Department of
Veterans Affairs

VA Medical Center Projects

503-26-109
Remediate Reserve Center UST

A/E Submission Instructions for Minor and NRM Construction Program:

- Schematics
- Design Development
- Construction Documents

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FOREWORD

This document states the minimum requirements for each submission in the production of VA Schematics, Design Development, and Construction Documents 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.

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A/E SUBMISSION INSTRUCTIONS FOR MINOR AND NRM CONSTRUCTION PROGRAM MEDICAL CENTER PROJECTS

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A/E SUBMISSION INSTRUCTIONS FOR MINOR AND NRM CONSTRUCTION PROGRAM MEDICAL CENTER PROJECTS

I. GENERAL

A. INTRODUCTION

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

   a. The A/E will have access to this facility's Asbestos and Lead Paint Assessment Surveys.

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, PC, rough sketch studies and other means of communication with the purpose of finalizing a general design approach to be followed. The project Contracting Officer Representative (COR) will be the main point of contact throughout the life of this contract.

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.

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 each 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, bound drawings, handbook, specifications, and CD (in REVIT 2025) for each submission to each unit specified in the "Distribution of A/E Materials" section. Submit instructions on the use of the information along with a complete listing of all layers that are used.

9. Submit a complete set of final approved drawings, specifications, handbook, and CD (Bid Documents) in REVIT 2025, Microsoft Word, Excel, and PDF formats, incorporating all revisions, within 15 days after completion of the 95% Construction Document stage. Submit instructions on the use of the information along with a complete listing of all layers that are used.

10. At each review stage, the A/E will perform a value engineering review.

11. At 50% and 90% submissions, the A/E shall complete the attached Fire Protection Outline (some parts of this outline might not be applicable: wherever this case, the A/E shall so indicate for each line item. The A/E shall also be required to report the amount of time necessary to complete the outline and any questions or problems the A/E incurs as a result of completing the outline. The A/E will also be required to complete the Resolution portion of the Fire and Safety Project Review Report (sample attached) after each submission review. This is to be submitted after each subsequent submission. Directions for completing the outline are attached as a sample letter. These directions are to be followed by the A/E with the exception that the first point of contact shall be the COR. Everything mentioned herein shall be both in hard copy and on CD.

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

13. The A/E will include a separate fee for construction period services. The A/E will review all submittals, requests for information, provide sketches,

clarification and revision drawings, and the A/E will have appropriate representatives available for the following:

Pre-Construction Conference	1-days
Intermediate Site Visits	6-days
Pre-Final Inspection	2-days
Final Inspection	3-days
Total Required	12-days

14. Prior submission plans are not subject to change at the request of the Medical Center staff without proper justification and approval of the COR and/or Contracting Officer.

15. The A/E will be required to coordinate the design with VA staff that would be involved with construction (i.e. doctors, managers, and other staff responsible for any work area to be involved in construction [i.e. normal workflow disrupted]) such that there would be least disruption of normal workflow.

16. In each submission, the A/E shall resubmit the material specified in the prior submission, revised according to the comments made by the VA at the prior review. The A/E shall return all original VA mark-ups of each submission at the next submission, showing that all comments have been addressed (a short response by an appropriate A/E representative shall be indicated next to each VA comment [i.e. see detail 1]).

17. To the extent applicable, all drawings are to be in REVIT 2025 format. All relevant existing work shall be shown as field verified by the A/E. The intent here is to show how equipment will fit (if 3D images of equipment aren't available through software, it is suggested that the A/E obtain 3D images from vendors via the internet, CD, or disk) and to show entire runs of duct, pipe, and conduit (i.e. from where new conduit meets existing to the termination point in the wall or outlet). All desks, equipment, and PC's planned to be put in the new and renovated space (relocated and/or planned) shall also be shown to see the relation of outlets to such.

18. The A/E shall wall through the entire design with the COR at the 90% submission and make any necessary adjustments noticed in the walk through for inclusion in the 100% submission.

19. The A/E shall provide Building Information Modeling (BIM) & Computer Aided Design (CAD) in accordance with the latest VA BIM & CAD Standards found on the Technical Information Library (TIL). The latest edition shall be followed.

20. The A/E shall abide by all A/E Quality Alerts found on the TIL.

21. The A/E shall ensure that all designs are in accordance with all VA Engineering and Design standards, handbooks, manuals, guides, information, schedules, criteria, details, and requirements found on the TIL. The latest edition shall be followed.

22. The A/E will be required to make formal presentations for each design review in person. The A/E will take written minutes of all design reviews and provide the Contracting Officer and the COR with the original (hard copy and CD) and a copy, respectively, within two work days. The A/E will also make a written inspection report (hard copy and CD) within two work days after each site inspection during construction.

23. The A/E will be required to indicate in the contract specifications that the construction contractor shall hold bi-weekly meetings with VA staff and take minutes of each meeting (hard copy and disk) which are to be distributed within two work days of each meeting to each meeting attendee. The A/E shall also attend these meetings via conference call.

24. The A/E shall send processed return of submittals to the Contracting Officer and the COR within seven (10) workdays of receipt. The A/E shall note in the contract specifications that the contractor shall provide a separate submittal and transmittal sheet for “each” item, no matter how insignificant. There shall not be more than one item listed on any transmittal sheet. The A/E shall also indicate in the specifications and drawings the following: that “all” submittals are to be approved by the VA prior to starting any work on site; all contractor and subcontractor employee certifications are to be submitted and approved prior to starting any work on site; all ID badges and necessary background checks are to be obtained for each contractor and subcontractor employee (at their expense) prior to any employee starting any work on site; and all job site deliveries to the contractor and any subcontractors will first only arrive to the contractor’s or subcontractor’s job site trailer or risk being rejected.

25. The A/E’s cost estimate shall never exceed the authorized funding, but if it does at any point, the A/E shall immediately inform the Contracting Officer and the COR in writing with the cost and justification by the A/E. Cost will be reviewed first at each submission and if the A/E does not present a plan within budget, the review of the submission will immediately cease and the A/E will be required to provide a new submission within budget within 24 hours.

26. All estimates shall be based on the most up-to-date working drawing available and shall be current as of the date of submission. Cost will include labor burden, sales tax, and applicable tiered sub-contractor’s fees as mentioned in the master specifications. Escalation as of time of award shall be shown as a separate line item.

27. The A/E shall provide a design which incorporates communication outlets, cable, and data equipment in use by this VAMC.

28. Coordinate with COR on use of all utilities described herein.

29. Starting with the Design Development phase, **"all" plans will have room numbers, square footages, and names indicated on them**. If the names will clutter the drawing, a chart shall be posted where blank drawing space permits, listing all the room numbers and names for that drawing. **"All" dimensions are to be in English units.**

30. **"Each" drawing using symbols and/or abbreviations of any kind shall have a legend unique to that drawing defining such.** This is to avoid having to flip through drawings looking for definitions and the uniqueness will avoid having to hunt through long legends. **"Each" plan drawing shall have true north and building north shown.**

31. All estimates shall be based on the most up-to-date working drawing available and shall be current as of the date of submission. Cost will include labor burden, sales tax, insurance, bonding, and applicable tiered sub-contractor's fees as mentioned in the master specifications. Escalation as of time of award shall be shown as a separate line item.

32. As a part of each submission, the A/E shall provide a single 3-D drawing (more if absolutely necessary) showing all physical involved entities (no text) of the entire design. Entities enclosing other entities will not be filled with differentiating color, all other entities will be. The intent here is to show with as few drawings as possible that there are no conflicts.

33. All ENGINEER employees performing work on site will be required to present two forms of ID, one a driver's license, and the other a Social Security Card or Voter Registration card, complete an application for a VA photo ID badge to be worn at all times while on site, get fingerprinted, get photographed, and have a complete background check performed prior to starting work at the VA Medical Center. This is to be completed prior to the start of work and/or meetings.

34. Prior to starting any work at the VAMC, all ENGINEER employees will view four videos, one on safety, one on infection control, one on hand washing, and one on privacy. Each employee may be required to pick up an infection control orientation booklet. The completion of these items will be documented by the COR for each employee.

35. The A/E will be required to make a short power point presentation at the 50% and 90% review periods. This review will indicate the problem being addressed, the style of the construction being planned any and all deviations

from the submitted space plan for the project and the deficiencies the project will resolve, if any. Prior to soliciting for construction proposals, the A/E is required to certify that the project is designed within budget, the Independent Government Estimate is correct (A/E's estimate).

36. The A/E shall subcontract a Fire & Safety P.E. (Professional Fire Protection Engineer) to review 50% and 90% submissions in total (drawings, specs, estimate, fire protection outline, etc.) and provide review comments to the VA and A/E electronically. The A/E will provide responses to the review comments by the Fire & Safety P.E. to the Fire & Safety P.E. and COR electronically. The A/E will provide one full copy of each review submission to the Fire & Safety P.E. The cost for this shall be added as a Part IV on the A/E fee proposal and not included in Parts I(a), I,II, or III.

B. A/E RESPONSIBILITIES:

1. General design requirements by A/E:

a. Design shall be in accordance with VA guidelines, standards, and master specifications. Copies of all VA guidelines and specification references (i.e. ANSI and ASHRAE references) used shall be turned over to the VA as part of the submission package in which they are used. This is requested to avoid past problems experienced such as a specification referencing a part of an ANSI standard without the COR having immediate access to the standard.

b. The A/E will be required to coordinate its contract with the VA with all other relating contracts that will involve construction period services to this extent only. Provide coordination, review and consultation services through completion of all related contracts.

c. Perform a complete site survey to evaluate existing conditions and space available for new construction and renovations. Survey the existing building and systems to determine the reliability, and compliance with present day codes and standards.

d. Review the system capabilities and facility needs with all involved people with the VA.

e. The VA has site plans, floor plans, and utility plans for A/E use. The A/E may acquire copies of hard copy drawings entirely at the A/E’s expense. **No drawing the A/E may acquire from the VA will the VA guarantee as being accurate, even if the drawing says “as-built”.** The A/E will be required to field verify all information relevant to subject project. This includes opening walls where necessary (The A/E will be required to seal each opening that is not required to be fire rated with appropriate temporary fire protection). The A/E will

be required to design finished repairs of all openings made by the A/E during design.

f. Points of connection and pertinent riser diagrams will be shown in the design. All drawings developed by the A/E shall clearly note impact on or changes to existing building systems and utilities (i.e. architectural, electrical, and mechanical, etc.). **The A/E will investigate where existing utilities may conflict with new utilities (including telecommunications) and shall provide all necessary re-routing in the design.**

g. Attend all design review meetings at the VA Medical Center in Altoona. There will be four design reviews. Design reviews will be conducted on the due date for each submission by the A/E. The A/E shall review all pieces information in each submission, including each drawing. **Computer 3D presentations will be performed by the A/E at each submission of each drawing.**

h. Provide consultation on questions asked by the VA during the design.

i. Each drawing prepared by the A/E shall have all notes, symbols, legends, and equipment locations, direction (true north and building north), and location key relevant to the drawing shown on the drawing.

j. The A/E will indicate phasing, which the A/E has generated upon interaction with all involved VA staff, on both the drawings and specifications. The A/E will provide the most efficient phasing that will insure safety to patients, staff, and visitors; and minimal disruption to the medical center's operations. At no time shall any part of the medical center's communications or any other operation be interrupted.

k. The A/E shall resolve any problem during the construction and completion of subject project (involving all related contracts) resulting from an A/E design error or omission. The A/E will be responsible for all design and construction (including equipment) that is necessary for any and all such resolutions.

l. The A/E shall provide as-built's (drawings and specifications) to the VA in time for the final inspection of the construction contract. The A/E will be given a mark-up by the contractor at least two weeks prior to the final inspection. The As-built's will be field verified by the A/E and in the latest versions of REVIT 2025. A CD and one set of Mylar reproducible (both full and **smallest readable size [in color]**) shall be provided to the VA.

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

3. 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 receive 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 the NCS.

4. 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.

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

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

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

8. The A/E shall provide submittal log of all submittals anticipated to be provided to the VA during construction per the contract documents.

9. The A/E shall provide the VA a list of all Sole Source products provided in the contract documents, with reference to where the information can be found. The A/E shall also provide the VA a list of all Brand Name or Equal products, with the same requirements. The A/E will be required to provide a list of salient characteristics in the specifications for each brand name or equal item approved.

10. The A/E shall coordinate all drawings, details, and specifications.

11. During the 50% submission design review, the A/E shall present on project phasing and shall be fully developed at the 95% design review.

12. The Government must retain rights to all associated software and have full access to all elements of the System. At no point can the Government be locked out of the System.

13. During Pre-Final Inspection, the A/E shall inspect all work shown on the contract documents to ensure all work is complete and installed as designed.

14. The A/E is to edit the most recent VA master specification sections that should be available on the TIL. Specification recycled from another project will not be accepted. **The A/E will be required to provide a list of salient characteristics in the specifications for each brand name or equal item approved.** The new space shall have complete energy management functionality that communicates with this facility's existing energy management system.

15. Perform a complete site survey to evaluate existing conditions and space available for new construction and renovations. Survey the existing system to determine the reliability, and compliance with present day codes and standards.

16. Description (Scope of Work)

The A/E will furnish design services, technical specifications, working drawings, cost estimates, as-built drawings, construction period services, and site visits for Project No. 503-26-109, “Remediate Reserve Center UST”. In addition, the AE will provide an environment assessment of the garage space and undocumented underground storage tank. The environmental assessment shall include but not be limited to the following:
-Provide Ground Penetrating Radar (GPR) scanning of the existing Reserve Center property determining the size and extent of the undocumented underground storage tank (UST).
-A GPR scan will be completed within the OMS building to determine where and what the filled floor drains are connected to and the pipe sizing.
-A GPR scan will be completed to determine the size of the underground storage tank that will be removed during the construction phase of the project.
-Complete soil borings within the OMS building around the abandoned maintenance pit and filled floor drains to determine the extent of the historical automotive servicing activities.
-Complete soil boings of the areas surrounding the undocumented underground storage tank to determine the extent of any soil contamination that may need to be removed.

The A/E shall provide a design for a construction contract that will provide for the following requirements:

This project will remove and remediate the underground storage tank, removing any contaminated soil adjacent to the tank, and restoring the parking lot area to working conditions. The project will also remove and remediate any contaminated soil near the automative maintenance pit, found during the environment assessment, and restore the area to working conditions. The project will also remediate any other hazards found during the environmental assessment.

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", "CONSTRUCTION DOCUMENT SUBMISSION", OR "BID DOCUMENTS" 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.

3. The 90% submission is the **"completed design"** from the A/E prior to review by the VA. Anything less will not be accepted as the 90% submission. **"The 90% submission is not 90% of the design."** This allows final review comments of the A/E's completed design to be included in the 100% submission so that the 100% submission is a true 100% submission and such that no more changes are necessary.

4. 100% Bid Documents shall be stamped and sealed by licensed architects and engineers registered in the state of Pennsylvania.

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. This facility will take no responsibility for any problems encountered. The A/E will bear responsibility for any problems encountered and shall take immediate remedial action if problems are encountered. All costs for any foreseen additional services shall be included in the proposal for this entire scope of work.

F. CRITICAL PATH METHOD PHASING MEETINGS

A. If required and prior to submission of Schematic material, the A/E shall meet with the VAMC's Project Manager 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 (both hard copy and CD).

B. Submit a phasing narrative and phasing plans (on reduced size plans) within two weeks after each phasing meeting to the VAMC Project Manager. 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.

II. SUMBISSIONS

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 or show the following:

Architectural:	Schematics*	DD**	CD***
Location of:			
• Rooms[1]	✓	✓	✓
• Doors2	✓	✓	✓
• 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	✓	✓	✓
• 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		✓	✓

Architectural:	Schematics*	DD**	CD***
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.

B. 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 (Program Guide 7610) 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 (see Handbook 7610).

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	✓		
• 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		✓	✓
• Waterflow and tamper switches		✓	✓
• Sprinkler system fire department connections		✓	✓
• Sprinkler design hazards per NFPA 13		✓	✓
• Exit signs and emergency lighting		✓	✓

Fire Protection:	Schematics*	DD**	CD***
• 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 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			✓

Fire Protection:	Schematics*	DD**	CD***
• 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.

C. 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 concept1	✓		
Illustrate overall design solution[2]	✓		
Material and finish samples	✓		
Sketches	✓		
Design solution for interior spaces:			
• Perspectives		✓	✓
• Plans		✓	✓
• 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			✓

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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.

D. 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			✓

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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.

E. 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	✓	✓	✓
• 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			✓

F. PLUMBING (cont.):

* 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			
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			✓

G. SANITARY (cont.):

* 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]	✓	✓	✓
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]			

HVAC:	Schematics*	DD**	CD***
• 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)		✓	✓
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:	Schematics*	DD**	CD***
HVAC 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.

H. 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, freezestats, 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:			
• 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.)		✓	✓

Electrical:	Schematics*	DD**	CD***
Location and size of:			
• Primary distribution switchgear/switchboard		✓	✓
• Engine-generator sets		✓	✓
• Substation/padmounted 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			✓

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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.

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I. 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)	✓	✓	✓
Activation Equipment List (Excel format)		✓	✓
Specifications			✓

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K. STEAM GENERATION: 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		✓	✓
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		✓	✓

Steam Generation:	Schematics*	DD**	CD***
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.

K. 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	✓	✓	✓
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: 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	✓		
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		✓	✓

Solid Waste Disposal System Including Incineration:	Schematics*	DD**	CD***
Verification of applicable emissions regulations affecting design or operation			✓
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.

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		✓	✓

Automatic Transport:	Schematics*	DD*	CD*
Details			
• Hoistway entrances for elevators		✓	✓
• Carlifts		✓	✓
• Dumbwaiters		✓	✓
• Trash chutes		✓	✓
• Linen chutes		✓	✓
• 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.

N. 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:

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	✓		
Name and location of qualified laboratory for sample analysis	✓		
Asbestos abatement drawing		✓	
Major Decontamination Areas showing: 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: 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:	Schematics*	DD**	CD***
Asbestos abatement drawings including: 1. restoration of impacted building sub-systems 2. integrated phasing on execution of abatement			✓

* 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.

O. NOTES:

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

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

P. SPACE PLANNING

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

P. NOTES:

1. Provide a tabular table with columns entitled Departmental Function, H-7610 Requirements, Approved Space Program [Net Square Meters (Net Square Feet)], Variance Between H-7610 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]		✓	✓

O. NOTES:

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)	✓	✓	✓
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. 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.

2. 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 Project Manager 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

a. Place the seal of the Pennsylvania; Registered Architect, Registered Landscape Architect, and Professional Engineer responsible for the design and the VAMC Project Director's signature on the Construction Documents.

b. Submit updated Department Ratio Chart of Final Bid stage to the VAMC Project Manager.

III. DISTRIBUTION OF A/E MATERIAL

A. SYMBOL IDENTIFICATION OF CONTRACT DRAWINGS

Drawings shall be identified as building # - floor of the building - symbol, and number of drawing in the symbol series (i.e. 4-1-1, 4-1-2). All drawings shall be executed per VA BIM Standard from on TIL.

B. GENERAL NOTES

1. Bond prints shall be full-sized.

2. Bind all drawings into sets in the order of their above classification symbol.

3. All submitted specifications shall be original, unbound, and marked-up VA Master Specifications. Where no VA Master Specification is available, submit a developed specification.

4. Submit all materials, packaged and clearly marked by discipline, to the VA's Contracting Officer. However, where a small amount of material is submitted, the drawings may be packaged together for all disciplines as long as the drawings are separated and tagged with the discipline name. Other material may also be consolidated provided they are labeled and can easily be identified and separated.

5. Material provided unbound will be returned to the A/E. All resubmission costs will be the responsibility of the A/E

Distribution of A/E Material

C. A/E % SUBMISSIONS AND DUE DATES

Schematic Submission & Design Development 50% (Due 45 days after award):

VA Medical Center (VAMC)	Appropriate Network Office*
(2) 8.5”x11” copies of narrative (1) full-size set of drawings (2) half-size sets of drawings (2) copies of cost estimate (2) copies of specifications (2) CDs with all files in original electronic format Third-Party Fire & Life Safety Report and A/E responses.	COR with provide.

Construction Documents 1 Submission 90% (Due 45 days after NTP):

VA Medical Center (VAMC)	Appropriate Network Office*
(2) 8.5”x11” copies of narrative (1) full-size set of drawings (2) half-size sets of drawings (2) copies of cost estimate (2) copies of specifications (2) CDs with all files in original electronic format Third-Party Fire & Life Safety Report and A/E responses. Submittal register to include all products, schedules, plans, shop drawings, coordination drawings, tests, inspections, and milestones.	COR with provide.

Bid Documents Submission 100% (Due 10 days after NTP):

VA Medical Center (VAMC)	Appropriate Network Office*
(2) 8.5”x11” copies of narrative (1) full-size set of stamped drawings (2) half-size sets of stamped drawings (2) copies of cost estimate (2) CDs with all files in original electronic format PDF copies of the drawings and	COR with provide.

specifications shall be word searchable. Submittal register to include all products, schedules, plans, shop drawings, coordination drawings, tests, inspections, and milestones.	

*Network Office will coordinate the necessary review with the responsible safety and fire protection person in their network.