up and drop off located at the south end of the new addition. Site and parking improvements should be conducted as necessary to improve pedestrian and vehicular access. The design/construction shall include all design, site investigation, surveys, abatement, environmental protection, utility site, phasing, site security, traffic control, construction, and all other components required to provide a complete project to the JJPVAMC upon contract completion. Commissioning services shall be provided by a 3rd party commissioning agent, in accordance with project specifications provided. The cost of the commissioning agent shall be included in the contractor's bid, and paid for by the contractor. The selected commissioning firm shall be approved by the VA prior to final selection by the contractor, upon VA review of commissioning agent's credentials. This structure shall include all rooms/areas as shown for the parking lot elevation on the existing AE drawings.

D. Alternate Bid Deduct #1 (Build):

This item includes everything in paragraph C except: The structure shall be designed and constructed to withstand a future vertical expansion of a minimum of one (1) additional level.

E. Guarantee Period Services (GPS): Elevator Maintenance Services for one (1) Elevators \$_____ Per Month for POP 500 days after NTP and cover the additional one year warranty period.

2. OFFERS:

Offers shall be based on this solicitation, together with General Requirements listed in Division 1, Section 01 00 00, and A/E Submission Requirements

- Base Bid (Design) Completion Time: **190** Calendar Days
- Alternate Bid Deduct #1 (Design) Completion Time: **190** Calendar Days
- Base Bid (Build) Completion Time: **500** Calendar Days
- Alternate Bid Deduct #1 (Build) Completion Time: 500 Calendar Days

Technical Requirements

1. Construction Management - Design-Build Team Engineering/Technical consultants shall be the subcontractor of the Design-Build Architect Engineer (DB A/E), not the Design-Build contractor or subcontractors, assuming that the DB A/E and DB contractor are not one and the same firm. The Offeror shall have the relevant experience of key personnel to be involved in this procurement and shall include:

- a) Project Manager;
- b) Architect;
- c) Mechanical (HVAC, Plumbing/Sanitary, and Steam Generation) Engineer;
- d) Structural Engineer;
- e) Electrical Engineer;
- f) Interior Designer;
- g) Construction Project Manager;
- h) Construction Superintendent;
- i) Construction Quality Control Manger;
- j) Site Safety and Health Officer;
- k) Qualified Fire Protection Engineer;
- l) Civil Engineer; and
- m) Environmental Engineer

2. Schedule - The Offeror shall provide a detailed schedule with narrative. This schedule shall be updated monthly for the duration of the contract, and upon any event causing an overall schedule impact.

3. Design Period:

- a) The design period and provisions for Government reviews;
- b) A list of drawings to be included with each design submittal for VA reviews; and
- c) A phasing plan for coordination of interruptions to the utility service due to relocation site utility work. Phasing plan shall include a minimum two (2) week notification to the government prior to disruption of any utility system or patient/traffic flow.

4. Construction Period:

- a) Mobilization;

- b) Security Requirements;
- c) Demolition method and sequencing;
- c) Enclosure;
- d) Interior construction;
- e) Procurement and installation of equipment;
- f) Provisions for overtime or shift work;
- g) Timing of relocation of existing equipment. (List any existing equipment to be relocated);
- h) Site utilities, temporary stairs, and roadway realignment; and
- i) Tests and final inspection.

3. DESIGN RESPONSIBILITIES OF THE A/E:

1. The design responsibilities are listed in A/E Submission Instruction.
2. A/E services to furnish the following tasks:
 - a) Technical Specifications.
 - b) Field & Site Survey Verification.
 - c) Comply with Local, State and Federal Codes/Regulations.
 - d) Methodology of Construction Procedures, Phasing Schedule.
 - e) Working Drawings.
 - f) Construction Cost Estimate. (within VA's Budget)
 - g) Construction Completion Time in calendar Days.
 - h) Attend design review meetings and take minutes to be submitted to VA.
 - i) Provide a checklist of all submittals, certifications, tests and inspections required per drawing and specification section (submittal registry).
 - j) Construction period services shall include but not be limited to submittal review, cost proposal review and as-built drawings from contractor's marked-up field drawing, including updating applicable VA Master CAD Drawings.
3. All designs shall comply with the **VA Office of Construction & Facilities Management Technical Information Library (TIL) (Standards)** which can be found at the web site: <http://www.cfm.va.gov/TIL/>
4. The A/E shall apply all applicable VA Design Manuals found at TIL web site.
5. Seismic design requirements of the project shall conform to VA Seismic design handbook, H-18-8. This location is in Seismic zone 5. Existing Building 1

has been upgraded to the current standards and shall not be directly attached to this design.

6. Applicable chapters of VA master construction specifications shall be prepared by the A/E. including any necessary adaptation. Electronic format for specifications shall be in Microsoft Word document files. VA Construction Standards shall apply to specific design requirements. All design guides, manuals and handbooks shall be utilized to the greatest extent practicable, i.e. Equipment symbols shall be in accordance with Equipment Guide List, "Standard Drawing Details"; Room Finishes shall be in accordance, "Room Finishes, Door and Hardware Schedule" etc.

7. Drawings and CAD files shall be in accordance to the US National CAD Standard (NCS) and supplied to the VA in PDF and CAD form:

<http://www.cfm.va.gov/TIL/sDetail.asp>

8. The A/E shall carefully review all requirements of the latest edition of the Accreditation Manual for Hospitals of the Joint Commission on Accreditation of Hospitals, with respect to design and operating requirements and report all conflicting conditions in writing.

4. CONSTRUCTION DOCUMENTS

1. General:

a) The RFP documents are intended to define the room layout, the basic materials, and systems to be installed in the project. It is the DB team's responsibility to complete the documents and construction in a manner consistent with the intent of the solicitation documents;

b) The Design-Build Team A/E (DB A/E) shall prepare and submit complete construction documents for review and approval by the VA in accordance with standard professional practice, the Department of Veterans Affairs Request for Proposal (VA RFP), and prevailing codes. The DB A/E shall submit the construction documents for review according to Section II. Submittal Schedule.

c) The DB team shall allow minimum of (14) working days for each review cycle. A cycle commences with the VA's receipt of the review documents and concludes with the DB team receipt of comments either by email or by hard copy delivery. The DB Team shall allow for up to one (1) full day meeting with the staff of John J. Pershing Veteran Affairs Medical Center Poplar Bluff to review each submission and resolve design issues;

d) Each submission shall include (4) hard copy sets and CD-ROM as specified in the A/E Submission Requirements;

e) Each submittal shall be made to the VA Contracting Officer Representative (COR) for coordination with the VA Medical Center.

f) Mandatory schedules and details may be indicated either on the drawings or in the specifications, at the option of the DB team;

g) The drawings included in the VA RFP will be available to the DB team in electronic format in AutoCAD for use in preparing the construction drawings. The

CADD drawing files are provided without warranty or obligation on the part of the RFP Architect/Engineer as to accuracy or information contained in the files. All information in the files shall be independently verified by the user. The specifications not included in the VA RFP shall be provided by DB A/E in electronic format in (Microsoft Office 2003 Word) for use in preparing the construction specifications. According to VA Master Specification

h) The DB A/E who prepares the construction documents shall be professional architect/engineers licensed in the state in which the design work is completed. The professional seal indicating such license by the state shall appear on the documents. The architect whose seal is shown will be known as the architect of record. The DB A/E shall certify compliance with the VA RFP; and

i) The construction drawings shall comply with the VA RFP and be prepared to include such details that the project can be constructed. The construction record drawings shall be completed in AutoCAD. Construction shop drawings are not required to be completed in AutoCAD. Drawings shall be plotted at scales no smaller than those used for equivalent information in the RFP (solicitation) documents.

2. Construction Drawings: The construction drawings shall include a coordinated set of:

a) Architectural drawings including floor plans, building elevations, building sections, wall sections, reflected ceiling plans, stair details, toilet and bath details, cabinetry elevations, door schedules and details, window schedules and details, room finish schedules, loading dock details, auto transport and pneumatic tube details, and other details;

b) Fire protection drawings as applicable including floor and roof plans, riser diagrams, equipment schedules, plumbing fixture schedules, and details, including general notes and all related calculations;

c) Plumbing drawings including floor and roof plans, riser diagrams, equipment schedules, plumbing fixture schedules, and details, including general notes and all related calculations;

d) HVAC drawings including floor and roof plans, one-line flow diagrams, equipment schedules, and details, including general notes and all related calculations. Also provide sections for mechanical equipment rooms and sequence of operation for all HVAC equipment;

e) Electrical drawings including floor and roof plans (power, lighting, and other systems), one-line diagrams, panel schedules, equipment schedules, light fixture schedules and details.

3. Construction Specifications: Project Specifications shall include specifications for all products, materials, equipment, methods, and systems shown on the construction drawings and to be incorporated in the project:

a) The DB Team shall prepare and submit 100 per cent complete construction specifications in accordance with standard professional practice and the VA RFP;

b) The construction specifications shall be at a comparable level of detail and demonstrate compliance with the VA RFP. The specification submitted for review shall be a “redline and strikeout” version of the VA RFP Specifications that clearly indicate the locations of deletions, revisions, and additions to the VA RFP Specifications; and

c) The construction specifications shall include the name of the manufacturer, the product name, model number, or other identification as appropriate to clearly identify the product that will be used in the construction of the project.

4. Approved Construction Documents:

a) The final construction document submission package will be submitted by the DB team for approval by the VA after completion of the 95% review cycle for the final package to be submitted by the DB team. The VA will have 14 days to take approval action.

b) The final construction documents submission package will include a full set of construction documents including all disciplines/packages.

5. Design Requirements - Compliance with codes and standards.

a) Project design shall be in compliance with applicable standards and codes described in VA Program Guides and design materials located at the VA Facility Management web site: <http://www.cfm.va.gov/TIL/>

5. CONSTRUCTION PERIOD SUBMITTALS

1. The DB Contractor shall prepare and submit shop drawings, product data, and samples during construction as required by the VA RFP documents. The shop drawings, product data, and samples shall bear the stamp of the licensed architect or engineer of record certifying compliance with this Design/Build Contract.

2. Other Submittals: The DB team shall submit test results, certificates, manufacturer’s instructions, manufacturers field reports, etc. as required by the VA RFP specifications; and

3. Project Record Drawings: The DB team will maintain a set of construction documents (field as-built drawings) to record actual construction changes during the construction process as required by the RFP specifications. The project record drawings will be available for review by the VA COR at all times.

4. Project Close-out

The DB team shall comply with the requirements in the “General Requirements”, 01 00 00, for submission of final RFP as-built drawings, shop drawings, manuals, and other documents as noted.

II. DESIGN SUBMITTAL SCHEDULE

Submission Events	Calendar Days (from Notice to Proceed date)
First Submittal Due (35% i.e. Schematics/Part A)	60
VAMC Review of First Submittal	14
Second Submittal Due (65% i.e. Design Development)	45
VAMC Review of Second Submittal	21
A/E Final Submission (100% stamped CD)	21
VAMC Review of Final Submittal	14
Any errors shall be corrected and complete sets resubmitted.	15
Total Calendar Days:	190
As Built Submittal (after contractor markups are delivered)	10

Note: The percentages indicate the approximate value of Part A Schematics and Part 1 Construction Documents combined.

III. SUBMISSION OF A/E MATERIAL

Black/White Prints:	<p>Four (4) complete bound sets of half-size prints and two (2) full-size (42x 30 inches) for each for Sematic Drawings (SD)(if applicable) and Design Drawings (DD) submissions.</p> <p>For CD Final Submission, stamped and signed, provide Four (4) bound half-size and two (2) full-size (42x30 inch), one unbound. (note velum requirement for unbound cover sheet only)</p> <p>Bind all drawings into sets in the order of their NCS classification symbol.</p> <p>Material provided unbound will be returned to the A/E. All resubmission costs will be the responsibility of the A/E.</p>
Estimates:	<p>One electronic copy sent via email in PDF format for each 65% and final submittal, and to be included on the CD Rom disk.</p>
Velum:	<p>(For As-Built submission only) One (1) complete set of velum prints shall be full size positive type with lines printed on the face of the print. Reversed printing is not acceptable.</p> <p>Note: The Final submission velum cover sheet prepared for signatures should be submitted at the Final submission, not with the As-Built.</p>
Specifications:	<p>One (1) set in accordance to the submission instructions for DD. All submitted specifications shall be original, unbound, and marked-up VA Master Specifications. Where no VA Master Specification is available, submit a developed specification.</p> <p>At Final submission: Two (2) complete sets of all documents – one set in a 3-ringed binder, and one unbound. Final Submission correction sheets.</p>
Computer Disks:	<p>At 100% submission: Two (2) CD-ROM with drawings in both in PDF and AutoCAD format and Specifications in MS Word format and include the cost estimate for the final submittal. This is for the VA Project Record archive.</p> <p>Two (2) CD-ROM with drawings and Specifications in PDF files for the prospective contractor(s). The PDF drawings shall be a</p>

	<p>42x30 inch size sheet and the specification 8.5x11 inch for printing purposes. This is for the Bid Document.</p> <p>At As Built submittal:</p> <p>Two (2) CD-ROM with drawings in both in PDF and AutoCAD format. This also shall include updated Building Master background in AutoCAD.</p> <p>The disks shall have printed labels with</p> <ul style="list-style-type: none">• VA Project Number• Project Title• Date submitted• Contract Bid Document or VA Project Record or As Built as applicable.
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**IV. A/E SUBMISSION INSTRUCTIONS FOR MINOR
CONSTRUCTION PROGRAM**

**Department of
Veterans Affairs**

**VA Medical Center
Projects**

**A/E Submission Instructions
For Minor and NRM
Construction Program:**

- **Schematics**
- **Design Development**
- **Construction Documents**

Department of Veterans Affairs
Washington, DC 20420

FOREWORD

This document states the minimum requirements for each submission in the production of VA Schematics, Design Development (DD), and Construction Documents (CD) for Minor and NRM Construction Program for Medical Center Projects. It will give VA reviewers and the A/E a clear understanding of what is required of the A/E at each stage of design.

This document does not relieve the A/E firms of their professional responsibility to produce a correct, complete, and fully coordinated set of construction documents.

V. GENERAL

A. INTRODUCTION

1. This document contains information and minimal submission requirements for contract documents specified in the A/E contract.

2. The Department of Veterans Affairs (VA) may contract with an Architect/Engineer (A/E) for any portion of a design: Schematics, Design Development, Construction Documents, or a combination of these.

a. For projects where the VA is contracting for Schematics Documents only, Schematics and Design Development Documents only, or Schematics, Design Development, and Construction Documents, the VA will provide the Design Program (if available), Facility Development Plans (if available), and VA design standards to accompany the Scope of Work for the project.

b. For projects where the VA is contracting for Design Development and Construction Documents only, the VA will provide the Schematics Plans and VA design standards to accompany the Scope of Work for the project.

c. For projects where the VA is contracting for Construction Documents only, the VA will provide the Design Development Plans and VA design standards to accompany the Scope of Work for the project.

3. Coordinate all activities with the VA Medical Center (VAMC). Hold informal meetings (upon mutual consent of the VA and the A/E) at the VAMC to discuss the design and related issues. Continue to expand contacts by telephone, rough sketch studies and other means of communication with the purpose of finalizing a general design approach to be followed.

4. Final approved Schematic documents shall be the basis for the development of the Design Development phase. Likewise, final approved Design Development documents shall be the basis for the development of the Construction Documents phase. The VAMC must approve any changes from each set of documents before the A/E proceeds to the next phase.

5. VA will review all submittals for functional and aesthetic relationships. However, no further functional decisions are anticipated after the Design Development phase.

6. Provide a design narrative/analysis for each technical discipline (e.g., architectural, mechanical, fire protection, etc.) which describes the intent of each discipline with schematic and/or design development submission.

7. Provide computations and sizing calculations for electrical, mechanical (HVAC, plumbing, 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.

8. Provide individually packaged drawings for each submission to each unit specified in the "Distribution of A/E Materials" section.

9. Submit a complete set of final approved drawings incorporating all revisions, within 30 days after completion of the Schematics and Design Development stages.

10. At each review stage, the VA's technical reviewer, a value-engineering consultant, or a construction manager will perform a value engineering review.

11. Submit final drawings (Bid Documents) on CD Rom disks to be used with the AutoCAD version at the VAMC. Submit instructions on the use of the disks along with a complete listing of all layers that are used.

B. A/E RESPONSIBILITIES:

1. Contract documents shall meet or exceed the requirements of this document.

2. The A/E is responsible for producing a complete set of drawings, design narrative/analysis, calculations, sample boards, and specifications in accordance with professional standard practices and VA criteria. Each A/E discipline shall obtain a copy of their respective VA design manuals, standard details, construction standards, and VA National CAD Standard Application Guide. The AE is responsible for obtaining all of the above at the VA Office of Construction & Facilities Management Technical Information Library (TIL) (Standards) which can be found at the web site: <http://www.va.gov/facmgt/standard/>.

3. A/E shall conduct coordination meetings between A/E technical disciplines before submitting material for each VA review and provide minutes of the meetings to VAMC.

4. A/E shall adhere to the approved Memorandum of Agreement (MOA).

5. A/E shall provide a checklist of all submittals, certifications, tests, and inspections required per drawing and specification section.

6. In addition, the A/E shall conduct interim fire protection installation inspections and witness final fire protection equipment testing.

C. SUBMISSION POLICY:

1. There is a Schematic* submission, a Design Development (DD**) submission, and a Construction Document (CD***) submission indicated in this guide. The VAMC may alter the submission requirements depending upon the complexity of the project by adding or deleting certain reviews. Where additional reviews might be required, the VAMC will issue, at their discretion, a detailed "Statement of Task" or supplemental instructions to the A/E, which would be provided at the time of solicitation for a fee proposal.

2. At each submission, the A/E shall date all material and present the designs on VA standard size drawings that are appropriately labeled, "SCHEMATIC SUBMISSION", "DESIGN DEVELOPMENT SUBMISSION", OR

“CONSTRUCTION DOCUMENT SUBMISSION”, in large block letters above or beside the VA standard drawing title block. In each submission, the A/E shall incorporate the corrections, adjustments, and changes made by VA at the previous review.

D. QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

In an effort to reduce construction change orders due to design errors and omissions, the Office of Facilities Management has initiated a Quality Assurance/Quality Control program. The A/E shall develop, execute, and demonstrate that the project plans and specifications have gone through a rigorous review and coordination effort. The requirements are as follows:

1. Fee Proposal: Provide an outline of the actions that your firm will take during the design process along with an associated fee.
2. Two Weeks after Receipt of the Notice To Proceed: Submit a detailed QA/QC Plan describing each step that will be taken during the development of the various phases of design. Each step should have an appropriate space where a senior member of the firm can initial and date when the action has been completed.
3. 100% Submittal: Submit the completed QA/QC Plan along with the latest marked-up documents (plans, specifications, etc.) necessary to ensure that a thorough review and coordination have been completed.

E. ADDITIONAL SERVICES

If additional services (i.e. surveys, soil borings, asbestos surveys, water flow testing, or lead surveys), are necessary to be performed by consultants, submit criteria for the work to be performed to the VAMC Contracting Officer as soon as possible. Upon approval of the criteria, submit proposals and qualifications of at least three firms being considered for the work in accordance with the contract procedures (CP1) of the contract, together with a proposal from the recommended firm and a brief justification for its selection, for VA approval. A/E should submit survey information for the Schematic Review.

F. CRITICAL PATH METHOD - PHASING MEETINGS

1. If required and prior to submission of Schematic material, the A/E shall meet with the VAMC's COR to discuss and outline phasing requirements for the project. These phasing requirements shall describe the general sequence of the project work, estimated project duration, and what Government constraints will exist that will influence the Contractor's approach to the construction project. The A/E shall be responsible for recording the phasing requirements.
2. Submit a phasing narrative and phasing plans (on reduced size plans) within two weeks after each phasing meeting to the VAMC COR. VA will review these submission(s) and return comments to the A/E within two weeks of receipt. The A/E will then use this information in preparing their schematic, design development, and construction document submissions.

VI. SUBMISSIONS

A. SITE DEVELOPMENT

Submit the following:

Site Development:	Schematics*	DD**	CD***
Narrative	✓		
Analysis of site	✓		
Circulation study	✓		
Phasing analysis	✓		
Parking analysis	✓		
Development concept showing proposed buildings and structures	✓		
Landscape drawings with plant groupings	✓		
Topographic, utility, and landscape survey		✓	✓
Demolition plan	✓	✓	✓
Layout plan showing location of:			
• Building and structures	✓	✓	✓
• Roads	✓	✓	✓
• Fire Access		✓	✓
• Parking	✓	✓	✓
• Accessible spaces		✓	✓
• Van spaces		✓	✓
• Mechanical and electrical equipment on grade	✓	✓	✓
• Future expansion	✓		
• Off-site roads	✓	✓	✓
• Off-site utilities	✓	✓	✓
• Service area(s)		✓	✓
• Entrances and exits		✓	✓
• Walks		✓	✓
• Inlets		✓	✓
• Contractor's staging area		✓	✓
• Vertical and horizontal road alignment		✓	✓
• Paving joint patterns		✓	✓
Grading plan showing:			
• Existing contours		✓	✓
• Proposed contours		✓	✓
• Spot elevations at structure corners, entrances, equipment pads, etc.		✓	✓

Site Development:	Schematics*	DD**	CD***
• First floor elevations		✓	✓
• Rim and invert elevations on storm drainage fixtures		✓	✓
• Erosion and sediment control		✓	✓
Rock excavation (quantity)		✓	✓
Planting plan showing:			
• List of plant material	✓	✓	✓
• Limits of irrigation	✓	✓	✓
Site details		✓	✓
Landscape details		✓	✓
Signage plan and schedule		✓	✓
Specifications		✓	✓

* Submit site and landscape plans at an appropriate scale to show all work involved.

** Submit site and landscape plans at same scale as topographic/utility survey incorporating all of the revisions required by comments from schematics.

*** Submit fully dimensioned, complete, and coordinated site and landscape plans incorporating all revisions required by comments from the design development phase.

B. ARCHITECTURAL

Submit the following:

Architectural:	Schematics*	DD**	CD***
Location of:			
• Rooms ¹	✓	✓	✓
• Doors ²	✓	✓	✓
• Corridor(s) ³	✓	✓	✓
• Basic column grid/sizes	✓	✓	✓
• Expansion and seismic joints	✓	✓	✓
• Electrical closets	✓	✓	✓
• Equipment rooms	✓	✓	✓
• Signal and telephone closets	✓	✓	✓
• Mechanical shafts and space	✓	✓	✓
• Stair(s)		✓	✓
• Ramp(s)		✓	✓
• Elevator(s)	✓	✓	✓
• Automatic Conveyances	✓	✓	✓
Floor Plans/Drawings:			
• All floors (new and renovated)	✓	✓	✓
• Penthouse	✓	✓	✓

Architectural:	Schematics*	DD**	CD***
• Roof plan	✓	✓	✓
• Pipe basement	✓	✓	✓
• Pipe tunnel		✓	✓
• Reflected ceiling ⁴		✓	✓
• Equipment floor plans 1:50 (1/4 inch) scale ⁵		✓	✓
• Demolition plans ⁶		✓	✓
Room names and numbers ⁷		✓	✓
Program net/designed net	✓	✓	✓
Exterior dimensions/total building gross area	✓	✓	✓
Size and shape of all departmental functions and services ⁹	✓	✓	✓
Exterior building elevations ¹⁰	✓	✓	✓
Finish floor elevations ¹¹	✓	✓	✓
Door locations, sizes, and swings		✓	✓
Wall thickness and chase walls		✓	✓
Handrail location/dimensions		✓	✓
Fixed equipment		✓	✓
Equipment elevations and details			✓
Plumbing fixtures		✓	✓
Wheelchair accessible facilities		✓	✓
Wall sections ¹²		✓	✓
Building sections ¹³		✓	✓
Finish grades at corners, entrances, exits, platforms and ramps		✓	✓
Fire and smoke rated partitions ¹⁴	✓	✓	✓
Lead-lined and radio-frequency-shielded partitions ¹⁴		✓	✓
Fire extinguisher cabinets ¹⁴		✓	✓
Spray-on fire proofing (see fire protection)			
Construction details ¹⁵		✓	✓
Drafting symbols, abbreviations, and general notes		✓	✓
Door, window, and louver schedules			✓
Interior details, elevations, sections			✓
Finish schedule ¹⁶		✓	✓
Graphics and signage ¹⁷			✓
Color rendering			✓
Specifications		✓	✓
Lead abatement ¹⁸	✓		
Lead abatement specification ¹⁹			✓

* Submit, as a minimum, a single line layout for at a scale not less than 1:100 (1/8 inch). A scale of 1:200 (1/16 inch) is acceptable for architectural floor layout if an entire floor cannot be shown on one sheet. Submit a complete double line layout of areas of critical importance, at a scale of 1:50 (1/4 inch) including equipment.

** Submit minimum 1:100 (1/8 inch) scale floor plans, new and renovated, incorporating all of the revisions required by comments from schematics.

*** Submit fully dimensioned, complete, and coordinated 1:100 (1/8 inch) scale floor plans, incorporating all revisions required by comments from the design development phase.

ARCHITECTUAL NOTES:

1. Use lines between spaces to indicate the centerline of the partition (for schematics only).
2. Indicate doors with a slash mark.
3. Along the corridor, the line shall represent the corridor side of the partition.
4. Indicate ceiling mounted equipment, lighting fixtures, air diffusers, registers, tracks, and other significant elements.
5. Identify all equipment for each room. Indicate and coordinate all equipment with the Equipment Guide List and Activated Equipment List. Use VA standard symbols and notation to distinguish between contractor-furnished and installed (CC), VA-furnished contractor-installed (VC), VA-furnished and installed (VV), VA-furnished with construction funds [VC(CF) and VV(CF)], and relocated (R) equipment. Equipment floor plans are not required for the offices, consultation rooms, classrooms, conference rooms, and waiting rooms within the above departments. Draw equipment details which are necessary for major decisions, though complete detailing is not required for this submittal.
6. Indicate existing finish schedule and notes on plan.
7. Label as required for schematic drawings. Coordinate new room numbering with medical center.
8. Use the same names on drawings as those used in the space program. Provide area figures in fractional form, e.g., 400/390. Indicate space provided, but not called for in the space program, as: -/390.
9. Label each service or activity listed in the Project Scope Data of the Design Program and indicate boundaries with a distinctive line. Include the activity code number.
10. If the project requires exterior work, show all facades indicating massing, proposed fenestration and the building relationship to adjacent structures and the finish grade. Show all significant building materials, including their colors, any proposed roof top mechanical equipment, architectural screens, skylights, and stacks on the elevation drawings. If building is designed for future expansion

(vertical and/or horizontal), delineate elevations with and without the future expansion. If project is an addition, show elevations of the existing building in sufficient detail to illustrate the relationship between the new and existing in terms of scale, material, and detail.

11. Define the relationship of the finish ground floor to finish grade at major entrances and docks.

12. Indicate construction including fire resistance rating, building materials and systems, and proposed sill and head heights of openings. Indicate both new and renovated areas on form provided by VA.

13. Define building configuration. Draw sections at the same scale as floor plans, normally 1:100 (1/8 inch). If the building abuts an existing structure, indicate in the section how the new floor elevations align with existing.

14. Identify psychiatric areas where special considerations are required to ensure the safety of patients (e.g. hard ceilings, safety glazing, etc.).

15. Indicate new building components and systems, such as window design, roofing system, special entryways, building "skin", and any special architectural elements for the project. Complete detailing of miscellaneous items is not required for this submission.

16. Indicate all building systems, materials, and future expansion, if applicable.

17. Submit a drawing for all which is part of the construction contract.

18. Provide square meters (feet) of lead paint and x-ray shielding to be removed.

19. Format provided in SPECIFICATIONS. If there is no VA master specification, develop contract specification that is in compliance with regulations of the Environmental Protection Agency.

C. FIRE PROTECTION

Submit the following:

Fire Protection:	Schematics*	DD**	CD***
Fire protection narrative: ¹			
• Fire and smoke separation	✓		
• Fire sprinkler/standpipe system	✓		
• Size of fire pumps	✓		
• Water supply available/max. demand	✓		
• Water flow testing results	✓		
• Fire alarm systems ²	✓		
Existing to be modernized	✓		
Base loop system for interface of new construction	✓		

Fire Protection:	Schematics*	DD**	CD***
• Kitchen extinguishing systems	✓		
• Size of air handling unit	✓		
• Exit paths from each zone	✓		
• Distances to stairs	✓		
• Occupancy of each area	✓		
• Exit calculations for each floor	✓		
• Smoke control features	✓		
Floor Plans/Drawings. ^{3 & 4}			
• Sprinkler zones	✓		
• Fire alarm zones	✓		
• Smoke zones	✓		
• Building water supply	✓		
• Interior sprinkler supply lines	✓		
• Standpipes	✓		
• Fire extinguisher cabinets	✓	✓	✓
• Fireproofing of structural members	✓		
• Sprinkler/standpipe riser supply piping		✓	✓
• Termination of sprinkler main and inspector test drains		✓	✓
• Sprinkler alarm valves		✓	✓
• Water flow and tamper switches		✓	✓
• Sprinkler system fire department connections		✓	✓
• Sprinkler design hazards per NFPA 13		✓	✓
• Exit signs and emergency lighting		✓	✓
• Occupied areas not protected by automatic sprinklers		✓	✓
Calculations	✓	✓	✓
Estimated capacities for proposed air handling units in cubic meters (cubic feet) per minute		✓	✓
Location of:			
• Fire alarm system		✓	✓
• Annunciator panels		✓	✓
• Pull stations		✓	✓
• Flow switches		✓	✓
• Audio-visual devices		✓	✓
• Smoke detectors		✓	✓
• Duct smoke detectors		✓	✓
• Smoke dampers		✓	✓

Fire Protection:	Schematics*	DD**	CD***
• Fire dampers		✓	✓
• Fire alarm risers ⁵		✓	✓
• Exit signs		✓	✓
• Emergency lighting		✓	✓
• Fire sprinklers		✓	✓
• Standpipes		✓	✓
• Fire hydrants		✓	✓
• Fire pumps		✓	✓
• Post indicator valves		✓	✓
• Sectional valves		✓	✓
• Fire extinguisher cabinets		✓	✓
• Electromagnetic door hold open devices		✓	✓
Wall sections indicating fire resistive ratings		✓	✓
Staff sleeping rooms		✓	✓
Excavation plan signage		✓	✓
Door and window schedule with fire rating or fire rated glazing			✓
Zoning of each fire alarm initiating device			✓
Details:			
• Fire pump system (capacity and pressure)			✓
• Elevation and isometric view of fire pump			✓
• Stairwell sign			✓
• Annunciator panel			✓
Interconnection of fire alarm system with:			
• Smoke dampers			✓
• Air handlers			✓
• Elevator controls			✓
• Kitchen fire extinguishing and fire pump system			✓
• HVAC system with smoke duct detectors			✓
Single line riser diagram for fire alarm system			✓
Height/configuration of storage racks and shelving			✓
Specifications			✓

* Submit, as a minimum, a single line layout for at a scale not less than 1:100 (1/8 inch). Submit a complete double line layout of areas of critical importance, at a scale of 1:50 (1/4 inch) including equipment.

** Submit minimum 1:100 (1/8 inch) scale floor plans, new and renovated, incorporating all of the revisions required by comments from schematics.

*** Submit fully dimensioned, complete, and coordinated 1:100 (1/8 inch) scale floor plans, incorporating all revisions required by comments from the design development phase.

FIRE PROTECTION NOTES:

1. Indicate NFPA 220 and UBC fire resistive rating of the building, NFPA 101 occupancy type, and fire protection code analysis to access compliance with NFPA 101.

2. Determine type, features, age, reliability, compliance with present day codes, capacity, zoning, supervision, control panel and power supplies, initiating devices and circuits, and auxiliary functions for existing fire alarm system. Indicate manufacturer, model number, voltage, and wiring style of existing alarm systems and devices. Provide recommendations for the proposed fire alarm work.

3. Provide information to meet JCAHO requirements; e.g. location of all fire rated barriers, smoke barriers, exit signs, fire extinguishers, manual pull stations, smoke detectors, and sprinkler flow switches. Show all interim life safety measures such as temporary systems Fire Alarm, Sprinkler, and Smoke.

4. At DD Submission, add room names, room numbers, door locations and swings, smoke and fire rated partitions, sprinkler/standpipe risers to floor plans. Identify psychiatric areas on drawings so areas for institutional type heads are identified. Add location of all valves (post indicator, sectional) and backflow preventer if provided.

5. Show new equipment and/or the necessary changes involved if modification to the existing system is required. Include any recommendations where certain requirements of VA criteria might be waived, in order to allow the existing equipment to be reused.

D. INTERIOR DESIGN

Submit the following:

Interior Design:	Schematics*	DD**	CD***
Written interior design concept ¹	✓		
Illustrate overall design solution ²	✓		
Material and finish samples	✓		
Sketches	✓		
Design solution for interior spaces:			
• Perspectives		✓	✓
• Plans		✓	✓

Interior Design:	Schematics*	DD**	CD***
• Details		✓	✓
• Elevations		✓	✓
• Sections		✓	✓
• Wayfinding		✓	✓
• Floor patterns		✓	✓
• Wall patterns		✓	✓
• Lighting		✓	✓
• Signage		✓	✓
• Handrails		✓	✓
• Bumper guards		✓	✓
Specification section 09050		✓	✓
Finish schedule		✓	✓
Exterior colors and materials		✓	✓
Sample boards for interior and exterior materials, products, and finishes		✓	✓
Edited carpet and wallcovering specifications		✓	✓
Specifications			✓
Keyed Finnish plans			✓
Interior design details, elevations, and sections			✓

* Submit, as a minimum, a single line layout for at a scale not less than 1:100 (1/8 inch). Submit a complete double line layout of areas of critical importance, at a scale of 1:50 (1/4 inch) including equipment.

** Submit minimum 1:100 (1/8 inch) scale floor plans, new and renovated, incorporating all of the revisions required by comments from schematics.

*** Submit fully dimensioned, complete, and coordinated 1:100 (1/8 inch) scale floor plans, incorporating all revisions required by comments from the design development phase.

INTERIOR DESIGN NOTES

1. Provide a document of data collected in interior design programming. Include collection and analysis of data from the VAMC project coordinator and interior designer. Data includes, but is not limited to the following: existing interior and exterior design and materials, light, safety, patient profile, customer's "vision" or desired image, public vs. private spaces, complete signage package, goals of customer, relationship to existing facilities, future expansion/renovation plans, regional influences, etc.

2. Discuss and illustrate the overall design solution for the primary areas of the project using marked-up floor plans, loose sketches, and material and finish samples. Use broad categories of materials, finishes, color palettes, patterns, textures, and scales. Separately group all major neutral background materials

and finishes that will be used and discuss how they will be integrated with all other materials and finishes on the project. Include all primary and secondary corridors, typical patient and toilet rooms, lobbies, atriums, eating spaces, chapels, waiting rooms, and exam rooms. Show the relationship among departments and functions, and between public and private spaces.

E. STRUCTURAL

Submit the following:

Structural:	Schematics*	DD**	CD***
Three alternative structural systems for typical bays ¹	✓		
Supporting calculations ²	✓	✓	✓
Cost estimates for each system ³	✓		
Recommend preferred system	✓		
Column locations	✓		
Shear load resisting elements ⁴	✓		
Boring location plan ⁵	✓		
Structural plans ⁶		✓	✓
Sections		✓	✓
Details		✓	✓
Size/location of:			
• Columns		✓	✓
• Beams		✓	✓
Lateral load resisting elements		✓	✓
Load bearing walls		✓	✓
Slabs		✓	✓
Foundations		✓	✓
Elevations			✓
Schedules			✓
General notes			✓
Boring logs			✓
Subsurface investigation report			✓
Estimated quantity of rock			✓
Specifications			✓

* Submit, as a minimum, a single line layout for at a scale not less than 1:100 (1/8 inch). Submit a complete double line layout of areas of critical importance, at a scale of 1:50 (1/4 inch) including equipment.

** Submit minimum 1:100 (1/8 inch) scale floor plans, new and renovated, incorporating all of the revisions required by comments from schematics.

*** Submit fully dimensioned, complete, and coordinated 1:100 (1/8 inch) scale floor plans, incorporating all revisions required by comments from the design development phase.

STRUCTURAL NOTES

1. When only one structural system is possible due to other project requirements, include an explanatory statement and submit only that structural system.
2. Include vertical and lateral load design for CD submission.
3. Include foundation and fireproofing.
4. Indicate existing utilities and structures within, adjacent, or contiguous to the new construction.
5. Upon approval of the subsurface investigation criteria, submit qualifications of at least three consultants being considered for the work together with the proposal of the consultant recommended as most qualified.
6. If there is only a CD submission, provide a Structural Engineering Analysis Submission within six weeks from the notice to proceed including sketches, calculations, and cost estimates of three alternative structural systems for typical bays, boring location plan for subsurface investigation, and consultant qualifications. For vertical expansion projects, analyze existing structure for structural feasibility.

F. PLUMBING

Submit the following:

Plumbing:	Schematics*	DD**	CD***
Narrative:			
• Existing plumbing systems to be used and necessary modifications	✓	✓	✓
• New plumbing systems	✓	✓	✓
• New or modified water treatment	✓	✓	✓
Floor Plans/Drawings:			
• Room names	✓	✓	✓
• Identify			
Existing plumbing fixtures w/VA numbering system	✓	✓	✓
New plumbing fixtures w/VA numbering system	✓	✓	✓
Existing equipment	✓	✓	✓
New equipment	✓	✓	✓
New medical gas outlets		✓	✓
New laboratory gas outlets		✓	✓
Plumbing piping	✓	✓	✓
• Size of pipe		✓	✓
• Equipment schedule		✓	✓
• Fire & smoke partitions	✓	✓	✓

Plumbing:	Schematics*	DD**	CD***
Narrative:			
• Demolition plans		✓	✓
• Riser diagrams			✓
• Legend, notes, and details			✓
Location and size of sprinkler riser, standpipes, and fire pumps (see fire protection)		✓	✓
Location of emergency eyewash and shower equipment		✓	✓
Calculations (equipment & piping)		✓	✓
List of Required Contract Specifications		✓	
Contract Specifications			✓

* Submit, as a minimum, a single line layout for at a scale not less than 1:100 (1/8 inch).

** Submit minimum 1:100 (1/8 inch) scale floor plans, new and renovated, incorporating all of the revisions required by comments from schematics phase.

*** Submit fully dimensioned, complete, and coordinated 1:100 (1/8 inch) scale floor plans, incorporating all revisions required by comments from the design development phase. Submit a complete double line layout of areas of critical importance, at a scale of 1:50 (1/4 inch).

G. SANITARY

Submit the following:

Sanitary:	Schematics*	DD**	CD***
Narrative:			
• Existing sanitary systems: underground water, sanitary sewers, storm sewers, & fuel gas with sources, disposal methods, storage pressures, condition, etc.		✓	✓
• New sanitary systems	✓	✓	✓
• Provide water analysis & expected yield if well required	✓	✓	✓
• Circulation study to assess emergency vehicle access	✓	✓	✓
Install test well, if well is required.	✓		
Utility Plans/Drawings showing existing and new sanitary systems:			
• Size of pipes	✓	✓	✓
• Invert elevations of sewers	✓	✓	✓
• Locate/size			

Sanitary:	Schematics*	DD**	CD***
Pumps	✓	✓	✓
Storage facilities	✓	✓	✓
Treatment equipment	✓	✓	✓
Fire hydrants		✓	✓
Sectional and post indicator valves		✓	✓
Backflow preventer		✓	✓
• Areas of new irrigation system	✓		
• New irrigation system			✓
• Profiles of sanitary & storm sewers			✓
• Demolition Plans		✓	✓
• Legend, notes, and details			✓
Point of connection to sprinkler system	✓	✓	✓
Calculations		✓	✓
List of specifications		✓	
Contract Specifications			✓

* Submit utility drawings at same scale as provided for Site Development drawings.

** Submit utility drawings at same scale as provided for Site Development drawings, incorporating all of the revisions required by comments from the schematics phase.

*** Submit utility drawings at same scale as provided for Site Development drawings, incorporating all of the revisions required by comments from the design development phase. Submit legend, notes, and details at a scale not less than 1:100 (1/8 inch).

H. HVAC

Submit the following:

HVAC:	Schematics*	DD**	CD***
Description of HVAC systems	✓		
Equipment for each functional space	✓		
Life cycle cost analysis ¹	✓		
Tentative location/sizes:			
• Mechanical equipment room	✓		
• Principal vertical shafts	✓		
Block layout of equipment	✓		
Louvers: ²			
• Outside air	✓	✓	✓
• Exhaust air	✓	✓	✓
• Relief air	✓	✓	✓
Engineering calculations ³	✓	✓	✓

HVAC:	Schematics*	DD**	CD***
Selection of HVAC equipment		✓	✓
Catalog cuts of equipment		✓	✓
Room by room heating and cooling loads		✓	✓
Zone by zone heating & cooling loads		✓	✓
Building block heating & cooling loads		✓	✓
Tabulation of steam consumption		✓	✓
Psychometric chart for air handling unit		✓	✓
Coil entering and leaving conditions		✓	✓
Fan motor heat gains		✓	✓
Consumption of humidification loads		✓	✓
Sound/acoustic analysis		✓	✓
Room-by-room air balance charts ⁴		✓	✓
Chilled water plant: ⁵			
• Quantity and type of chillers		✓	✓
• Capacity in tons of refrigeration		✓	✓
• Electrical equipment		✓	✓
Heating system:			
• Total heating load		✓	✓
• Domestic hot water load		✓	✓
• Humidification load		✓	✓
• Equipment steam demand		✓	✓
• Zoning of heating system		✓	✓
HVAC floor plan: ⁶			
• Main supply, return and exhaust ductwork		✓	✓
• Volume dampers		✓	✓
• Fire and smoke partitions		✓	✓
• Fire and smoke dampers		✓	✓
• Smoke detectors		✓	✓
• Automatic control dampers		✓	✓
• Air quantities for each room		✓	✓
• Air inlets/outlets		✓	✓
• Rises and drops in ductwork		✓	✓
• Expansion loops		✓	✓
• Anchors		✓	✓
• Vales		✓	✓
• Drip assemblies		✓	✓
• Balancing fittings		✓	✓
Interconnection of HVAC equipment with fire protection equipment (see fire protection)		✓	✓

HVAC:	Schematics*	DD**	CD***
Plan/section of mechanical equipment rooms		✓	✓
Schematic flow and riser diagrams ⁷		✓	✓
Schematic control diagrams ⁸		✓	✓
HVAC demolition drawings		✓	✓
Phasing plan		✓	✓
Equipment schedule		✓	✓
Seismic bracing		✓	✓
VA symbols and abbreviation		✓	✓
Selection of			
• Pumps			✓
• Fans			✓
Sizing and selection of			
• Expansion tanks			✓
• Steam to hot water convertor			✓
• Heat exchangers			
Sound analysis			✓
Complete selection data			✓
Outside chilled water and condenser water distribution ⁹			✓
Standard detail drawings			✓
Automatic temperature control drawings ¹⁰			✓
HVAC specifications			✓

* Submit, as a minimum, a single line layout for at a scale not less than 1:100 (1/8 inch). Submit a complete double line layout of areas of critical importance, at a scale of 1:50 (1/4 inch) including equipment.

** Submit minimum 1:100 (1/8 inch) scale floor plans, new and renovated, incorporating all of the revisions required by comments from schematics.

*** Submit fully dimensioned, complete, and coordinated 1:100 (1/8 inch) scale floor plans, incorporating all revisions required by comments from the design development phase.

HVAC NOTES

1. Provide specific design recommendations and full back-up data. Include the heating and cooling capacities of each functional area and the block cooling and heating loads for each new and/or existing building.

2. The locations of these louvers must not allow short circuiting of air from emergency generator exhaust or truck waiting and loading dock areas into air intake etc. Consider factors affecting louver location such as visibility, historical considerations, wind direction, nuisance and health hazard odors (from emergency generator or truck exhausts).

3. Include room-by-room, peak zone-by-zone, and building block heating and cooling loads. Provide a tabulation of steam consumption based on data from all sources. Show correlation between each HVAC zone boundary and architectural floor area correlation between the architectural room numbers and abbreviated/coded room numbers used with computer input data sheets.

4. Show supply, return, exhaust, make-up, and transfer quantities with intended pressure relationships, i.e. positive, negative, or zero with respect to adjoining spaces.

5. Provide pertinent data on accessories such as pumps and cooling tower etc. Show the extent of the outside chilled water and condenser water piping. Clearly show how the piping will be laid in tunnels, trenches, or by direct burial.

6. Show ceiling clearances, at locations where ducts cross each other, by providing 1:50 (1/4 inch) scale local sections. Show all ductwork, and piping 150 mm (6 inch) and larger in double line. Show separate floor plans for air distribution and piping unless waived by VA. Show clearances required for access and maintenance with coil and tube pull.

7. Show typical air handling systems and all hydronic systems with existing capacities and new estimated loads. Verify actual operating conditions and capacities of HVAC systems prior to design.

8. Show control devices, such as, thermostats, humidistats, flow control valves, dampers, freeze stats, operating and high limit sensors for all air systems and fluids, smoke dampers, duct detectors etc. Provide a written description of the sequence of operation on the floor plans. Detail the scope of work involved with the Central Engineering Center (ECC) and address if enough spare capacity is available or a new ECC is required. Show a point schedule for analog/digital input/output to be included in ECC.

9. Show pipe sizes and insulation with plans, profile, sections, details, and all accessories, such as, anchors, expansion loops/joints, valves, manholes, capped and flanged connections, interface between the new and existing work (if any). Clearly indicate interferences (if any) with the existing utilities and/or landscape elements on outside piping layout drawings. Show rerouting any utilities, cuttings of roads, pavements, trees, etc., and the extent of new and demolition work. Outside utility drawings shall be based on the study of the latest site drawings, discussions with engineering personnel, and actual site inspection of the existing utility.

10. Show all duct detectors, control valves/dampers static pressure sensors, differential pressure control assemblies, etc., whose actual physical location is critical for the intended sequence of operation on floor plans.

I. ELECTRICAL

Submit the following:

Electrical:	Schematics*	DD**	CD***
Narratives:			

Electrical:	Schematics*	DD**	CD***
• Design ¹	✓		
• Life cycle analysis for electrical systems	✓		
Location and size of:			
• Electrical equipment ²	✓		
• Electric closets ³	✓		
• Telephone closets ³	✓		
• Signal closets ³	✓		
• Electrical distribution equipment			
Drawings showing:			
• Electrical plot plan of existing and proposed underground power (including manholes)	✓	✓	✓
• Telephone systems	✓	✓	✓
• Signal inter-building systems	✓	✓	✓
• Proposed electrical system ⁴	✓	✓	✓
• Electric symbols	✓	✓	✓
• Lighting fixture schedule	✓	✓	✓
• Emergency Life Safety Equipment (see fire protection)			
• Symbols, note, abbreviations		✓	✓
List of specialty areas	✓		
Method of short-circuit calculations	✓		
Method of voltage drop and demand calculations	✓		
Utility company correspondence	✓		
Utility company requirements		✓	✓
Load calculations for normal & emergency use	✓	✓	✓
Drawings:			
• Lighting layouts		✓	✓
• Power layouts		✓	✓
• Signal layouts		✓	✓
• Specialty area layouts		✓	✓
• Demolition plans		✓	✓
Riser diagrams		✓	✓
Branch circuit wiring (typ.)		✓	✓
Location and size of:			
• Primary distribution switchgear/switchboard		✓	✓
• Engine-generator sets		✓	✓
• Substation/pad mounted		✓	✓

Electrical:	Schematics*	DD**	CD***
transformer			
• Manholes		✓	✓
Location of smoke dampers and duct smoke detectors			✓
Interconnection of electrical control equipment with HVAC equipment (see fire protection)			✓
Smoke partitions and fire alarm zones	✓	✓	✓
Fire alarm and signal riser diagrams (see fire protection)		✓	✓
Calculations for emergency generator(s)		✓	✓
Phasing scheme		✓	✓
Electrical details			✓
Specifications			✓

* Submit, as a minimum, a single line layout for at a scale not less than 1:100 (1/8 inch). Submit a complete double line layout of areas of critical importance, at a scale of 1:50 (1/4 inch) including equipment.

** Submit minimum 1:100 (1/8 inch) scale floor plans, new and renovated, incorporating all of the revisions required by comments from schematics.

*** Submit fully dimensioned, complete, and coordinated 1:100 (1/8 inch) scale floor plans, incorporating all revisions required by comments from the design development phase.

ELECTRICAL NOTES

1. Include basic assumptions, points of interconnection, impact of new construction to existing electrical distribution system, current demand loading (high voltage switchgear and primary feeder), and projected load of new construction. Propose various feasible electrical systems for project and provide advantages/disadvantages.

2. Include means and clearances for installation, maintenance, and removal/replacement of equipment.

3. Electrical, signal and telephone closets must stack vertically.

4. Include high voltage and low voltage switchgear, transformers and low voltage main and/or distribution panels, branch panels and methods of feeding 277/480 volt and 120/208 volt normal and emergency panels.

J. EQUIPMENT

Submit the following:

Equipment:	Schematics*	DD**	CD***
Equipment (on architectural drawing)	✓	✓	✓

Equipment:	Schematics*	DD**	CD***
Activation Equipment List (Excel format)		✓	✓
Specifications			✓

* Submit, as a minimum, a single line layout for at a scale not less than 1:100 (1/8 inch). Submit a complete double line layout of areas of critical importance, at a scale of 1:50 (1/4 inch) including equipment.

** Submit minimum 1:100 (1/8 inch) scale floor plans, new and renovated, incorporating all of the revisions required by comments from schematics.

*** Submit fully dimensioned, complete, and coordinated 1:100 (1/8 inch) scale floor plans, incorporating all revisions required by comments from the design development phase.

K. STEAM GENERATION (IF APPLICABLE)

Submit the following:

Steam Generation:	Schematics*	DD**	CD***
Report on new and existing steam loads ¹	✓		
Life-cycle cost analysis of steam supply alternatives	✓		
Analysis of alternate plant locations	✓		
Life-cycle cost analysis for alternative types of equipment	✓		
Life-cycle cost analysis for heat recovery alternatives	✓		
Data on emissions regulations	✓		
Data on methods of compliance	✓		
Selection of major equipment	✓		
Plot plan with new and existing plant locations	✓		
Fuel related storage and handling facilities	✓		
Alternate plan view layouts of new and existing plant	✓		
Plot plan of steam generating facility ²		✓	✓
Catalog cuts on equipment from two manufacturers		✓	✓
Plans/sections/locations of:			
• Equipment		✓	✓
• Major piping		✓	✓
• Pipe supports		✓	✓
Demolition		✓	✓

Steam Generation:	Schematics*	DD**	CD***
Schematic flow diagrams of all piping systems		✓	✓
Calculations:			
• Equipment sizing	✓	✓	✓
• Major piping systems		✓	✓
• Steam load		✓	✓
• Control and regulating valve		✓	✓
• Flowmeter systems		✓	✓
• Steam trap		✓	✓
• Heating and ventilating system		✓	✓
• Steam piping		✓	✓
Schedules		✓	✓
Equipment lists		✓	✓
Verification of emission regulations		✓	✓
List of standards and details		✓	
Specifications		✓	✓

* Submit, as a minimum, a single line layout for at a scale not less than 1:100 (1/8 inch). Submit a complete double line layout of areas of critical importance, at a scale of 1:50 (1/4 inch) including equipment.

** Submit minimum 1:100 (1/8 inch) scale floor plans, new and renovated, incorporating all of the revisions required by comments from schematics.

*** Submit fully dimensioned, complete, and coordinated 1:100 (1/8 inch) scale floor plans, incorporating all revisions required by comments from the design development phase.

STEAM GENERATION NOTES

1. Include maximum and minimum summer and winter demands and total annual production. Provide break-down of new steam loads into categories of end use such as building heating, humidification, reheat, domestic hot water, sterilization, line losses, kitchen, and laundry.

2. Show boilers, pumps, heat recovery devices, tanks, and emission control devices.

L. STEAM DISTRIBUTION (OUTSIDE)

Submit the following:

Steam Distribution (Outside):	Schematics*	DD**	CD***
Estimate steam and condensate loads	✓	✓	✓
Life-cycle cost analysis of steam distribution system	✓		
Calculations of pipe sizing	✓	✓	✓
Steam distribution plot plan	✓	✓	✓

Steam Distribution (Outside):	Schematics*	DD**	CD***
Existing underground utilities			
Soil conditions report	✓	✓	✓
Performance requirements for steam traps		✓	✓
Calculate pipe stress		✓	✓
Select expansion facilities for piping		✓	✓
Location of:			
• Manholes		✓	✓
• Pipe expansion devices		✓	✓
Profile drawings including existing utilities		✓	✓
Plan views/sections/dimensions for major piping, pipe layout and pipe supports of:			
• Manholes		✓	✓
• Trenches		✓	✓
• Tunnels		✓	✓
Demolition Plans		✓	✓

* Submit outside steam generation plans at an appropriate scale to show all work involved.

** Submit outside steam generation plans at same scale as topographic/utility survey incorporating all of the revisions required by comments from schematics.

*** Submit fully dimensioned, complete, and coordinated outside steam generation plans incorporating all revisions required by comments from the design development phase.

M. SOLID WASTE DISPOSAL SYSTEM INCLUDING INCINERATION

Submit the following:

Solid Waste Disposal System Including Incineration:	Schematics*	DD**	CD***
Incineration report including: <ol style="list-style-type: none"> 1. amount and type of waste (new & existing) 2. emissions regulations and types of emissions controls required 3. life-cycle cost analysis on alternatives for waste disposal 4. calculations of equipment sizing and description of types of equipment 5. viable alternatives for waste disposal 	✓		

Solid Waste Disposal System Including Incineration:	Schematics*	DD**	CD***
Evaluation of capability of existing incinerator	✓		
Complete description of existing processing system	✓		
Tests to determine remaining service life and capacity of system	✓		
Plot plan with new plant location and location of existing plant	✓		
Plan view layout of new system or existing system showing new equipment location	✓		
Load calculations on amount and types of waste		✓	✓
Plot plan with location of new processing system		✓	✓
Plans/sections showing locations of:			
• Equipment			
• Major piping		✓	✓
Demolition		✓	✓
Catalog cuts (2 min.) of equipment selections		✓	✓
Emissions control devices		✓	✓
Schedules		✓	✓
Equipment lists		✓	✓
List of standards to be furnished later		✓	✓
List of special details to be furnished later		✓	✓
Verification of applicable emissions regulations affecting design or operation			✓
Specifications			✓

* Submit, as a minimum, a single line layout for at a scale not less than 1:100 (1/8 inch). Submit a complete double line layout of areas of critical importance, at a scale of 1:50 (1/4 inch) including equipment.

** Submit minimum 1:100 (1/8 inch) scale floor plans, new and renovated, incorporating all of the revisions required by comments from schematics.

*** Submit fully dimensioned, complete, and coordinated 1:100 (1/8 inch) scale floor plans, incorporating all revisions required by comments from the design development phase.

N. AUTOMATIC TRANSPORT

Submit the following:

Automatic Transport:	Schematics*	DD*	CD*
Automatic transport systems (ATS):			
• Narrative w/ recommended improvements for exiting system	✓	✓	✓
• Traffic study including existing and proposed ATS w/ alternate methods of distribution	✓	✓	✓
Changes to existing systems (arch. dwgs.)		✓	✓
Hoistway (arch. dwg.)		✓	✓
Machine room vents (arch. dwg.)		✓	✓
Type of ventilation (mech. dwg.)		✓	✓
Electrical requirements (elect. dwg.)		✓	✓
Drawings: ^{1, 2, & 3}			
• Automatic Transport Systems		✓	✓
• Elevators		✓	✓
• Dumbwaiters		✓	✓
• Other ATS systems		✓	✓
Sizes/dimensions/details:			
• Hoistway enclosures		✓	✓
• Pits		✓	✓
• Pit ladders		✓	✓
• Machine area ladder and railings		✓	✓
• Entrances		✓	✓
• Machine rooms		✓	✓
Locations/dimensions:			
• Elevator cars		✓	✓
• Entrances		✓	✓
• Counterweights		✓	✓
• Trap doors		✓	✓
Location of hoistway vents		✓	✓
Location of steel hoisting beams		✓	✓
Size of machine beams		✓	✓
Size of end reactions		✓	✓
Location/detail of machine beam pockets		✓	✓
Rail loadings		✓	✓
Hydraulic elevator piston pit loads		✓	✓
Details			
• Hoistway entrances for elevators		✓	✓
• Carlifts		✓	✓

Automatic Transport:	Schematics*	DD*	CD*
• ETVS		✓	✓
Elevator machine room equipment layout		✓	✓
Interface with automatic recall and shutdown (see fire protection)			✓
Specifications		✓	✓

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** Submit minimum 1:100 (1/8 inch) scale floor plans, new and renovated, incorporating all of the revisions required by comments from schematics.

*** Submit fully dimensioned, complete, and coordinated 1:100 (1/8 inch) scale floor plans, incorporating all revisions required by comments from the design development phase.

AUTOMATIC TRANSPORT NOTES

1. Include tracking, piping, battery charging areas, blower rooms, queuing areas, cart holding areas, cart washer, central control area, and floor or wall recessed transport control units. Indicate architectural features in areas to be utilized for these systems. Indicate on architectural drawings all the major equipment located in machine rooms, secondary levels, pits, and the areas pertaining to ATS, AGVS and ETVS.

2. Indicate changes required on the architectural drawings where existing transport systems are retained and modified to serve new and existing areas.

3. Provide all electrical criteria (per basic electrical notes and Automatic Transport Design Manual) on electrical drawings.

O. ASBESTOS ABATEMENT

Submit the following if asbestos is found on the site:

Asbestos Abatement:	Schematics*	DD**	CD***
Asbestos abatement report including: 1. Summary results of building records 2. Summary results of station personnel interview 3. determination of materials known to contain asbestos 4. visual inspection of building to determine location and condition of asbestos 5. sample strategy on the extent of asbestos present	✓		

Asbestos Abatement:	Schematics*	DD**	CD***
Name and location of qualified laboratory for sample analysis	✓		
Asbestos abatement drawing		✓	
Major Decontamination Areas showing: <ol style="list-style-type: none"> 1. Limits of sealing off the location 2. Quantities of asbestos material 3. Arrangements for auxiliary rooms 4. Engineering of negative air systems 5. Path of asbestos to loading platform 6. Location and connection to required utilities 		✓	
Minor Decontamination Areas showing: <ol style="list-style-type: none"> 1. location, type, and length of pipe element to be abated by "Glove and Bag" approach 2. Other abatement features 		✓	
Summary of: ¹			
• Square meter (feet) of floor space for abatement		✓	✓
• Total linear and square meter (feet) of asbestos to be abated		✓	✓
• Total cost of abatement ²		✓	✓
Asbestos abatement drawings including: <ol style="list-style-type: none"> 1. restoration of impacted building sub-systems 2. integrated phasing on execution of abatement 			✓

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** Submit minimum 1:100 (1/8 inch) scale floor plans, new and renovated, incorporating all of the revisions required by comments from schematics.

*** Submit fully dimensioned, complete, and coordinated 1:100 (1/8 inch) scale floor plans, incorporating all revisions required by comments from the design development phase.

ASBESTOS ABATEMENT NOTES

1. Provide a copy of the summary to the construction cost estimator for inclusion as a separate bid item in the project estimate if asbestos is found.

2. Include any cost for decontamination of equipment and fixtures.

P. SPACE PLANNING

	Schematics	DD	CD
Space-Accounting Summary Table	✓ ¹	✓ ²	✓ ³

1. Provide a tabular table with columns entitled Departmental Function, Space Planning Criteria (PG-18-9), Approved Space Program [Net Square Meters (Net Square Feet)], Variance Between PG-18-9 and Approved Space Program, Departmental Conversion Factor, Planned Departmental Gross Square Meters (Feet); column totals; and a Total Project Net to Gross Factor. Also, list separately the area required for additions to the program, unassigned space, major circulation (inter-departmental corridors, stairs, elevators), major mechanical and electrical spaces, exterior walls, connecting corridors to other buildings, space for future mechanical system expansion, and similar special requirements.

2. Update table. Justify in writing substantial deviations from the approved space program.

3. Update table.

Q. CRITICAL PATH METHOD (CPM)

Submit the following:

Critical Path Method (CPM)j:	Schematics	DD	CD
Phasing Narrative	✓	✓	✓
Phasing Plans (on reduced site plans)	✓		
Phasing Diagram	✓		
Phases (marked on full size drawing)	✓		
Written list of systems ¹	✓	✓	✓
Phasing Diagram (drawn on Phasing Plan) ¹		✓	✓
CPM Phasing Plans (full size contract drawings) ²		✓	✓

1. Include temporary system by phase, and separate by technical discipline.

2. One drawing may reflect several reduced site plans.

R. ESTIMATING

Submit the following:

Estimating:	Schematics	DD	CD
Cost estimate in compliance with Manual for Preparation of Estimates (separate estimates for new construction and alteration work)	✓	✓	✓

Estimating:	Schematics	DD	CD
Level "A" Summary Sheets for building	✓	✓	
Level "A" Summary Sheets for sitework	✓	✓	
Building gross area computation (new)	✓	✓	
Building gross area computation (alteration work)	✓	✓	
Project Data Sheet 1	✓		
Project Data Sheet 1 and 2		✓	✓
Asbestos abatement		✓	✓
Detailed estimate take-off sheets			✓
Level "B" Summary Sheets for buildings			✓
Level "B" Summary Sheets for sitework			✓
Supplement A to SF 252			✓
Detail Market Analysis			✓

S. SPECIFICATIONS

	Schematics	DD	CD
Specifications (All Disciplines)		✓ ^{1, 2, & 3}	✓ ^{4 & 5}

1. Comply with the requirements of the VA Manual for Preparation and Issuance of Construction Solicitation and Contract Documents.
2. Submit for all technical disciplines the original VA Master Specification section drafts marked-up with pencil showing the editing for the project. Clearly identify modifications, deletions and insertions. Assure the specification drafts have been edited and tailored in their application to represent accurate coordination between drawings and specifications.
3. When no VA Master Construction Specification exists for a "unit of work", prepare the specification section consistent with VA Master Construction Specifications format.
 - a. Use generic or non-proprietary specifications describing the minimal acceptable product criteria level where no "Standard" exists to define quality and workmanship levels.
 - b. Use applicable "Standards" to define quality and workmanship when these publications exist. List complete designation and title of each publication used in Part 1; follow format in VA Master Construction Specifications for Applicable Publications.
 - c. Do not use proprietary specifications or systems that restrict competition unless authorization in writing has been received from the VA COR for such proprietary specification. See the Federal Acquisition Regulation (FAR) Part 10, Part 14, and Part 36.

d. Do not use trade names or manufacturers brand names, except as previously noted.

e. When a deviation is requested, define and specify the minimum acceptable levels of essential criteria in descriptive, physical, functional, or performance requirements.

4. Type specifications in final format and content including any desk copy changes made by the VAMC staff at the previous review. Submit a complete set of the typed specifications for review. Include one set of full size final drawings of all disciplines, fully coordinated.

5. Return all draft specifications reviewed at DD review to aid the final bid document review. These draft specifications will later be returned to the A/E.

T. FINAL BID DOCUMENTS

1. Place the seal of the Registered Architect, Registered Landscape Architect, and Professional Engineer responsible for the design and the VAMC Project Director's signature on the Construction Documents. A stamp of the VAMC Project Director's signature will be furnished.

2. Submit updated Department Ratio Chart of Final Bid stage to the VAMC COR.

VII. GENERAL REQUIREMENTS (SPECIFICATION)

SECTION 01 00 00 GENERAL REQUIREMENTS

1.1 GENERAL INTENTION

- A. Contractor shall completely prepare site for building operations, including demolition and removal of existing structures, and furnish labor and materials and perform work for Construct Clinical and Urgent Care Addition as required by this RFP.
- B. Visits to the site by Bidders may be made only by appointment with the Medical Center Engineering Officer.
- C. All employees of general contractor and subcontractors shall comply with VA security management program and obtain permission of the VA police, be identified by project and employer, and restricted from unauthorized access.
- D. Prior to commencing work, general contractor shall provide proof that a OSHA certified "competent person" (CP) (29 CFR 1926.20(b) (2) will maintain a presence at the work site whenever the general or subcontractors are present.
- E. Training:
 - 1. All employees of general contractor or subcontractors shall have the 10-hour OSHA certified Construction Safety course and /or other relevant competency training, as determined by VA CP with input from the ICRA team. Foremen, Principles and lead men shall have the 30-hour OSHA certified Construction Safety course
 - 2. Submit training records of all such employees for approval before the start of work.

1.2 STATEMENT OF BID ITEM(S)

A. Bid item #1 (Design): Work includes all labor, materials, equipment and supervision for Level II design submission IAW with Program Guide PG-18-15, Vol E The Design-Build Contractor Team shall provide all necessary due diligences work including survey evaluation, calculations, working drawings, cost estimates, and construction period services necessary for this project, in

accordance with items herein specified. Design-Build Architect Engineer (DB A/E) is to provide complete set of construction documents, drawings and specifications reflecting work that the Design-Build contractor is to provide with all labor, material, and technical expertise to design, construct, and commission a single story structure IAW VA Barrier Free Design Guide (approximately 8,000 square foot) at the elevation of the existing south parking lot of the hospital (Building 1) at the John J. Pershing Veteran Affairs Medical Center (JJPVAMC) 1500 N Westwood Blvd Poplar Bluff, Missouri 63901. **The provided drawings and documents are for reference only and the design build contractor is responsible for the complete design build project including new drawings and specifications.**

B. Bid item #2 Alternate Bid Deduct 1 (Design): This item includes everything in bid item 1 except: Remove the design to withstand future vertical expansion of a minimum of one (1) additional level.

C. Bid item #3 BASE BID (Build): Work includes all labor, materials, equipment and supervision to construct **a single story structure**, access road, IAW VA Barrier Free Design Guide. This addition is to be an adaptation of the current A/E design that was completed for this project and could not be constructed due to budgetary restraints. **The current A/E drawings are for a two (2) story structure.** Only the lower level floor plan with the related drawings and the elevator and elevator shaft to allow access to the main hospital (Building 1) will be utilized for this project. All bid deductions identified in the current A/E drawings are not part of this project and shall not be utilized in the design and construction of this project. **The provided drawings and documents are for reference only and the design build contractor is responsible for the complete design build project including new drawings and specifications.** This structure shall be designed and constructed to withstand future vertical expansion of a minimum of one (1) additional level. This structure shall include an elevator and elevator shaft(s) as shown on the existing A/E drawings. This structure shall include the design and construction of elevator shaft(s) that shall include one (1) elevator with the option of adding one (1) elevator in the future. This elevator and elevator shaft(s) shall be designed and constructed to allow adequate room for a patient gurney to be transferred between floors. This structure shall comply with the VA Barrier Free Design Guide and applicable codes and shall have a covered pick up and drop off located at the south end of the new addition. Site and parking improvements should be conducted as necessary to improve pedestrian and vehicular access.

D. Bid item #4 Alternate Bid Deduct 1 (Build):

This item includes everything in bid item 3 except: The structure shall be designed and constructed to withstand future vertical expansion of a minimum of one (1) additional level.

E. Bid item #5: Guarantee Period Services (GPS): Elevator

Maintenance Services for one (1) Elevators \$_____ Per Month for POP 500 days after NTP and cover the additional one year warranty period.

1.3 SPECIFICATIONS AND DRAWINGS FOR CONTRACTOR

A. Specifications and Drawings are to be developed and produced by the contractor as specified in the A/E Submission Instructions.

1.4 CONSTRUCTION SECURITY REQUIREMENTS

A. Security Plan:

1. The security plan defines both physical and administrative security procedures that will remain effective for the entire duration of the project.
2. The General Contractor is responsible for assuring that all sub-contractors working on the project and their employees also comply with these regulations.

B. Security Procedures:

1. General Contractor's employees shall not enter the project site without appropriate badge. They may also be subject to inspection of their personal effects when entering or leaving the project site.
2. For working outside the "regular hours" as defined in the contract, The General Contractor shall give 5 days' notice to the Contracting Officer so that security and escort arrangements can be provided for the employees. This notice is separate from any notices required for utility shutdown described later in this section.
3. No photography of VA premises is allowed without written permission of the Contracting Officer.
4. VA reserves the right to close down or shut down the project site and order General Contractor's employees off the premises in the event of a national emergency. The General Contractor may return to the site only with the written approval of the Contracting Officer.

C. Guards:

1. No separate guards or security force is anticipated nor expected for this project. VAMC Poplar Bluff shall provide the necessary security for the facility. The guard shall have communication devices to report events as directed by VA police.
3. The general Contractor shall install equipment for recording guard rounds to ensure systematic checking of the premises.

D. Key Control:

1. The General Contractor shall provide duplicate keys and lock combinations to the COR for the purpose of security inspections of every area of project including tool boxes and parked machines and take any emergency action.
2. The General Contractor shall turn over all permanent lock cylinders to the VA locksmith for permanent installation. See Section 08 71 00, DOOR HARDWARE and coordinate.

E. Document Control:

1. Before starting any work, the General Contractor/Sub Contractors shall submit an electronic security memorandum describing the approach to following goals and maintaining confidentiality of "sensitive information".
2. The General Contractor is responsible for safekeeping of all drawings, project manual and other project information. This information shall be shared only with those with a specific need to accomplish the project.
4. Certain documents, sketches, videos or photographs and drawings may be marked "Law Enforcement Sensitive" or "Sensitive Unclassified". Secure such information in separate containers and limit the access to only those who will need it for the project. Return the information to the Contracting Officer upon request.
5. These security documents shall not be removed or transmitted from the project site without the written approval of Contracting Officer.
6. All paper waste or electronic media such as CD's and diskettes shall be shredded and destroyed in a manner acceptable to the VA.

7. Notify Contracting Officer and Site Security Officer immediately when there is a loss or compromise of "sensitive information".
8. All electronic information shall be stored in specified location following VA standards and procedures using an Engineering Document Management Software (EDMS).
 - a. Security, access and maintenance of all project drawings, both scanned and electronic shall be performed and tracked through the EDMS system.
 - b. "Sensitive information" including drawings and other documents may be attached to e-mail provided all VA encryption procedures are followed.

F. Motor Vehicle Restrictions

1. Contractor Vehicle parking is restricted on site to areas away from patient and employee parking. The site is next to the fence in storage area. No special permits are required. The General Contractor, subcontractors and employees of those firms can be dismissed for continuing to park in areas outside of their designated area.

1.5 FIRE SAFETY

A. Applicable Publications: Publications listed below form part of this Article to extent referenced. Publications are referenced in text by basic designations only.

1. American Society for Testing and Materials (ASTM):
 - E84-2008.....Surface Burning Characteristics of Building Materials
2. National Fire Protection Association (NFPA):
 - 10-2006.....Standard for Portable Fire Extinguishers
 - 30-2007.....Flammable and Combustible Liquids Code
 - 51B-2003.....Standard for Fire Prevention During Welding, Cutting and Other Hot Work
 - 70-2007.....National Electrical Code
 - 241-2004.....Standard for Safeguarding Construction, Alteration, and Demolition Operations
3. Occupational Safety and Health Administration (OSHA):
 - 29 CFR 1926.....Safety and Health Regulations for Construction

- B. Fire Safety Plan: Establish and maintain a fire protection program in accordance with 29 CFR 1926. Prior to start of work, prepare a plan detailing project-specific fire safety measures, including periodic status reports, and submit to COR and Facility Safety Officer for review for compliance with contract requirements in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES Prior to any worker for the contractor or subcontractors beginning work, they shall undergo a safety briefing provided by the general contractor's competent person per OSHA requirements. This briefing shall include information on the construction limits, VAMC safety guidelines, means of egress, break areas, work hours, locations of restrooms, use of VAMC equipment, etc. Documentation shall be provided to the COR that individuals have undergone contractor's safety briefing.
- C. Site and Building Access: Maintain free and unobstructed access to facility emergency services and for fire, police and other emergency response forces in accordance with NFPA 241.
- D. Separate temporary facilities, such as trailers, storage sheds, and dumpsters, from existing buildings and new construction by distances in accordance with NFPA 241. For small facilities with less than 6 m (20 feet) exposing overall length, separate by 3m (10 feet).
- E. Temporary Construction Partitions:
1. Install and maintain temporary construction partitions to provide smoke-tight separations between construction areas, the areas that are described in phasing requirements and adjoining areas. Construct partitions of gypsum board or treated plywood (flame spread rating of 25 or less in accordance with ASTM E84) on both sides of fire retardant treated wood or metal steel studs. Extend the partitions through suspended ceilings to floor slab deck or roof. Seal joints and penetrations. At door openings, install Class C, ¾ hour fire/smoke rated doors with self-closing devices.
 2. Install two-hour, fire-rated, temporary construction partitions as shown on drawings to maintain integrity of existing exit stair enclosures, exit passageways, fire-rated enclosures of hazardous areas, horizontal exits, smoke barriers, vertical shafts and openings enclosures.

3. Close openings in smoke barriers and fire-rated construction to maintain fire ratings. Seal penetrations with listed through-penetration firestop materials in accordance with Section 07 84 00, FIRESTOPPING.
- F. Temporary Heating and Electrical: Install, use and maintain installations in accordance with 29 CFR 1926, NFPA 241 and NFPA 70.
 - G. Means of Egress: Do not block exiting for occupied buildings, including paths from exits to roads. Minimize disruptions and coordinate with COR and facility Safety Officer.
 - H. Egress Routes for Construction Workers: Maintain free and unobstructed egress. Inspect the site daily. Report the findings and corrective actions weekly to COR and the facility Safety Officer.
 - I. Fire Extinguishers: Provide and maintain extinguishers in construction areas and temporary storage areas in accordance with 29 CFR 1926, NFPA 241 and NFPA 10.
 - J. Flammable and Combustible Liquids: Store, dispense and use liquids in accordance with 29 CFR 1926, NFPA 241 and NFPA 30.
 - L. Sprinklers: Install, test and activate new automatic sprinklers in accordance with the construction schedule. The fire protection sprinklers shall meet or exceed the requirements set forth by the VA's fire protection specifier.
 - M. Existing Fire Protection: Do not impair automatic sprinklers, smoke and heat detection, and fire alarm systems, except for portions immediately under construction, and temporarily for connections. Provide fire watch for impairments more than 4 hours in a 24-hour period. Request interruptions in accordance with Article, OPERATIONS AND STORAGE AREAS, and coordinate with COR and facility Safety Officer. All existing or temporary fire protection systems (fire alarms, sprinklers) located in construction areas shall be tested as coordinated with the medical center. Parameters for the testing and results of any tests performed shall be recorded by the medical center and copies provided to the COR.
 - N. Smoke Detectors: Prevent accidental operation. Conform to the Interim Life Safety Measures when installing temporary covers over the smoke detectors, and n less than at end of work

operations each day. Coordinate with COR and facility Safety Officer.

- O. Hot Work: Perform and safeguard hot work operations in accordance with NFPA 241 and NFPA 51B. Coordinate with COR to obtain permits from facility Safety Officer at least 72 hours in advance.
- P. Fire Hazard Prevention and Safety Inspections: Inspect entire construction areas weekly. Coordinate with, and report findings and corrective actions weekly to COR and facility Safety Officer.
- Q. Smoking: Smoking is prohibited in and adjacent to construction areas inside existing buildings and additions under construction. In separate and detached buildings under construction, smoking is prohibited except in designated smoking rest areas.
- R. Dispose of waste and debris in accordance with NFPA 241. Remove from buildings daily.
- S. Perform other construction, alteration and demolition operations in accordance with 29 CFR 1926.
- T. Fines for violations of Fire Safety Requirements.
 - 1. Tripping, setting off, of fire alarms and /or flow switches, without proper notification is a violation fineable at the minimum of \$2,500 per offense plus expenses.
 - 2. Smoke detectors that were bagged, covered, or any way rendered inoperable during work shift must be made operable at the end of said work shift. This offense is fineable at the minimum of \$2,500 per offense plus expenses.
 - 3. Any false alarms that causes a visit by the fire department is fineable at the minimum of \$2,500 per offense plus expenses.
 - 4. Hot Work: The following offenses are a violation fineable at a minimum of \$2,500 per offense plus expenses: a) Failure to obtain a hot work permit prior to work, b) Failure to maintain Fire Watch, as required during Hot Work, and c) Failure to remove smoke detector cover after said Hot Work is completed at the end of the work shift for the day, whichever is sooner.
 - 5. Fines for Open Fire Doors: Fire doors at all times shall be kept closed, where required. These doors shall not be left open in any manner; they shall not be propped or tied open. Violations are fineable at no less than \$2,500 per violation plus expenses. These fines will be imposed due to

contractor's fault, negligence or failure to comply with NFPA codes and VA Policies.

- U. If required, submit documentation to the COR that personnel have been trained in the fire safety aspects of working in areas with impaired structural or compartmentalization features.

1.6 OPERATIONS AND STORAGE AREAS

- A. The Contractor shall confine all operations (including storage of materials) on Government premises to areas authorized or approved by the Contracting Officer. The Contractor shall hold and save the Government, its officers and agents, free and harmless from liability of any nature occasioned by the Contractor's performance.
- B. Temporary buildings (e.g., storage sheds, shops, offices) and utilities may be erected by the Contractor only with the approval of the Contracting Officer and shall be built with labor and materials furnished by the Contractor without expense to the Government. The temporary buildings and utilities shall remain the property of the Contractor and shall be removed by the Contractor at its expense upon completion of the work. With the written consent of the Contracting Officer, the buildings and utilities may be abandoned and need not be removed.
- C. The Contractor shall, use only established roadways, or use temporary roadways constructed by the Contractor when and as authorized by the Contracting Officer. When materials are transported in prosecuting 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, the Contractor shall protect them from damage. The Contractor shall repair or pay for the repair of any damaged curbs, sidewalks, or roads.

(FAR 52.236-10)

- D. Working space and space available for storing materials shall be as determined by the COR.
- E. Workmen are subject to rules of Medical Center applicable to their conduct. Execute work in such a manner as to interfere as little as possible with work being done by others. Keep roads

clear of construction materials, debris, standing construction equipment and vehicles at all times.

- F. Execute work so as to interfere as little as possible with normal functioning of Medical Center as a whole, including operations of utility services, fire protection systems and any existing equipment, and with work being done by others. Use of equipment and tools that transmit vibrations and noises through the building structure, are not permitted in buildings that are occupied, during construction, jointly by patients or medical personnel, and Contractor's personnel, except as permitted by the COR where required by limited working space.
1. Do not store materials and equipment in other than assigned areas.
 2. Schedule delivery of materials and equipment to immediate construction working areas within buildings in use by Department of Veterans Affairs in quantities sufficient for not more than two work days. Provide unobstructed access to Medical Center areas required to remain in operation.
 3. Where access by Medical Center personnel to vacated portions of buildings is not required, storage of Contractor's materials and equipment will be permitted subject to fire and safety requirements.
 4. Utilities Services: Where necessary to cut existing pipes, electrical wires, conduits, cables, etc., of utility services, or of fire protection systems or communications systems (except telephone), they shall be cut and capped at suitable places where shown; or, in absence of such indication, where directed by the COR. All such actions shall be coordinated with the Utility Company involved.
 - a. Whenever it is required that a connection fee be paid to a public utility provider for new permanent service to the construction project, for such items as water, sewer, electricity, gas or steam, payment of such fee shall be the responsibility of the Contractor, and not the Government.
- G. Phasing: To insure such executions, Contractor shall furnish the COR with a schedule of approximate phasing dates on which the Contractor intends to accomplish work in each specific area of site, building or portion thereof. In addition, Contractor shall

notify the COR two weeks in advance of the proposed date of starting work in each specific area of site, building or portion thereof. Arrange such phasing dates to insure accomplishment of this work in successive phases mutually agreeable to Medical Center Director, COR and Contractor, as follows:

Contractor shall take all measures and provide all material necessary for protecting existing equipment and property in affected areas of construction against dust and debris, so that equipment and affected areas to be used in the Medical Centers operations will not be hindered. Contractor shall permit access to Department of Veterans Affairs personnel and patients through other construction areas which serve as routes of access to such affected areas and equipment. Coordinate alteration work in areas occupied by Department of Veterans Affairs so that Medical Center operations will continue during the construction period.

2. Immediate areas of alterations not mentioned in preceding Subparagraph 1 will be temporarily vacated while alterations are performed.
- I. Construction Fence: Before construction operations begin, Contractor shall provide a chain link construction fence, 2.1m (seven feet) minimum height, around the construction area indicated on the drawings. Provide gates as required for access with necessary hardware, including hasps and padlocks. Fasten fence fabric to terminal posts with tension bands and to line posts and top and bottom rails with tie wires spaced at maximum 375mm (15 inches). Bottom of fences shall extend to 25mm (one inch) above grade. Remove the fence when directed by the COR.
 - J. When a building is turned over to Contractor, Contractor shall accept entire responsibility therefore.
 1. Contractor shall maintain a minimum temperature of 4 degrees C (40 degrees F) at all times, except as otherwise specified.
 2. Contractor shall maintain in operating condition existing fire protection and alarm equipment. In connection with fire alarm equipment, Contractor shall make arrangements for pre-inspection of site with the Fire Department whichever will

be required to respond to an alarm from Contractor's employee or watchman.

- K. Utilities Services: Maintain existing utility services for Medical Center at all times. Provide temporary facilities, labor, materials, equipment, connections, and utilities to assure uninterrupted services. Where necessary to cut existing water, steam, gases, sewer or air pipes, or conduits, wires, cables, etc. of utility services or of fire protection systems and communications systems (including telephone), they shall be cut and capped at suitable places where shown; or, in absence of such indication, where directed by the COR.
1. No utility service such as water, gas, steam, sewers or electricity, or fire protection systems and communications systems may be interrupted without prior approval of the COR. A two week notice is required. Written approval for utility outages will be given once a suitable time and backup system have been implemented. Electrical work shall be accomplished with all affected circuits or equipment de-energized. When an electrical outage cannot be accomplished, work on any energized circuits or equipment shall not commence without the Medical Center Director's prior knowledge and written approval. Refer to specification Sections 26 05 11, REQUIREMENTS FOR ELECTRICAL INSTALLATIONS, 27 05 11 REQUIREMENTS FOR COMMUNICATIONS INSTALLATIONS and 28 05 11, REQUIREMENTS FOR ELECTRONIC SAFETY AND SECURITY INSTALLATIONS for additional requirements.
 2. Contractor shall submit a request to interrupt any such services to COR, in writing, 48 hours in advance of proposed interruption for the site and 2 weeks in advance for interruptions involving the medical center. Request shall state reason, date, exact time of, and approximate duration of such interruption.
 3. Contractor will be advised (in writing) of approval of request, or of which other date and/or time such interruption will cause least inconvenience to operations of Medical Center. Interruption time approved by Medical Center may occur at other than Contractor's normal working hours.

4. Major interruptions of any system must be requested, in writing, at least 15 calendar days prior to the desired time and shall be performed as directed by the COR.
 5. In case of a contract construction emergency, service will be interrupted on approval of COR. Such approval will be confirmed in writing as soon as practical.
 6. Whenever it is required that a connection fee be paid to a public utility provider for new permanent service to the construction project, for such items as water, sewer, electricity, gas or steam, payment of such fee shall be the responsibility of the Government and not the Contractor.
- L. Abandoned Lines: All service lines such as wires, cables, conduits, ducts, pipes and the like, and their hangers or supports, which are to be abandoned, shall be removed. Pipe legs shall not be more than two diameters in length past the final isolation. This is for the prevention of Legionella.
- M. To minimize interference of construction activities with flow of Medical Center traffic, comply with the following:
1. Keep roads, walks and entrances to grounds, to parking and to occupied areas of buildings clear of construction materials, debris and standing construction equipment and vehicles. Wherever excavation for new utility lines cross existing roads, at least one lane must be open to traffic at all times.
 2. Method and scheduling of required cutting, altering and removal of existing roads, walks and entrances must be approved by the COR.
- N. Coordinate the work for this contract with other construction operations as directed by COR. This includes the scheduling of traffic and the use of roadways, as specified in Article, USE OF ROADWAYS.

1.7 ALTERATIONS

- A. Survey: Before any work is started, the Contractor shall make a thorough survey with the COR and a representative of VA Supply Service, of areas of buildings and site in which alterations occur and areas which are anticipated routes of access, and furnish a report, signed by the contractor, the COR and the Contracting Officer. This report shall list by rooms and spaces:

1. Existing condition and types of resilient flooring, doors, windows, walls and other surfaces not required to be altered throughout the affected areas of the building.
 2. Existence and conditions of items such as plumbing fixtures and accessories, electrical fixtures, equipment, venetian blinds, shades, etc., required by drawings to be either reused or relocated, or both.
 3. Shall note any discrepancies between drawings and existing conditions at site.
 4. Shall designate areas for working space, materials storage and routes of access to areas within buildings where alterations occur and which have been agreed upon by Contractor and COR.
- B. Any items required by drawings to be either reused or relocated or both, found during this survey to be nonexistent, or in opinion of COR and/or Supply Representative, to be in such condition that their use is impossible or impractical, shall be furnished and/or replaced by Contractor with new items in accordance with specifications which will be furnished by Government. Provided the contract work is changed by reason of this subparagraph B, the contract will be modified accordingly, under provisions of clause entitled "DIFFERING SITE CONDITIONS" (FAR 52.236-2) and "CHANGES" (FAR 52.243-4 and VAAR 852.236-88) of Section 00 72 00, GENERAL CONDITIONS.
- C. Re-Survey: Thirty days before expected partial or final inspection date, the Contractor and COR together shall make a thorough re-survey of the areas of buildings involved. They shall furnish a report on conditions then existing, of resilient flooring, doors, windows, walls and other surfaces as compared with conditions of same as noted in first condition survey report:
1. Re-survey report shall also list any damage caused by Contractor to such flooring and other surfaces, despite protection measures; and, will form basis for determining extent of repair work required of Contractor to restore damage caused by Contractor's workmen in executing work of this contract.
- D. Protection: Provide the following protective measures:

1. Wherever existing roof surfaces are disturbed they shall be protected against water infiltration. In case of leaks, they shall be repaired immediately upon discovery.
2. Temporary protection against damage for portions of existing structures and grounds where work is to be done, materials handled and equipment moved and/or relocated.
3. Protection of interior of existing structures at all times, from damage, dust and weather inclemency. Wherever work is performed, floor surfaces that are to remain in place shall be adequately protected prior to starting work, and this protection shall be maintained intact until all work in the area is completed.

1.8 INFECTION PREVENTION MEASURES

- A. Implement the requirements of VAMC's Infection Control Risk Assessment (ICRA) team. ICRA Group may monitor dust in the vicinity of the construction work and require the Contractor to take corrective action immediately if the safe levels are exceeded.
- B. Establish and maintain a dust control program as part of the contractor's infection preventive measures in accordance with the guidelines provided by ICRA Group as specified here. Prior to start of work, prepare a plan detailing project-specific dust protection measures, including periodic status reports, and submit to Project Engineer and Facility ICRA team for review for compliance with contract requirements in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES.
 1. All personnel involved in the construction or renovation activity shall be educated and trained in infection prevention measures established by the medical center.
- C. Medical center Infection Control personnel shall monitor for airborne disease (e.g. aspergillosis) as appropriate during construction. A baseline of conditions may be established by the medical center prior to the start of work and periodically during the construction stage to determine impact of construction activities on indoor air quality. In addition:
 1. The COR and VAMC Infection Control personnel shall review pressure differential monitoring documentation to verify that

pressure differentials in the construction zone and in the patient-care rooms are appropriate for their settings. The requirement for negative air pressure in the construction zone shall depend on the location and type of activity. Upon notification, the contractor shall implement corrective measures to restore proper pressure differentials as needed.

2. In case of any problem, the medical center, along with assistance from the contractor, shall conduct an environmental assessment to find and eliminate the source.
- D. In general, following preventive measures shall be adopted during construction to keep down dust and prevent mold.
1. Dampen debris to keep down dust and provide temporary construction partitions in existing structures where directed by the COR. Blank off ducts and diffusers to prevent circulation of dust into occupied areas during construction..
 2. Do not perform dust producing tasks within occupied areas without the approval of the COR. For construction in any areas that will remain jointly occupied by the medical Center and Contractor's workers, the Contractor shall:
 - a. Provide dust proof two-hour, fire-rated, temporary drywall construction barriers to completely separate construction from the operational areas of the hospital in order to contain dirt debris and dust. Barriers shall be sealed and made presentable on hospital occupied side. Install a self-closing rated door in a metal frame, commensurate with the partition, to allow worker access. Maintain negative air at all times. A fire retardant polystyrene, 6-mil thick or greater plastic barrier meeting local fire codes may be used where dust control is the only hazard, and an agreement is reached with the COR and Medical Center.
 - b. HEPA filtration is required where the exhaust dust may reenter the breathing zone. Contractor shall verify that construction exhaust to exterior is not reintroduced to the medical center through intake vents, or building openings. Install HEPA (High Efficiency Particulate Accumulator) filter vacuum system rated at 95% capture of 0.3 microns including pollen, mold spores and dust particles. Insure continuous negative air pressures occurring within the work

area. HEPA filters should have ASHRAE 85 or other pre filter to extend the useful life of the HEPA. Provide both primary and secondary filtrations units. Exhaust hoses shall be heavy duty, flexible steel reinforced and exhausted so that dust is not reintroduced to the medical center.

- c. Adhesive Walk-off/Carpet Walk-off Mats, minimum 600mm x 900mm (24" x 36"), shall be used at all interior transitions from the construction area to occupied medical center area when construction impacts the transition into the building. These mats shall be changed as often as required to maintain clean work areas directly outside construction area at all times. This will be necessary during the installation of the vestibule between the elevator and the existing south entrance to the hospital.
- d. Vacuum and wet mop all transition areas from construction to the occupied medical center at the end of each workday. Vacuum shall utilize HEPA filtration. Maintain surrounding area frequently. Remove debris as they are created. Transport these outside the construction area in containers with tightly fitting lids.
- e. The contractor shall not haul debris through patient-care areas without prior approval of the COR and the Medical Center. When, approved, debris shall be hauled in enclosed dust proof containers or wrapped in plastic and sealed with duct tape if the debris is hauled through the existing medical center. No sharp objects should be allowed to cut through the plastic. Wipe down the exterior of the containers with a damp rag to remove dust. All equipment, tools, material, etc. transported through occupied areas in the Medical Center shall be made free from dust and moisture by vacuuming and wipe down.
- f. Using a HEPA vacuum, clean inside the barrier and vacuum ceiling tile prior to replacement. Any ceiling access panels opened for investigation beyond sealed areas shall be sealed immediately when unattended.
- g. There shall be no standing water during construction. This includes water in equipment drip pans and open containers

within the construction areas. All accidental spills must be cleaned up and dried within 12 hours. Remove and dispose of porous materials that remain damp for more than 72 hours.

- h. At completion, remove construction barriers and ceiling protection carefully, outside of normal work hours. Vacuum and clean all surfaces free of dust after the removal.

E. Final Cleanup:

1. Upon completion of project, or as work progresses, remove all construction debris from above ceiling, vertical shafts and utility chases that have been part of the construction.
2. Perform HEPA vacuum cleaning of all surfaces in the construction area once the structure is enclosed and the HVAC system is working. This includes walls, ceilings, cabinets, furniture (built-in or free standing), partitions, flooring, etc.
3. All new air ducts shall be cleaned prior to final inspection.

1.9 DISPOSAL AND RETENTION

A. Materials and equipment accruing from work removed and from demolition of buildings or structures, or parts thereof, shall be disposed of as follows:

1. Reserved items which are to remain property of the Government are identified by attached tags or in specifications as items to be stored. Items that remain property of the Government shall be removed or dislodged from present locations in such a manner as to prevent damage which would be detrimental to re-installation and reuse. Store such items where directed by the COR.
2. Items not reserved shall become property of the Contractor and be removed by Contractor from the Medical Center.
3. Items of portable equipment and furnishings located in rooms and spaces in which work is to be done under this contract shall remain the property of the Government. When rooms and spaces are vacated by the Department of Veterans Affairs during the alteration period, such items which are NOT required by drawings and specifications to be either relocated

or reused will be removed by the Government in advance of work to avoid interfering with Contractor's operation.

1.10 PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS

- A. The Contractor shall preserve and protect all structures, equipment, and vegetation (such as trees, shrubs, and grass) on or adjacent to the work sites, which are not to be removed and which do not unreasonably interfere with the work required under this contract. The Contractor shall only remove trees when specifically authorized to do so, and shall avoid damaging vegetation that will remain in place. If any limbs or branches of trees are broken during contract performance, or by the careless operation of equipment, or by workmen, the Contractor shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed by the Contracting Officer.
- B. The Contractor shall protect from damage all existing improvements and utilities at or near the work site and on adjacent property of a third party, the locations of which are made known to or should be known by the Contractor. The Contractor shall repair any damage to those facilities, including those that are the property of a third party, resulting from failure to comply with the requirements of this contract or failure to exercise reasonable care in performing the work. If the Contractor fails or refuses to repair the damage promptly, the Contracting Officer may have the necessary work performed and charge the cost to the Contractor.

(FAR 52.236-9)

- C. Refer to Section 01 57 19, TEMPORARY ENVIRONMENTAL CONTROLS, for additional requirements on protecting vegetation, soils and the environment. Refer to Articles, "Alterations", "Restoration", and "Operations and Storage Areas" for additional instructions concerning repair of damage to structures and site improvements.
- D. Refer to FAR clause 52.236-7, "Permits and Responsibilities," which is included in General Conditions. A National Pollutant Discharge Elimination System (NPDES) permit is required for this project. The Contractor is considered an "operator" under the

permit and has extensive responsibility for compliance with permit requirements. VA will make the permit application available at the (appropriate medical center) office. The apparent low bidder, contractor and affected subcontractors shall furnish all information and certifications that are required to comply with the permit process and permit requirements. Many of the permit requirements will be satisfied by completing construction as shown and specified. Some requirements involve the Contractor's method of operations and operations planning and the Contractor is responsible for employing best management practices. The affected activities often include, but are not limited to the following:

- Designating areas for equipment maintenance and repair;
- Providing waste receptacles at convenient locations and provide regular collection of wastes;
- Locating equipment wash down areas on site, and provide appropriate control of wash-waters;
- Providing protected storage areas for chemicals, paints, solvents, fertilizers, and other potentially toxic materials; and
- Providing adequately maintained sanitary facilities.

1.11 RESTORATION

- A. Remove, cut, alter, replace, patch and repair existing work as necessary to install new work. Except as otherwise shown or specified, do not cut, alter or remove any structural work, and do not disturb any ducts, plumbing, steam, gas, or electric work without approval of the COR. Existing work to be altered or extended and that is found to be defective in any way, shall be reported to the COR before it is disturbed. Materials and workmanship used in restoring the area shall conform in type and quality to that of original existing construction, except as otherwise shown or specified.
- B. Upon completion of contract, deliver work complete and undamaged. Existing work (walls, ceilings, partitions, floors, mechanical and electrical work, lawns, paving, roads, walks, etc.) disturbed or removed as a result of performing required new work, shall be patched, repaired, reinstalled, or replaced with new work, and

refinished and left in as good condition as existed before commencing work.

- C. At Contractor's own expense, Contractor shall immediately restore to service and repair any damage caused by Contractor's workmen to existing piping and conduits, wires, cables, etc., of utility services or of fire protection systems and communications systems (including telephone) which are indicated on drawings and which are not scheduled for discontinuance or abandonment.
- D. Expense of repairs to such utilities and systems not shown on drawings or locations of which are unknown will be covered by adjustment to contract time and price in accordance with clause entitled "CHANGES" (FAR 52.243-4 and VAAR 852.236-88) and "DIFFERING SITE CONDITIONS" (FAR 52.236-2) of Section 00 72 00, GENERAL CONDITIONS.

1.12 PHYSICAL DATA

- A. The Government does not guarantee that other materials or unseen conditions will not be encountered nor that proportions, conditions or character of several materials will not vary from those indicated or inferred by any indications in this offering. Bidders are expected to examine site of work and logs of borings; and, after investigation, decide for themselves character of materials and make their bids accordingly. Upon proper application to Department of Veterans Affairs, bidders will be permitted to make subsurface explorations of their own at site.

1.13 PROFESSIONAL SURVEYING SERVICES

A registered professional land surveyor or registered civil engineer whose services are retained and paid for by the Contractor shall perform services specified herein and in other specification sections. The Contractor shall certify that the land surveyor or civil engineer is not one who is a regular employee of the Contractor, and that the land surveyor or civil engineer has no financial interest in this contract.

1.14 LAYOUT OF WORK

- A. The Contractor shall lay out the work from Government established base lines and bench marks, indicated on the drawings, and shall be responsible for all measurements in connection with the

layout. The Contractor shall furnish, at Contractor's own expense, all stakes, templates, platforms, equipment, tools, materials, and labor required to lay out any part of the work. The Contractor shall be responsible for executing the work to the lines and grades that may be established or indicated by the Contracting Officer. The Contractor shall also be responsible for maintaining and preserving all stakes and other marks established by the Contracting Officer until authorized to remove them. If such marks are destroyed by the Contractor or through Contractor's negligence before their removal is authorized, the Contracting Officer may replace them and deduct the expense of the replacement from any amounts due or to become due to the Contractor.

(FAR 52.236-17)

- B. Establish and plainly mark center lines for the addition to building 1. And ensure they are in accordance with lines and elevations shown on contract drawings.
- C. Following completion of general mass excavation and before any other permanent work is performed, establish and plainly mark (through use of appropriate batter boards or other means) sufficient additional survey control points or system of points as may be necessary to assure proper alignment, orientation, and grade of all major features of work. Survey shall include, but not be limited to, location of lines and grades of footings, exterior walls, center lines of columns in either direction, major utilities and elevations of floor slabs:
 - 1. Such additional survey control points or system of points thus established shall be checked and certified by a registered land surveyor or registered civil engineer. Furnish such certification to the COR before any work (such as footings, floor slabs, columns, walls, utilities and other major controlling features) is placed.
- D. During progress of work, and particularly as work progresses from floor to floor, Contractor shall have line grades and plumbness of all major form work checked and certified by a registered land surveyor or registered civil engineer as meeting requirements of contract drawings. Furnish such certification to the COR before any major items of concrete work are placed. In addition, the

Contractor shall also furnish to the COR certificates from a registered land surveyor or registered civil engineer that the following work is complete in every respect as required by contract drawings.

1. Lines of each building and/or addition.
 2. Elevations of bottoms of footings and tops of floors of each building and/or addition.
 3. Lines and elevations of sewers and of all outside distribution systems.
 5. Lines of elevations of all swales and interment areas.
 6. Lines and elevations of streets and parking lots.
- E. Whenever changes from contract drawings are made in line or grading requiring certificates, record such changes on a reproducible drawing bearing the registered land surveyor or registered civil engineer seal, and forward these drawings upon completion of work to COR.
- F. The Contractor shall perform the surveying and layout work of this and other articles and specifications in accordance with the provisions of Article "Professional Surveying Services".

1.15 AS-BUILT DRAWINGS

- A. The contractor shall maintain two full size sets of as-built drawings which will be kept current during construction of the project, to include all contract changes, modifications and clarifications.
- B. All variations shall be shown in the same general detail as used in the contract drawings. To insure compliance, as-built drawings shall be made available for the COR's review, as often as requested.
- C. Contractor shall deliver two approved completed sets of as-built drawings to the COR within 15 calendar days after each completed phase and after the acceptance of the project by the COR.
- D. Paragraphs A, B, & C shall also apply to all shop drawings.

1.16 USE OF ROADWAYS

- A. For hauling, use only established public roads and roads on Medical Center property and, when authorized by the COR, such temporary roads which are necessary in the performance of contract work. Temporary roads shall be constructed by the

- Contractor at Contractor's expense. When necessary to cross curbing, sidewalks, or similar construction, they must be protected by well-constructed bridges.
- B. When new permanent roads are to be a part of this contract, Contractor may construct them immediately for use to facilitate building operations. These roads may be used by all who have business thereon within zone of building operations.
 - C. When parts of the Clinic are required to be completed in advance of general date of completion, all roads leading thereto must be completed and available for use at time set for completion of such buildings or parts thereof.

1.17 TEMPORARY USE OF MECHANICAL AND ELECTRICAL EQUIPMENT

- A. Use of new installed mechanical and electrical equipment to provide heat, ventilation, plumbing, light and power will be permitted subject to compliance with the following provisions:
 - 1. Permission to use each unit or system must be given by the COR. If the equipment is not installed and maintained in accordance with the following provisions, the COR will withdraw permission for use of the equipment.
 - 2. Electrical installations used by the equipment shall be completed in accordance with the drawings and specifications to prevent damage to the equipment and the electrical systems, i.e. transformers, relays, circuit breakers, fuses, conductors, motor controllers and their overload elements shall be properly sized, coordinated and adjusted. Voltage supplied to each item of equipment shall be verified to be correct and it shall be determined that motors are not overloaded. The electrical equipment shall be thoroughly cleaned before using it and again immediately before final inspection including vacuum cleaning and wiping clean interior and exterior surfaces.
 - 3. Units shall be properly lubricated, balanced, and aligned. Vibrations must be eliminated.
 - 4. Automatic temperature control systems for preheat coils shall function properly and all safety controls shall function to prevent coil freeze-up damage.

5. The air filtering system utilized shall be that which is designed for the system when complete, and all filter elements shall be replaced at completion of construction and prior to testing and balancing of system.
 6. All components of heat production and distribution system, metering equipment, condensate returns, and other auxiliary facilities used in temporary service shall be cleaned prior to use; maintained to prevent corrosion internally and externally during use; and cleaned, maintained and inspected prior to acceptance by the Government. The Contractor shall not depend upon the existing steam or hot water service for building 1 for the supply of heat or hot water systems. The Clinical and Urgent Care addition shall have its own standalone domestic hot water system and a standalone HVAC system.
- B. Prior to final inspection, the equipment or parts used which show wear and tear beyond normal, shall be replaced with identical replacements, at no additional cost to the Government.
- C. This paragraph shall not reduce the requirements of the mechanical and electrical specifications sections.

1.18 TEMPORARY USE OF EXISTING ELEVATORS

- A. The Contractor will not be allowed the use of existing elevators.

1.19 TEMPORARY USE OF NEW ELEVATORS

- A. The Contractor and his personnel shall be permitted use of new elevator(s) subject to the following provisions:
1. Contractor shall make arrangements with the COR for use of elevator(s). Contractor may obtain elevator(s) for exclusive use.
 2. Prior to the use of elevator(s), the Contractor shall have the elevator(s) inspected and accepted by an ASME accredited, certified elevator safety inspector. The acceptance report shall be submitted to the COR.
 3. Submit to the COR the schedule and procedures for maintaining equipment. Indicate the day or days of the week and total hours required for maintenance. A report shall be submitted to the COR monthly indicating the type of maintenance conducted, hours used, and any repairs made to the elevator(s).

4. The Contractor shall be responsible for enforcing the maintenance procedures.
5. During temporary use of elevator(s) all repairs, equipment replacement and cost of maintenance shall be the responsibility of the Contractor.
6. Personnel for operating elevator(s) shall not be provided by the Department of Veterans Affairs.
7. Contractor shall cover and provide maximum protection of the entire elevator(s) installation.
8. The Contractor shall arrange for the elevator company to perform operation of the elevator(s) so that an ASME accredited, certified elevator safety inspector can evaluate the equipment. The Contractor shall be responsible for any costs of the elevator company.
9. All elevator(s) parts worn or damaged during temporary use shall be removed and replaced with new parts. This shall be determined by an ASME accredited certified elevator safety inspector after temporary use and before acceptance by the Government. Submit report to the COR for approval.
10. Elevator shall be tested as required by the testing section of the elevator(s) specifications before acceptance by the Department of Veterans Affairs.

1.20 TEMPORARY TOILETS

- A. Provide where directed, (for use of all Contractor's workmen) ample temporary sanitary toilet accommodations with suitable sewer and water connections; or, when approved by the COR, provide suitable dry closets where directed. Keep such places clean and free from flies and all connections and appliances connected therewith are to be removed prior to completion of contract, and premises left perfectly clean.

1.21 AVAILABILITY AND USE OF UTILITY SERVICES

- A. The Government shall make all reasonably required amounts of utilities available to the Contractor from existing outlets and supplies, as specified in the contract. The amount to be paid by the Contractor for chargeable electrical services shall be the prevailing rates charged to the Government. The Contractor shall carefully conserve any utilities furnished without charge.

- B. The Contractor, at Contractor's expense and in a workmanlike manner satisfactory to the Contracting Officer, shall install and maintain all necessary temporary connections and distribution lines, and all meters required to measure the amount of electricity used for the purpose of determining charges. The Contractor shall remove all temporary connections, distribution lines, meters, and associated fittings and valves before the Government will give final acceptance of the work.
- C. Contractor shall install meters at Contractor's expense and furnish the Medical Center a monthly record of the Contractor's usage of electricity as hereinafter specified.
- D. Heat: Furnish temporary heat necessary to prevent injury to work and materials through dampness and cold. Use of open salamanders or any temporary heating devices which may be fire hazards or may smoke and damage finished work, will not be permitted. Maintain minimum temperatures as specified for various materials:
- E. Electricity (for Construction and Testing): Furnish all temporary electric services.
1. Obtain electricity by connecting to the Medical Center electrical distribution system. The Contractor shall meter and pay for electricity required for electric cranes and hoisting devices, electrical welding devices and any electrical heating devices providing temporary heat. Electricity for all other uses is available at no cost to the Contractor.
- F. Water (for Construction and Testing): Furnish temporary water service.
1. Obtain water by connecting to the Medical Center water distribution system. Provide reduced pressure backflow preventer at each connection. Water is available at no cost to the Contractor.
 2. Maintain connections, pipe, fittings and fixtures and conserve water-use so none is wasted. Failure to stop leakage or other wastes will be cause for revocation (at COR's discretion) of use of water from the Medical Center's system.

1.22 NEW TELEPHONE AND IT EQUIPMENT

The contractor shall provide wiring, termination and jack outlets per VA Master Specifications. The contractor shall coordinate with the work of installation of telephone equipment by others. This work shall be completed before the building is turned over to the Government.

1.23 TESTS

- A. Pre-test mechanical and electrical equipment and systems and make corrections required for proper operation of such systems before requesting final tests. Final test will not be conducted unless pre-tested.
- B. Conduct final tests required in various sections of specifications in presence of an authorized representative of the Contracting Officer. Contractor shall furnish all labor, materials, equipment, instruments, and forms, to conduct and record such tests.
- C. Mechanical and electrical systems shall be balanced, controlled and coordinated. A system is defined as the entire complex which must be coordinated to work together during normal operation to produce results for which the system is designed. For example, air conditioning supply air is only one part of entire system which provides comfort conditions for a building. Other related components are return air, exhaust air, steam, chilled water, refrigerant, hot water, controls and electricity, etc.
- D. All related components as defined above shall be functioning when any system component is tested. Tests shall be completed within a reasonably short period of time during which operating and environmental conditions remain reasonably constant.
- E. Individual test result of any component, where required, will only be accepted when submitted with the test results of related components and of the entire system.

1.24 INSTRUCTIONS

- A. Contractor shall furnish Maintenance and Operating manuals and verbal instructions when required by the various sections of the specifications and as hereinafter specified.
- B. Manuals: Maintenance and operating manuals (four copies each) for each separate piece of equipment shall be delivered to the COR

coincidental with the delivery of the equipment to the job site. Manuals shall be complete, detailed guides for the maintenance and operation of equipment. They shall include complete information necessary for starting, adjusting, maintaining in continuous operation for long periods of time and dismantling and reassembling of the complete units and sub-assembly components. Manuals shall include an index covering all component parts clearly cross-referenced to diagrams and illustrations. Illustrations shall include "exploded" views showing and identifying each separate item. Emphasis shall be placed on the use of special tools and instruments. The function of each piece of equipment, component, accessory and control shall be clearly and thoroughly explained. All necessary precautions for the operation of the equipment and the reason for each precaution shall be clearly set forth. Manuals must reference the exact model, style and size of the piece of equipment and system being furnished. Manuals referencing equipment similar to but of a different model, style, and size than that furnished will not be accepted.

- C. Instructions: The Contractor shall provide qualified, factory-trained manufacturers' representatives to give detailed instructions to assigned Department of Veterans Affairs personnel in the operation and complete maintenance for each piece of equipment. All such training will be at the job site. These requirements are more specifically detailed in the various technical sections. Instructions for different items of equipment that are component parts of a complete system shall be given in an integrated, progressive manner. All instructors for every piece of component equipment in a system shall be available until instructions for all items included in the system have been completed. This is to assure proper instruction in the operation of inter-related systems. All instruction periods shall be at such times as scheduled by the COR and shall be considered concluded only when the COR is satisfied in regard to complete and thorough coverage. The Department of Veterans Affairs reserves the right to request the removal of, and substitution for, any instructor who, in the opinion of the COR, does not

demonstrate sufficient qualifications in accordance with requirements for instructors above.

1.25 GOVERNMENT-FURNISHED PROPERTY (IF APPLICABLE)

- A. The Government shall deliver to the Contractor, the Government-furnished property shown on the drawings.
- B. Equipment furnished by Government to be installed by Contractor will be furnished to Contractor at the Medical Center.
- C. Contractor shall be prepared to receive this equipment from Government and store or place such equipment not less than 90 days before Completion Date of project.
- D. Notify Contracting Officer in writing, 60 days in advance, of date on which Contractor will be prepared to receive equipment furnished by Government. Arrangements will then be made by the Government for delivery of equipment.
 - 1. Immediately upon delivery of equipment, Contractor shall arrange for a joint inspection thereof with a representative of the Government. At such time the Contractor shall acknowledge receipt of equipment described, make notations, and immediately furnish the Government representative with a written statement as to its condition or shortages.
 - 2. Contractor thereafter is responsible for such equipment until such time as acceptance of contract work is made by the Government.
- E. Equipment furnished by the Government will be delivered in a partially assembled (knock down) condition in accordance with existing standard commercial practices, complete with all fittings, fastenings, and appliances necessary for connections to respective services installed under contract. All fittings and appliances (i.e., couplings, ells, tees, nipples, piping, conduits, cables, and the like) necessary to make the connection between the Government furnished equipment item and the utility stub-up shall be furnished and installed by the contractor at no additional cost to the Government.
- F. Completely assemble and install the Government furnished equipment in place ready for proper operation in accordance with specifications and drawings.

- G. Furnish supervision of installation of equipment at construction site by qualified factory trained technicians regularly employed by the equipment manufacturer.

1.26 RELOCATED EQUIPMENT AND ITEMS

- A. Contractor shall disconnect, dismantle as necessary, remove and reinstall in new location, all existing equipment and items indicated by symbol "R" or otherwise shown to be relocated by the Contractor.
- B. Perform relocation of such equipment or items at such times and in such a manner as directed by the COR.
- C. Suitably cap existing service lines, such as water, drain, gas, air, vacuum and/or electrical, whenever such lines are disconnected from equipment to be relocated. Remove abandoned lines in finished areas and cap as specified herein before under paragraph "Abandoned Lines".
- D. Provide all mechanical and electrical service connections, fittings, fastenings and any other materials necessary for assembly and installation of relocated equipment; and leave such equipment in proper operating condition.
- E. Contractor shall employ services of an installation engineer, who is an authorized representative of the manufacturer of this equipment to supervise assembly and installation of existing medical equipment if necessary.
- F. All service lines such as noted above for relocated equipment shall be in place at point of relocation ready for use before any existing equipment is disconnected. Make relocated existing equipment ready for operation or use immediately after reinstallation.

1.27 STORAGE SPACE FOR DEPARTMENT OF VA EQUIPMENT

- A. No storage of VA medical Equipment is anticipated for this project.

1.28 HISTORIC PRESERVATION

Where the Contractor or any of the Contractor's employees, prior to, or during the construction work, are advised of or discover any possible archeological, historical and/or cultural resources, the Contractor shall immediately notify the COR verbally, and then with a written follow up.

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