

**SECTION 01 00 00
GENERAL REQUIREMENTS**

TABLE OF CONTENTS

1.1 SAFETY REQUIREMENTS.....	1
1.2 GENERAL INTENTION.....	1
1.3 STATEMENT OF BID ITEM(S)	4
1.4 SPECIFICATIONS AND DRAWINGS FOR CONTRACTOR.....	5
1.5 CONSTRUCTION SECURITY REQUIREMENTS.....	5
1.6 OPERATIONS AND STORAGE AREAS.....	7
1.7 ALTERATIONS.....	11
1.8 DISPOSAL AND RETENTION.....	13
1.9 PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS.....	13
1.10 RESTORATION.....	14
1.11 PHYSICAL DATA.....	15
1.12 PROFESSIONAL SURVEYING SERVICES.....	15
1.13 LAYOUT OF WORK.....	15
1.14 AS-BUILT DRAWINGS.....	16
1.15 USE OF ROADWAYS.....	17
1.16 RESIDENT ENGINEER'S FIELD OFFICE.....	17
1.17 TEMPORARY USE OF MECHANICAL AND ELECTRICAL EQUIPMENT.....	17
1.18 TEMPORARY USE OF EXISTING ELEVATORS.....	17
1.19 TEMPORARY USE OF NEW ELEVATORS.....	17
1.20 TEMPORARY TOILETS.....	17
1.21 AVAILABILITY AND USE OF UTILITY SERVICES.....	17
1.22 NEW TELEPHONE EQUIPMENT	18

1.23 TESTS.....	18
1.24 INSTRUCTIONS.....	18
1.25 GOVERNMENT-FURNISHED PROPERTY.....	20
1.26 RELOCATED // EQUIPMENT // ITEMS //	20
1.27 STORAGE SPACE FOR DEPARTMENT OF VETERANS AFFAIRS EQUIPMENT.....	20
1.28 CONSTRUCTION SIGN.....	20
1.29 SAFETY SIGN.....	20
1.30 PHOTOGRAPHIC DOCUMENTATION.....	20
1.31 FINAL ELEVATION Digital Images.....	20
1.32 HISTORIC PRESERVATION.....	20
1.33 VA TRIRIGA CPMS.....	Error! Bookmark not defined.

**SECTION 01 00 00
GENERAL REQUIREMENTS**

1.1 SAFETY REQUIREMENTS

Refer to section 01 35 26, SAFETY REQUIREMENTS for safety and infection control requirements.

1.2 GENERAL INTENTION

- A. Contractor shall completely prepare site for building operations, including demolition and removal of existing structures, features, and furnish labor and materials and perform work for Rental Buildings Site Prep, 575-16-807S, as required by drawings and specifications.
- B. Visits to the site by Bidders shall be during a scheduled site visit as coordinated by the COR and Contracting Officer.
- C. Offices of VA Engineering Service, will render certain technical services during construction.
- D. Scope of Work

RENTAL BUILDING SITE PREP

575-16-807S

Grand Junction Veterans Healthcare System

Grand Junction, Colorado

This scope shall provide for the installation and connection of domestic water, electrical and sanitary sewer utility systems on the grounds of the Grand Junction Veterans Healthcare System, Grand Junction, Colorado. The installation of utility systems will precede the solicitation and award for furnishing and placing rented temporary office buildings. Connection of the utility system as required by this scope will NOT be the responsibility of the utilities installation contractor.

The vendor shall be responsible for the following key items/procedures in accordance with plans and specifications:

Rental Building "A"

Provide excavation of soil for the placement of a 3" schedule 40 PVC drainage piping.

Provide excavation of soils at point of connection to existing sanitary sewer piping.

Provide bedding aggregate for placement of drainage piping.

Provide 3" schedule 40 PVC drainage piping and fittings.

Provide backfilling, compaction and surface restoration of all affected areas.

Provide excavation of soil for the placement of 1" copper piping.

Provide for point of connection of 1" copper pipe in crawlspace of Building 35.

Provide bedding aggregate for placement of 1" copper piping.

Provide 1" continuous copper piping, valves and fittings.

Provide backfilling, compaction and surface restoration of all affected areas.

Provide excavation of soil for the placement of 2" communication piping.

Provide 2" PVC communications conduit from existing signal manhole to new rental building "A".

Provide for 6 pair single mode fiber optic cable from rental "A" to Building 34 via Building 33 and communication manholes.

Provide bedding aggregate for placement of -2-" communication piping.

Provide backfilling, compaction and surface restoration of all affected areas.

Provide excavation of soil for the placement of a NEC electrical conduit with concrete coverage from Building 36 to new rental building "A".

Provide new disconnect at Building 36 main distribution panel.

Provide NEC copper cable from existing panel to new rental building "A" via new disconnect.

Provide backfilling, compaction and surface restoration of all affected areas.

Rental Building "B"

Provide excavation of soil for the placement of a 3" schedule 40 PVC drainage piping.

Provide excavation of soils at point of connection to existing sanitary sewer piping.

Provide bedding aggregate for placement of drainage piping.

Provide 3" schedule 40 PVC drainage piping and fittings.

Provide backfilling, compaction and surface restoration of all affected areas.

Provide excavation of soil for the placement of 1" copper piping.

Provide for point of connection of 1" copper pipe at existing water piping.

Provide bedding aggregate for placement of 1" copper piping.

Provide 1" continuous copper piping, valves and fittings.

Provide backfilling, compaction and surface restoration of all affected areas.

Provide excavation of soil for the placement of 2" communication piping.

Provide 2" PVC communications conduit from existing signal manhole to new rental building "B".

Provide for 6 pair single mode fiber optic cable from rental "B" to Building 34 via communication manholes.

Provide bedding aggregate for placement of 2" communication piping.

Provide backfilling, compaction and surface restoration of all affected areas.

Provide excavation of soil for the placement of a NEC electrical conduit with concrete coverage from Building 36 to new rental building "A".

Provide new disconnect at Building 36 main distribution panel.

Provide NEC copper cable from existing transformer to new disconnect, 480/208 VAC 3-phase transformer at rental building "A".

Provide backfilling, compaction and surface restoration of all affected areas.

Drawings

Site plan pdf

Temporary Rental "A" pdf

Temporary Rental "B" pdf

Temporary Rental "A" Floor pdf

Temporary Rental "B" Floor pdf

Specifications

01 00 00 General Requirements pdf

01 33 23 Shop Drawings, Products and Samples pdf

01 35 26 Safety Requirements pdf

03 30 53 Cast in Place Concrete pdf
 26 05 11 Requirements for Electrical Installations pdf
 26 05 19 Low-Voltage Electrical Conductors and Cables pdf
 26 05 26 Grounding and Bonding for Electrical Systems pdf
 26 05 33 Raceways and Boxes for Electrical Systems pdf
 26 05 41 Underground Electrical Construction pdf
 26 08 00 Commissioning of Electrical Systems pdf
 26 22 00 Low-Voltage Transformers pdf
 26 24 16 Panelboards pdf
 26 29 21 Enclosed Switches and Circuit Breakers pdf
 21 20 11 Earthwork pdf
 33 08 00 Commissioning of Utility Systems pdf
 33 10 00 Water Utilities pdf
 33 30 00 Sanitary Sewer Utilities pdf

Notes:

Scope shall provide for thirty (30) lineal feet of excess 6 pair single mode fiber optic cables at all terminal end points.

All areas are covered by lawn sprinkler systems. Repair to damaged lines/heads/fittings shall be the responsibility of the contractor.

Exclusions: None

General

All work will be coordinated through Facilities Management Service. Davis-Bacon wage rates to apply. All design and work will conform to the current edition of the VA Master Specifications and VA Design Standards as published at the following site: www.cfm.va.gov, IPC 2009, OSHA building codes and standards.

Accreditation and certification (C&A) is NOT required.

Delivery Period: Ninety (90) days from Notice to Proceed.

E. All employees of general contractor and subcontractors shall comply with VA security management identification badging program and obtain permission of the VA police, be identified by project and employer, and restricted from unauthorized access.

1.3 STATEMENT OF BID ITEM(S)

A. ITEM I, GENERAL CONSTRUCTION: Work includes general construction, concrete, trenching, excavation, grading, drainage as necessary for the installation of utility systems.

ITEM II, Electrical Work: Work includes all labor, material, equipment and supervision to perform the required electrical construction work on this project.

ITEM III, Mechanical Work: Work includes all labor, material, equipment and supervision to perform the required Mechanical construction work on this project.

B. ALTERNATE NO.1: NONE

1.4 SPECIFICATIONS AND DRAWINGS FOR CONTRACTOR

A. Drawings and contract documents may be obtained from the website where the solicitation is posted. Additional copies will be at Contractor's expense.

1.5 CONSTRUCTION SECURITY REQUIREMENTS

A. Security Plan:

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

B. Security Procedures:

1. General Contractor's employees shall not enter the project site without appropriate badge. They may also be subject to inspection of their personal effects when entering or leaving the project site.
2. Before starting work the General Contractor shall give one week's notice to the Contracting Officer of intention to work.
3. No photography of VA premises is allowed without written permission of the Contracting Officer.
4. VA reserves the right to close down or shut down the project site and order General Contractor's employees off the premises in the event of a national emergency. The General Contractor may return to the site only with the written approval of the Contracting Officer.

C. Guards: NA

D. Key Control:

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

E. Document Control:

1. Before starting any work, the General Contractor/Sub Contractors shall submit an electronic security memorandum describing the approach to following goals and maintaining confidentiality of "sensitive information".
2. The General Contractor is responsible for safekeeping of all drawings, project manual and other project information. This information shall be shared only with those with a specific need to accomplish the project.
3. 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.
4. These security documents shall not be removed or transmitted from the project site without the written approval of Contracting Officer.
5. All paper waste or electronic media such as CD's and diskettes shall be shredded and destroyed in a manner acceptable to the VA.
6. Notify Contracting Officer and Site Security Officer immediately when there is a loss or compromise of "sensitive information".

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

F. Motor Vehicle Restrictions

1. Contractor's employee's (all levels) shall not park privately owned vehicles or company owned vehicles on the Medical Center premises. Company owned vehicles may park on VA premises if the vehicle is consistently being accessed for contract related tasks.

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.
- 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.

(FAR 52.236-10)

- D. Working space and space available for storing materials shall be as determined by the COR.
- E. Workmen are subject to rules of Medical Center applicable to their conduct.
- F. Execute work so as to interfere as little as possible with normal functioning of Medical Center as a whole, including operations of utility services, fire protection systems and any existing equipment, and with work being done by others.
 - 1. Do not store materials and equipment in other than assigned areas.
 - 2. Schedule delivery of materials and equipment to immediate construction working areas within buildings in use by Department of Veterans Affairs in quantities sufficient for not more than two work days. Provide unobstructed access to Medical Center areas required to remain in operation.
 - 3. Where access by Medical Center personnel to vacated portions of buildings is not required, storage of Contractor's materials and equipment will be permitted subject to fire and safety requirements.
 - 4. Contractor will NOT address freighted or shipped materials/equipment to "VA Medical Center, 2121 North 0 Avenue." VA warehouse will NOT accept any contractor deliveries.
- F. 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 COR. All such actions shall be coordinated with the COR or Utility Company involved:

G. Phasing:

The Medical Center must maintain its operation 24 hours a day 7 days a week. Therefore, any interruption in service must be scheduled and coordinated with the COR to ensure that no lapses in operation occur. It is the CONTRACTOR'S responsibility to develop a work plan and schedule detailing, at a minimum, the procedures to be employed, the equipment and materials to be used, the interim life safety measure to be used during the work, and a schedule defining the duration of the work with milestone subtasks. The work to be outlined shall include, but not be limited to:

To insure such executions, Contractor shall furnish the COR with a schedule of approximate phasing dates on which the Contractor intends to accomplish work in each specific area of site, building or portion thereof. In addition, Contractor shall notify the COR two weeks in advance of the proposed date of starting work in each specific area of site, building or portion thereof.

H. Building Vacate: NA

I. Construction Fence: Before construction operations begin, Contractor shall provide a chain link construction fence, 2.1m (seven feet) minimum height, around the construction area indicated on the drawings. Provide gates as required for access with necessary hardware, including hasps and padlocks. Fasten fence fabric to terminal posts with tension bands and to line posts and top and bottom rails with tie wires spaced at maximum 375mm (15 inches). Remove the fence when directed by COR.

J. When a building and/or construction site is turned over to Contractor, Contractor shall accept entire responsibility including upkeep and maintenance therefore:

1. 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.

K. Utilities Services: Maintain existing utility services for Medical Center at all times. Provide temporary facilities, labor, materials, equipment, connections, and utilities to assure uninterrupted services. Where necessary to cut existing water, steam, gases, sewer or air pipes, or conduits, wires, cables, etc. of utility services or of fire protection systems and communications systems (including telephone), they shall be cut and capped at suitable places where shown; or, in absence of such indication, where directed by COR.

1. No utility service such as water, gas, steam, sewers or electricity, or fire protection systems and communications systems may be interrupted without prior approval of COR [Chief Engineer, Chief of Facilities Management]. 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 a detailed work plan, 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 00, COMMON WORK RESULTS FOR ELECTRONIC SAFETY AND SECURITY for additional requirements.
2. Contractor shall submit a request to interrupt any such services to COR, in writing, 7 days 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 COR.
5. In case of a contract construction emergency, service will be interrupted on approval of COR. Such approval will be confirmed in writing as soon as practical.

6. Whenever it is required that a connection fee be paid to a public utility provider for new permanent service to the construction project, for such items as water, sewer, electricity, gas or steam, payment of such fee shall be the responsibility of the Government and not the Contractor.

L. Abandoned Lines: All service lines such as wires, cables, conduits, ducts, pipes and the like, and their hangers or supports, which are to be abandoned but are not required to be entirely removed, shall be sealed, capped or plugged at the main, branch or panel they originate from. 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.

M. To minimize interference of construction activities with flow of Medical Center traffic, comply with the following:

1. Keep roads, walks and entrances to grounds, to parking and to occupied areas of buildings clear of construction materials, debris and standing construction equipment and vehicles. Wherever excavation for new utility lines cross existing roads, at least one lane must be open to traffic at all times with approval.

2. Method and scheduling of required cutting, altering and removal of existing roads, walks and entrances must be approved by the COR.

N. Coordinate the work for this contract with other construction operations as directed by COR. This includes the scheduling of traffic and the use of roadways, as specified in Article, USE OF ROADWAYS.

1.7 ALTERATIONS

A. Survey: Before any work is started, the Contractor shall make a thorough survey with the COR of construction areas and buildings in which alterations/connections 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 wall and other surfaces not required to be altered throughout affected areas of buildings.

2. Existence and conditions of grounds surfaces including grassed area, sprinklers systems, concrete walkways, etc. required by drawings.
3. Shall note any discrepancies between drawings and existing conditions at site.
4. Shall designate areas for working space, materials storage and routes of access to areas within buildings where alterations occur and which have been agreed upon by Contractor and COR.

B. Reused or relocated items: NA

C. Re-Survey: Thirty days before expected partial or final inspection date, the Contractor and COR together shall make a thorough re-survey of the areas of buildings involved. They shall furnish a report on conditions then existing, of resilient flooring, doors, windows, walls and other surfaces as compared with conditions of same as noted in first condition survey report:

1. Re-survey report shall also list any damage caused by Contractor to such flooring and other surfaces, despite protection measures; and, will form basis for determining extent of repair work required of Contractor to restore damage caused by Contractor's workmen in executing work of this contract.

D. Protection: Provide the following protective measures:

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

1.8 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: NA
2. Items not reserved shall become property of the Contractor and be removed by Contractor from Medical Center.
4. PCB Transformers and Capacitors: PCB transformers and capacitors are NOT anticipated to be encountered with this scope of work.

1.9 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. Refer to FAR clause 52.236-7, "Permits and Responsibilities," which is included in General Conditions. A National Pollutant Discharge Elimination System (NPDES) permit is required for this project. The Contractor is considered an "operator" under the permit and has extensive responsibility for compliance with permit requirements. VA will make the permit application available at the (appropriate medical center) office. The apparent low bidder, contractor and affected subcontractors shall furnish all information and certifications that are required to comply with the permit process and permit requirements. Many of the permit requirements will be satisfied by completing construction as shown and specified. Some requirements involve the Contractor's method of operations and operations planning and the Contractor is responsible for employing best management practices. The affected activities often include, but are not limited to the following:
- Designating areas for equipment maintenance and repair;
 - Providing waste receptacles at convenient locations and provide regular collection of wastes;
 - Locating equipment wash down areas on site, and provide appropriate control of wash-waters;
 - Providing protected storage areas for chemicals, paints, solvents, fertilizers, and other potentially toxic materials; and
 - Providing adequately maintained sanitary facilities.

1.10 RESTORATION

- A. Remove, cut, alter, replace, patch and repair existing work as necessary to install new work. Except as otherwise shown or specified, do not cut, alter or remove any structural work, and do not disturb any ducts, plumbing, steam, gas, or electric work without approval of the COR. Existing work to be altered or extended and that is found to be

defective in any way, shall be reported to the COR before it is disturbed. Materials and workmanship used in restoring 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 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).

1.11 PHYSICAL DATA NA

1.12 PROFESSIONAL SURVEYING SERVICES NA

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.

1.13 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 all center lines for required utilities. Assure such lines are in accordance with contract drawings.
- C. Mass excavation: NA
- D. During progress of work, and particularly as work progresses, Contractor shall maintain grades and plumbness of all major work.
 - 1. Lines and elevations of sewers and of all outside distribution systems.
 - 2. Lines and elevations of subsurface electrical distribution conduit.
 - 3. Lines and elevations of subsurface domestic water piping
 - 4. Lines and elevations of subsurface communication conduit.
- E. Whenever changes from contract drawings are made in line or grading requiring certificates, record such changes on a reproducible drawing bearing the registered land surveyor or registered civil engineer seal, and forward these drawings upon completion of work to COR.

1.14 AS-BUILT DRAWINGS

- A. The contractor shall maintain two full size sets of as-built drawings which will be kept current during construction of the project, to include all contract changes, modifications and clarifications.

- B. All variations shall be shown in the same general detail as used in the contract drawings. To insure compliance, as-built drawings shall be made available for the COR review, as often as requested.
- C. Contractor shall deliver two approved completed sets of as-built drawings in the electronic version (scanned PDF) to the COR within 15 calendar days after each completed phase and after the acceptance of the project by the COR.
- D. Paragraphs A, B, & C shall also apply to all shop drawings.

1.15 USE OF ROADWAYS

- A. For hauling, use only established public roads and roads on Medical Center property and, when authorized by the COR, such temporary roads which are necessary in the performance of contract work. Temporary roads shall be constructed and restoration performed by the Contractor at Contractor's expense. When necessary to cross curbing, sidewalks, or similar construction, they must be protected by well-constructed bridges.

1.16 RESIDENT ENGINEER'S FIELD OFFICE NA**1.17 TEMPORARY USE OF MECHANICAL AND ELECTRICAL EQUIPMENT NA****1.18 TEMPORARY USE OF EXISTING ELEVATORS NA****1.19 TEMPORARY USE OF NEW ELEVATORS NA****1.20 TEMPORARY TOILETS**

- A. Contractor may have for use of Contractor's workmen, such toilet accommodations as may be assigned to Contractor by Medical Center. Contractor shall keep such places clean and be responsible for any damage done thereto by Contractor's workmen. Failure to maintain satisfactory condition in toilets will deprive Contractor of the privilege to use such toilets.

1.21 AVAILABILITY AND USE OF UTILITY SERVICES

- A. The Government shall make all reasonably required amounts of utilities available to the Contractor from existing outlets and supplies, as specified in the contract.

1.22 NEW TELEPHONE EQUIPMENT NA**1.23 TESTS**

- A. Pre-test mechanical and electrical equipment and systems and make corrections required for proper operation of such systems before requesting final tests. Final test will not be conducted unless pre-tested.
- C. 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.
- D. Mechanical and electrical systems shall be balanced, controlled and coordinated. A system is defined as the entire system which must be coordinated to work together during normal operation to produce results for which the system is designed.
- E. All related components as defined above shall be functioning when any system component is tested. Tests shall be completed within a reasonably period of time during which operating and environmental conditions remain reasonably constant and are typical of the design conditions.
- F. Individual test result of any component, where required, will only be accepted when submitted with the test results of related components and of the entire system.

1.24 INSTRUCTIONS

- A. Contractor shall furnish Maintenance and Operating manuals (hard copies and electronic) and verbal instructions when required by the various sections of the specifications and as hereinafter specified.
- B. Manuals: Maintenance and operating manuals and one compact disc (four hard copies and one electronic copy each) for each separate piece of equipment shall be delivered to the COR coincidental with the delivery of the equipment to the job site. Manuals shall be complete, detailed guides for the maintenance and operation of equipment. They shall include complete information necessary for starting, adjusting, maintaining in continuous operation for long periods of time and dismantling and reassembling of the complete units and sub-assembly

components. Manuals shall include an index covering all component parts clearly cross-referenced to diagrams and illustrations. Illustrations shall include "exploded" views showing and identifying each separate item. Emphasis shall be placed on the use of special tools and instruments. The function of each piece of equipment, component, accessory and control shall be clearly and thoroughly explained. All necessary precautions for the operation of the equipment and the reason for each precaution shall be clearly set forth. Manuals must reference the exact model, style and size of the piece of equipment and system being furnished. Manuals referencing equipment similar to but of a different model, style, and size than that furnished will not be accepted.

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

1.25 GOVERNMENT-FURNISHED PROPERTY NA

1.26 RELOCATED // EQUIPMENT // ITEMS // NA

1.27 STORAGE SPACE FOR DEPARTMENT OF VETERANS AFFAIRS EQUIPMENT NA

1.28 CONSTRUCTION SIGN NA

1.29 SAFETY SIGN NA

1.30 PHOTOGRAPHIC DOCUMENTATION NA

1.31 FINAL ELEVATION DIGITAL IMAGES NA

1.32 HISTORIC PRESERVATION

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

- - - E N D - - -