

**SECTION 01 00 00
GENERAL REQUIREMENTS**

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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 VAMC Salisbury, Building 42 Additions and Renovations as required by drawings and specifications.
- B. Visits to the site by Bidders may be made only at the pre-bid conference. Please refer to the Solicitation for the date/time of the organized visit.
- C. Offices of RPA Design, AME Consulting Engineers, Zapata, and ColeJenest & Stone as Architect-Engineers, will render certain technical services during construction. Such services shall be considered as advisory to the Government and shall not be construed as expressing or implying a contractual act of the Government without affirmations by Contracting Officer or his duly authorized representative.
- D. Before placement and installation of work subject to tests by testing laboratory retained by Department of Veterans Affairs, the Contractor shall notify the Resident Engineer in sufficient time to enable testing laboratory personnel to be present at the site in time for proper taking and testing of specimens and field inspection. Such prior notice shall be not less than three work days unless otherwise designated by the Resident Engineer.
- E. 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.
- F. 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.

G. 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. Contractor's on site Superintendent 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 I, BASE BID: Contractor shall provide all labor, materials, tools, equipment, and supervision, and perform all operations necessary for the renovation of existing patient rooms and supporting areas, and construction of new elevator addition. The contractor shall complete all work as further described in the construction drawings and specifications. Work includes but is not limited to general construction, alterations, walks, grading, drainage, mechanical and electrical work, utility systems, elevators, necessary removal of existing structures and construction and certain other items. Contractor is to provide all materials and complete all work with little to no effect or down time to B42 and surrounding buildings, other than what has been indicated on the drawing for phasing. All work to be completed in strict accordance with the drawings and specifications. All work, including final cleanup and completion of any punch list items, shall be performed within five-hundred (500) calendar days after the date of receipt of notice to proceed.

B. BID ITEM II (DEDUCT ALTERNATE NO. 1): Perform all work described in BID ITEM I above, except -

1. Change ductile iron pipe water line to PVC, except where crossing withing 18" of sanitary sewer. Refer to GS2.0.
2. Delete pergola at second floor Roof Garden.
3. Use knock-down metal door frames in place of welded door frames.

4. Delete renovations to existing elevator cabs. Refer to Sheet A321.
5. Delete fireplaces from project scope. Power shall be provided as Owner may elect to install at a later date. Eight fireplaces are shown at Rooms C1-9 Lobby, 1C121, 1D112, 1D122, 2B154, 2C121, D112, and 2D122. Area to be infilled with two sets of two adjustable shelving units. Match finish of other casework in room.
6. Delete renovations for Formal Dining Room 2A102. Replace door to current space with new door to match all other new doors.
7. Delete outdoor fountain. Refer to civil drawings.
8. Delete window frame and glass from elevator P24 at both the elevator cab and the shaft. Opening in shaft to be infilled with brick and concrete masonry units to match surrounding wall.

All work, including final cleanup and completion of any punch list items, shall be performed within four-hundred and ninety (490) calendar days of receipt of the Notice to Proceed. Work shall be performed in strict accordance with specifications and drawings.

C. BID ITEM III (DEDUCT ALTERNATE NO. 2): Perform all work described in BID ITEM II above, except -

1. Eliminate lightning protection.

All work, including final cleanup and completion of any punch list items, shall be performed within four-hundred and eighty (480) calendar days of receipt of the Notice to Proceed. Work shall be performed in strict accordance with specifications and drawings.

D. BID ITEM IV (DEDUCT ALTERNATE NO. 3): Perform all work described in BID ITEM III above, except -

1. Change counters in resident bathroom from solid surface to plastic laminate. Plastic laminate shall be equal to LAM-1. Refer to Drawing IF601.
2. Revise voice/data cabling/connectivity from category 6 to category 5e.

3. Revise nurse call system from Rauland Responder 5 to Rauland Responder 4000 series.
4. Delete card readers, door contacts, PIR sensor, electric strikes rough-in and change to standard keyed type locks.

All work, including final cleanup and completion of any punch list items, shall be performed within four-hundred and seventy (470) calendar days of receipt of the Notice to Proceed. Work shall be performed in strict accordance with specifications and drawings.

E. BID ITEM V (DEDUCT ALTERNATE NO. 4): Perform all work described in BID ITEM IV above, except -

1. Delete scope of work shown for Elevator Lobby C1-1, Corridor C1-6, Corridor C1-7, Vestibule C1-8, Lobby C1-9, Corridor C1-16 Elevator Lobby C2-1, Corridor C2-7, Corridor C2-8, Corridor C2-9, and Corridor C2-16.

All work, including final cleanup and completion of any punch list items, shall be performed within four-hundred and sixty (460) calendar days of receipt of the Notice to Proceed. Work shall be performed in strict accordance with specifications and drawings.

F. BID ITEM VI (DEDUCT ALTERNATE NO. 5): Perform all work described in BID ITEM V above, except -

1. Delete work associated with rooms Game Room 1B151, Lounge 1D112, Lounge 2B151, and Lounge 2D112 as shown on the documents. Rooms to receive new paint and flooring instead.

All work, including final cleanup and completion of any punch list items, shall be performed within four-hundred and fifty (450) calendar days of receipt of the Notice to Proceed. Work shall be performed in strict accordance with specifications and drawings.

G. BID ITEM VII (DEDUCT ALTERNATE NO. 6): Perform all work described in BID ITEM VI above, except -

1. Delete second floor porch from elevator tower. Concrete columns to stop at first floor level and guardrails shall be installed uninterrupted at the edge of the first floor porch. Door 2D113A and automatic operator to be replaced by storefront window of same size and shape. Delete aluminum canopy.

All work, including final cleanup and completion of any punch list items, shall be performed within four-hundred and thirty-five (435) calendar days of receipt of the Notice to Proceed. Work shall be performed in strict accordance with specifications and drawings.

H. BID ITEM VIII (DEDUCT ALTERNATE NO. 7): Perform all work described in BID ITEM VII above, except -

1. Delete porches from elevator tower including all concrete structural components pertaining to them. Where concrete beams are shown to interact with the elevator shaft, those beams shall be replaced by 12-inch concrete masonry units to match the adjacent. Brick veneer shall be continuous from footing to parapet cap except where breaks are needed for relief angles. Stucco finish shall be continuous from sidewalk to 10 feet above the second level. Doors 1D113A and 2D113A and automatic operators to be replaced by storefront windows of same size and shape. Vestibule BC154 shall remain, however it shall be limited to 12 feet in height and be constructed with a sloped glazing top. Spandrel glass shall be installed at all areas above the scheduled ceiling height.

All work, including final cleanup and completion of any punch list items, shall be performed within four-hundred and twenty (420) calendar days of receipt of the Notice to Proceed. Work shall be performed in strict accordance with specifications and drawings.

I. BID ITEM IX (DEDUCT ALTERNATE NO. 8): Perform all work described in BID ITEM VIII above, except -

1. Delete work associated with the D Wing on both first and second floors. Areas are indicated by hatch pattern on sheets A101 and A102. All existing components (architectural, mechanical, electrical, fire protection) to remain in place unless otherwise noted. New medical vacuum pump shall be installed where indicated on P421D and piping to be routed above ceiling as required reaching the

C Wing. The vacuum piping shall be capped at the nurse station in a manner that allows for future expansion of the system. Water supplies (cold, hot, hot recirculation) shall be capped as they enter the D Wing in a manner that allows for future expansion of the system. Lines to be capped at both first and second floors. All new ductwork associated with D wing shall not be installed. The 1-1/2" main chilled water supply (CHWS) and main chilled water return (CHWR) that originates in the D wing to feed equipment in 'C' shall be installed. The chilled water mains originate near Soiled Rm 1D134 and shall be installed above the existing 1st floor 'D' wing ceiling to the 'C' wing per the drawings.

Contractor will be responsible for replacing damaged tiles in D Wing ceiling due to all the piping work being done above the existing ceiling.

All work, including final cleanup and completion of any punch list items, shall be performed within three-hundred and twenty (320) calendar days of receipt of the Notice to Proceed. Work shall be performed in strict accordance with specifications and drawings.

1.3 SPECIFICATIONS AND DRAWINGS FOR CONTRACTOR

- A. AFTER AWARD OF CONTRACT, One (1) Compact Disk (CD) will be furnished to the Contractor containing PDF electronic documents of drawings and specifications. Contractor shall, at Contractor's expense, print sets of documents needed for the Contractor and subcontractors.

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 subcontractors 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 3 days notice to the Contracting Officer so that 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. Key Control:

1. The General Contractor shall provide duplicate keys and lock combinations to the Resident Engineer 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.

D. 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.

E. Motor Vehicle Restrictions

1. Vehicle authorization request shall be required for any vehicle entering the site and such request shall be submitted 24 hours before the date and time of access. Access shall be restricted to picking up and dropping off materials and supplies.
2. Separate permits shall be issued for General Contractor and its employees for parking in designated areas only.

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 Project Engineer 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 Resident Engineer 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 one-hour 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 Project Engineer.
- H. Egress Routes for Construction Workers: Maintain free and unobstructed egress. Inspect daily. Report findings and corrective actions weekly to Project Engineer.
- 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 prior to removing existing sprinklers.
- 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 Project Engineer and facility safety Manager. 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 Resident Engineer.

- N. Smoke Detectors: Prevent accidental operation. Remove temporary covers at end of work operations each day. Coordinate with Project Engineer and facility Safety Manager Officer.

- O. Hot Work: Perform and safeguard hot work operations in accordance with NFPA 241 and NFPA 51B. Coordinate with Project Engineer. Obtain permits from facility Safety Manager at least forty-eight (48) hours in advance. Designate contractor's responsible project-site fire prevention program manager to permit hot work.

- P. Fire Hazard Prevention and Safety Inspections: Inspect entire construction areas weekly. Coordinate with, and report findings and corrective actions weekly to Project Engineer and facility Safety Manager.

- 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. If required, submit documentation to the Resident Engineer 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, under regulations prescribed by the Contracting Officer, 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.
- D. Working space and space available for storing materials shall be as shown on the drawings and as determined by the Resident Engineer.
- E. Workmen are subject to rules of Medical Center applicable to their conduct.
- F. 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.
- G. 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 Resident Engineer 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.

H. 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 Resident Engineer. All such actions shall be coordinated with the Utility Company involved:

1. 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.

I. Phasing: To insure such executions, Contractor shall furnish the Resident Engineer 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 Resident Engineer 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, Project Engineer and Contractor, as follows:

1. Building 42 Additions and Renovations consists of three separate projects which are being designed and issued for construction as separate phases. The work for this contract is Phase-III. Phase-I will be complete and Phase II may be under construction concurrently with this project.

2. The work for this project shall be divided into four phases (A, B, C, D).
 - a. Work in Phases A and B may begin immediately after notice to proceed. Work in Phase D may not begin until Phase C is occupiable. Phases A and B shall be two sub-phases that shall be built simultaneously.
 - b. Phase A. The fishing pier, the front entry renovation of existing lobby and finish upgrades to existing elevators shall be constructed together. This shall be accommodated by closing off the main corridor in the vicinity of the existing elevators and by closing off the elevated connecting corridor at B Wing. The Owner requires the elevators to remain operational as long as possible. Rooms: C1-1, C1-6 to C1-9, C1-16, P20, P21, S23, C2-1, C2-7 to C2-9, C2-16, 2A102.
 - c. Phase B. The new elevator tower shall be built in its entirety with the exception of the ground level entry vestibule. The elevator shall be in fully operational order as it will provide construction access to the first and second floors during Phases C and D.
 - d. Phase C. The C Wing shall be renovated at both the first and second floors in its entirety. The wing shall be fully operational and occupiable prior to moving to Phase D. Rooms: 1B150, 1B151, 1C100 to 1C136, 2B154, 2B155, 2C100 to 2C136.
 - e. Phase D. The D Wing shall be renovated at both the first and second floors in its entirety. At the conclusion of construction, the new elevator vestibule shall be erected and the final preparations of the elevator shall be completed. Rooms: 1D100 to 1D112, 1D114 to 1D132, 1D134 to 1D139, 2D100 to 2D112, 2D114 to 2D132, 2D134 to 2D139.
3. Areas adjacent to the construction work will be occupied 24 hours per day.
4. Provide temporary dust, sight, and sound barriers as required by Owner and wherever necessary to limit the amount of noise, dust, and visual pollution within and around the facility. The exact location and quantity of temporary barriers is to be determined by construction schedule and work sequence. Interior temporary

partitions defined for these purposes are full height 4" metal studs and gyp board partitions, painted, sound insulated with full height 2" sound attenuation blankets and sealed at top, bottom, and ends to prevent the passage of dust and noise. Provide rated partitions where necessary to maintain smoke and fire ratings in facility.

- J. 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 Resident Engineer.
- K. 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 Fire Department or Company (Department of Veterans Affairs or municipal) whichever will be required to respond to an alarm from Contractor's employee or watchman.
- L. 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 Resident Engineer.
 - 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 Resident Engineer. 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 Resident Engineer, in writing, 48 hours in advance of proposed interruption. 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 Resident Engineer.
 5. In case of a contract construction emergency, service will be interrupted on approval of Resident Engineer. 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.
- M. 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 but are not required to be entirely removed, shall be sealed, capped or plugged. The lines shall not be capped in finished areas, but shall be removed and sealed, capped or plugged in ceilings, within furred spaces, in unfinished areas, or within walls or partitions; so that they are completely behind the finished surfaces.
- N. 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 Resident Engineer.

O. Coordinate the work for this contract with other construction operations as directed by Resident Engineer. 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 Resident Engineer areas of buildings in which alterations occur and areas which are anticipated routes of access, and furnish a report, signed by both, to 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 affected areas of 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 Resident Engineer.

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 Resident Engineer, 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).

C. Re-Survey: Thirty days before expected partial or final inspection date, the Contractor and Resident Engineer 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 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 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 RE 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 Resident Engineer. 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 Resident Engineer. 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 one-hour 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 Resident Engineer 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 prefilter 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. These mats shall be changed as often as required to maintain clean work areas directly outside construction area at all times.
- 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 Resident Engineer and the Medical Center. When, approved, debris shall be hauled in enclosed dust proof containers or wrapped in plastic and sealed with duct tape. 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 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. 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 noted on drawings 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 Resident Engineer.
 - 2. Items not reserved shall become property of the Contractor and be removed by Contractor from 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 site, 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. 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 Resident Engineer. Existing work to be altered or extended and that is found to be defective in any way, shall be reported to the Resident Engineer before it is disturbed. Materials and workmanship used in restoring

work, 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).

1.12 PHYSICAL DATA

- A. Data and information furnished or referred to below is for the Contractor's information. The Government shall not be responsible for any interpretation of or conclusion drawn from the data or information by the Contractor.
 - 1. The indications of physical conditions on the drawings and in the specifications are the result of site investigations by Geoscience Group, 500 Clanton Road, Suite K, Charlotte, North Carolina, 28217.
- (FAR 52.236-4)**
- B. Subsurface conditions have been developed by core borings and test pits. Logs of subsurface exploration are shown diagrammatically on drawings.
 - C. A copy of the soil report is included in Appendix A, and shall be considered part of the contract documents.
 - D. Government does not guarantee that other materials will not be encountered nor that proportions, conditions or character of several materials will not vary from those indicated by explorations. 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 each building and/or addition to each existing building, and such other lines and grades that are reasonably necessary to properly assure that location, orientation, and elevations established for each such structure and/or addition, roads, parking lots, 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 both directions, 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 Resident Engineer before any work (such as footings, floor slabs, columns, walls, utilities and other major controlling features) is placed.
- D. 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 Resident Engineer.
- E. 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 Resident Engineer's review, as often as requested.
- C. Contractor shall deliver two approved completed sets of as-built drawings to the Resident Engineer within 15 calendar days after each completed phase and after the acceptance of the project by the Resident Engineer.
- 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 Resident Engineer, 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 certain buildings (or parts of certain buildings) 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 Resident Engineer. If the equipment is not installed and maintained in accordance with the following provisions, the Resident Engineer 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. Boilers, pumps, feedwater heaters and auxiliary equipment must be operated as a complete system and be fully maintained by operating personnel. Boiler water must be given complete and continuous chemical treatment.

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. Use of existing elevators for handling building materials and Contractor's personnel will be permitted subject to following provisions:

1. Contractor makes all arrangements with the Project Engineer for use of elevators. The Project Engineer will ascertain that elevators are in proper condition. Contractor may use Elevator P24 throughout the Work. Contractor shall note that this elevator will be modernized as part of the Work and will, therefore, be inoperational for a period during the Work.

2. Contractor covers and provides maximum protection of following elevator components:

a. Entrance jambs, heads soffits and threshold plates.

b. Entrance columns, canopy, return panels and inside surfaces of car enclosure walls.

c. Finish flooring.

1.19 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 Resident Engineer, 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.

1.20 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 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. Before final acceptance of the work by the Government, the Contractor shall remove all the temporary connections, distribution lines, meters, and associated paraphernalia.
- C. 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:
 - 1. Obtain heat by connecting to Medical Center heating distribution system.
 - a. Steam is available at no cost to Contractor.
- D. 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.

E. 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 Resident Engineer's discretion) of use of water from Medical Center's system.

F. Steam: Furnish steam system for testing required in various sections of specifications.

1. Obtain steam for testing by connecting to the Medical Center steam distribution system. Steam is available at no cost to the Contractor.
2. Maintain connections, pipe, fittings and fixtures and conserve steam-use so none is wasted. Failure to stop leakage or other waste will be cause for revocation (at Resident Engineer's discretion), of use of steam from the Medical Center's system.

1.21 NEW TELEPHONE EQUIPMENT

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 VA.

1.22 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. Another example of a complex which involves several components of different disciplines is a boiler installation. Efficient and acceptable boiler operation depends upon the coordination and proper operation of fuel, combustion air, controls, steam, feedwater, condensate and other related components.

- 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.

1.23 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 Resident Engineer 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: 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 Resident Engineer and shall be considered concluded only when the Resident Engineer 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 Resident Engineer, does not demonstrate sufficient qualifications in accordance with requirements for instructors above.

1.24 GOVERNMENT-FURNISHED PROPERTY

- A. The Government shall deliver to the Contractor the Government-furnished property shown on the Schedule 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.

1.25 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 Resident Engineer.
- C. Suitably cap existing service lines, such as steam, condensate return, 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. 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.

1.33 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 Resident Engineer verbally, and then with a written follow up.

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